00400 SUPPLEMENTS TO BID FORMS

Contract No. A919

T&M SCHEDULE

1.	For purposes of evaluating and comparing bids, the Bidder shall provide the following cost to maintain a hypothetical work crew at PVSC Facility, for a period of one 40 hour work week, including a hypothetical material cost.	YEAR 1	YEAR 2
	A. Hourly Rate per Person Including all wages, labor, travel, taxes, insurance (including Liability Insurance), overhead, licenses, qualifications, equipment, profit and all other mark-ups and costs: 1. Electrical Foreman \$ (13. 90 14. x 40 Hrs.)	-¢ 4 52 6 (A1)	
	2. Electrical Journeyman \$ 99.75 /Hr. x 40 Hrs.	=\$ <u>4,536</u> (A1) =\$ <u>3,990</u> (A2)	=\$ <u>4,150 °C</u> (C2)
	B. Material Mark-up Including all insurance, overhead, profit and any other mark-up shall be fifteen (15) percent. Materials 15%		
	Formula: Hypothetical Material Cost per week x % Mark up \$80,000.00/wk X 1.15 [enter % as decimal]	=\$ <u>92,000.00</u> (B1)	=\$ <u>92,000.00</u> (D1)
	Year 1: Total (Sum of A1, A2 and B1) Year 2: Total (Sum of C1, C2 and D1)	=\$_100, 526	=\$ 100, 846
	TOTAL (Sum Year 1 plus Year 2)	\$ 201,3	72 00

Contract No. A919 -- FURNISH AND INSTALL NEW REPLACEMENT ELECTRIC FEEDER CABLES FOR A TWO (2) YEAR PERIOD 00401 Supplement to Bid Forms

ALSO SEE ATTACHED

A reference list generated by the bidder is acceptable provided all of the information listed below is supplied. REFERENCE QUESTIONNAIRE

							1,20
WERE LIENS CLAIMS OR STOP NOTICES	ATTACH	20		No	No	Na	
WERE ANY PENALTIES IMPOSED? ATTACH EXPI ANATION	NO CONTRACTOR OF THE PARTY OF T	NO		No	0 2	۵	
WAS TIME EXTENSION NECESSARY YES / NO ATTACH	EXPLANATION	No		No	0 2	20	
APPROX. DATE COMPLTD MO. / YR.		12-2012		16-2013	10-2613	9-2013	
LIST NAME & TEL. NO. OF PERSON IN	OK THORY	D, 600 000 12-2012	973-575- 578-578	ALFONIO	ALPENZE 977 515, 5352	A. T DIGGORANG	
CHECK PRIME OR SUB CONT.		SUB		200	Bine	SUG	
PROJECT LOCATION & SPECIFIC TYPE OF WORK PERFORMED BY YOUR ORGANIZATION AND CONTRACT PRICE	Short Hills N.S.	N	\$ 8,200,000	STABUTH SPORTS	Arth Successun Upganoes B4.400.000	MERCK K-16 M-GLOCK GNTROS B 2, 100,000	
NAME OF OWNER COMPLETE ADDRESS AND TELEPHONE NUMBER	PLAKE Chiloress v.P Short Hills	1715 NOOTHEROG PINLY AMERICAN LATER	404 726-1332	ALAN KASHIAN NETLIFE STADIOM 1- NETLIFE DR. E. RUTHE PFOYD IIS 201 559-1769		Ton JA KOSITZ HONEYWELL IOI COLUNBIA DIR. HOUVISTOWN N.S	908-403-1409



11 MERRY LANE • EAST HANOVER, NJ 07936 • (973) 515-5352 • FAX (973) 515-4513

REFERENCES

Adam Varava Kean University 1000 Morris Ave. Union, NJ 908-956-5158

Alan Kashian MetLife Stadium 1 MetLife Dr. East Rutherford, NJ 201-559-1769

Tom Jakositz Honeywell, Inc. HBS 101 Columbia Rd. Morristown, NJ 908-403-1409

00000 BID DOCUMENT SUBMISSION CHECKLIST

Contract No. A919 FURNISH AND INSTALL NEW REPLACEMENT ELECTRIC FEEDER CABLES FOR A TWO (2) YEAR PERIOD

	Item	Contract Section	Initial Each Item Submitted with Bid
1.	Disclosure of Investment Activities in Iran	00100	aro
2.	Signature	00300	aso
3.	Contractor's NJ Dept. of Treasury Business Registration Certificate	00300	aEO.
4.	References	00300	aso
5.	Bid Bond or Certified Check	00301	(ED
6.	Surety Company Certificate	00302	65D.
7.	Statement of Ownership	00303	000
8.	Affirmative Action Compliance	00304	300
9.	Bid Sheet	00305	a PO
10.	Contract Period	00305 Item A.	CEFO
11.	Submittal of Bid	00305 Item P.	BPD.
12.	Non-Collusion Affidavit	00306	000
13.	Supplement to Bid Forms	00400	080
14.	Certification Questionnaire	00401	asid
15.	Acknowledgment of Receipt of Changes to Bid Documents	00402	(05 Q.
16.	Subcontractor's Listing	00403	080
17.	Public Works Contractor Registration	00404	GED
18.	Insurance Requirements	00727 /	050
19.	Hazardous Material (MSDS)	00826	(180)
20.	State of New Jersey Division of Purchase and Property Two-Year Chapter 51/Executive Order 117 Vendor Certification and Disclosure of Political Contributions (CH51.1 R1/21/2009)	Appendix 2	aco.

SIGNATURE: The undersigned hereby acknowledges and has submitted the above listed requirements. This sheet must be submitted with the bid documents.

Name of Bidder: (Company Name)	Travis Inc.	
By Authorized Repr		_
Signature:	welly Elica-	
Print Name and Title	Anthony E. DiGiovanni, Estimator	
Date: 10/18/	//3	

J. DiGiovanni, President		
obert G. Travis, Owner	100 Miles	
eter M. Barba, Owner		
	· · · · · · · · · · · · · · · · · · ·	

The bidder is requested to state below what work of a character similar to that included in the proposed contract he has done, and give references that will enable the Passaic Valley Sewerage Commissioner's to judge his experience, skill and business standing.

(Also Provided Copy of Certificate)

This requirement will be fulfilled by completion of the "Certification Questionnaire" included in Section 00401 – Reference Questionnaire.

00304 AFFIRMATIVE ACTION COMPLIANCE

IF AWARDED A CONTRACT, YOUR COMPANY/FIRM WILL BE REQUIRED TO PROVIDE THE FOLLOWING INFORMATION TO THE COMMISSION PRIOR TO THE ACTUAL AWARD OF THE CONTRACT AND EXECUTION THEREOF:

Pursuant to Public Law 1975, C. 127 (NJAC 17:27), Affirmative Action Compliance is required by contractors bidding on contracts let by Public Agencies (see Section 00737). Prior to the award and execution of the contract, the low bidder must furnish the Passaic Valley Sewerage Commission with the following documentation:

The Public Agency may require the construction contractor that is to be awarded the contract to submit their <u>Initial Project Workforce Report</u> (copy marked Public Agency) at the time the signed contract is returned to the Agency.

Note: The Initial Project Workforce Report (A.A. 201) must be submitted by the **third day after** the signing of the construction contract.

If the construction contractor does not submit the Initial Project Manning Report (A.A. 201) within the required time period, the Public Agency <u>may</u> extend the time period to the fourteenth calendar day.

If by the fourteenth calendar day the contractor does not submit the Affirmative Action document, the Public Agency <u>must</u> declare the contractor as being non-responsive and may award the contract to the second lowest responsible bidder.

00305 BID SHEET (Including Terms and Conditions Applicable to the Proposal)

CONTRACT NO. A919 - FURNISH AND INSTALL NEW REPLACEMENT ELECTRIC FEEDER CABLES FOR A TWO (2) YEAR PERIOD

Name of Contract	otor: <u>Travis Inc.</u>			
Business Name:	Travis Inc.			
Mailing Address:				
	(Malling Address m East Hanover, NJ 07936	rust include St	reet Address)	
Telephone No.	973-515-5352	Fax No.	973-515-4513	
Contact Person: _	Anthony E. DiGiovanni			

A. The Bidder shall furnish all labor, equipment, materials and supplies necessary to furnish and install new replacement electric feeder cables for a two (2) year period, in accordance with the contract specifications at various PVSC Facilities.

All work shall be performed on a time and material (T&M) basis and shall be in accordance with the contractor's T&M Schedule (Section 00400) which shall be submitted with the bid and will become part of this contract.

Costs for supervision and labor shall include all cost factors, such as wages, benefits, travel time, fuel, insurance, overhead and profit, general and administrative (G&A) and all other additional expenses. Billing time for the maintenance, testing and repair services performed is to begin at the start of work at PVSC and end at the time leaving PVSC. The minimum billable time for a call in will be four (4) hours.

The contractor hourly rate submitted for straight time will cover PVSC's normal working hours of 7:45AM to 4:15PM Monday through Friday in accordance with Division 1, Section 01046 - Working Hours. The overtime hourly rate will be used during weekdays after 40 hours per week or for services provided on weekends, Holidays or when being requested to work during PVSC non-normal working hours. Overtime hourly work (if approved) will be billed at a cost of 1.5 times the T&M schedule rate.

The contractor shall be available 7 days a week for 24 hour notice on-call and emergency service work during the life of this contract and will be compensated at the respective hourly rates.

Materials shall be billed at cost plus a 15% markup fee.

For purposes of evaluating and comparing bids, the contractor shall provide a T&M Schedule (see Section 00400) to maintain a hypothetical work crew at a PVSC facility, for a period of one forty (40) hour work week per year. The Contractor hourly rates for labor shall commence from the actual time the Contractor reports at the PVSC Facility requiring service until the time leaving PVSC. PVSC will maintain appropriated records showing the actual time the contractor spent on the job. The contractor will not be compensated for any traveling time between place of business and the PVSC Facility where work is to be performed.

All hourly rate(s) listed in the T&M Schedule (see Section 00400) shall be filled out in subsection 1.A. Failure to do so would be considered a non-responsive bid and may be cause for the bid to be rejected.

The hypothetical work crew described is for bid evaluation purposes only. Actual crews, equipment and duration will vary, depending on the specific task to be done.

The work required under this contract is indeterminate and will be performed on a "Time and Material" basis. There shall be no fixed contract amount when a specific task is required; a "not to exceed" price and time frame will be established for the task. Contractor's time required to develop a cost proposal for any given task or project and the time spent in pre-construction meeting(s) shall not be compensable.

The term of this contract is for a two (2) year period, beginning from the Notice to Proceed date. All prices shall hold firm and not be subject to increase during the term of the contract.

The work shall proceed in the manner specified and in conformity with the requirements set forth in the Contract Documents herein contained or hereunto attached and in accordance with the Contract Specifications.

In the event of a conflict between the bid specifications (request for proposal, invitation to bid, etc.) and the contractors bid submission (proposal, response, etc.) the terms of the specifications (or otherwise as referenced) shall govern the agreement between PVSC and the contractor.

- B. All prices are exclusive of N. J. State and Federal Taxes. The Passaic Valley Sewerage Commission is an agency of the State of New Jersey and is exempt from the New Jersey Sales and Use Taxes, pursuant to Section 9(a)(1) of the New Jersey Sales and Use Tax Act (N.J.S.A. 54:32B-1 et seq.).
- C. The cost of all Warrantees shall be included.
- **D.** The bidder's price shall be inclusive, including all labor, equipment, consumables, inspection and transportation. Bidder shall not include the cost of any services provided by PVSC.
- E. Prices shall also include all transportation charges on materials removed from site and charges pertaining to disposal and other costs pertaining to the execution of the work.
- **F.** The Commission reserves the right to make no award and reject all bids should, in their judgment it be in the public interest to do so.
- G. Contract Period and Extension Option: If in the opinion of the Commission it is in the best interest of PVSC to extend this contract, the Contractor will be so notified of the Commission's intent at least thirty (30) days prior to the expiration date of the existing contract. The Contractor shall have fifteen (15) calendar days to respond to the Commission's request to extend the contract. If the Contractor agrees to the extension, all terms and conditions of the original contract, including all prices, will be applicable.
- H. The successful Bidder shall maintain for the duration of the work to be done under this contract, Liability Insurance in the amounts specified in the General Conditions, Section 00727. Upon execution of the contract, the contractor shall furnish the PVSC with all certificates of insurance as required and set forth herein.
- I. It is the bidder's responsibility to visit the PVSC facilities to inspect and to verify all locations, dimensions, conditions and access as needed to perform the contract work. Arrangements for the site visit can be made by contacting Mr. Peter Wasiliew, Electrical Engineer at (973) 817-5794.
- J. No variations will be permitted to the terms and conditions of the contract. Terms and conditions are in accordance with N.J. Laws for Public Bidding and the policies of the Passaic Valley Sewerage Commission. Any bids that include variations to the terms and conditions will be considered non-responsive and will be rejected.
- **K.** If the Bidder intends to offer alternatives to the materials, equipment and/or services specified, then it is mandatory that the Bidders list and explain in detail any and all such exceptions to the

specifications on the attached "Bidders Exception" sheet, and shall submit the sheet with his bid. If the exception involves material or equipment, the Bidder shall also include technical data to show that the exception is equal to or better than those specified. It is understood that if no exception is listed on the "Bidders Exceptions" sheet, the Bidder shall supply all the materials, equipment and/or services exactly as prescribed and shall return the "Bidders Exception" sheet marked "NONE".

- L. Only Bidders with experience with a similar type of work will be considered. Certification of this experience, and the names and addresses of at least three (3) customers from whom similar work was performed within the last two (2) years, shall be supplied with the bid. A certification questionnaire form is included for the Contractor's convenience.
- M. Unless prevented by strike or strikers which prevent construction or delivery of equipment or supplies from the manufacturer, failure to complete the work within the specified time shall be considered an abandonment of the contract and the Commission may seek redress for damages.
- N. The work must be completed without interrupting the operation of the PVSC Treatment Plant. The contractor must schedule his operations in detail with PVSC as noted in Div. 1, Section 01310 of Contract Specifications.
- O. Payment will be made in accordance with the Schedule as specified in Division 1, Section 01025.
- P. Proposals shall be enclosed in opaque sealed envelopes, addressed to Passaic Valley Sewerage Commission, 600 Wilson Avenue, Newark, New Jersey 07105, with the name and address of the bidder plainly marked upon the outside thereof. (If forwarded by preferably registered mail, the sealed envelope containing the proposal, marked as directed above must be enclosed in another envelope addressed as specified in the Proposal.) The outside envelope containing the bids must clearly identify the bid number, contract name and bid opening date. Failure to properly identify the contents may result in the bid being rejected.

To the extent that <u>N.J.S.A.</u> 2A:30A-2 et seq. applies to the project and its related work and/or any agreement between PVSC and the Contractor, all exceptions contained in <u>N.J.S.A.</u> 2A:30A-2(a) et seq. shall apply solely for the benefit of PVSC.

T&M SCHEDULE

1.	For purposes of evaluating and comparing bids, the Bidder shall provide the following cost to maintain a hypothetical work crew at PVSC Facility, for a period of one 40 hour work week, including a hypothetical material cost.	YEAR 1	YEAR 2
	A. Hourly Rate per Person Including all wages, labor, travel, taxes, insurance (including Liability Insurance), overhead, licenses, qualifications, equipment, profit and all other mark-ups and costs: 1. Electrical Foreman \$/Hr. x 40 Hrs. 2. Electrical Journeyman \$/Hr. x 40 Hrs.	=\$(A1) =\$(A2)	=\$(C1) =\$(C2)
	 B. Material Mark—up Including all insurance, overhead, profit and any other mark-up shall be fifteen (15) percent. 1. Materials 15% Formula: Hypothetical Material Cost per week x % Mark up \$80,000.00/wk X 1.15 [enter % as decimal] 	=\$ <u>92,000.00</u> (B1)	=\$ <u>92,000.00</u> (D1)
	Year 1: Total (Sum of A1, A2 and B1) Year 2: Total (Sum of C1, C2 and D1)	=\$	=\$
	TOTAL (Sum Year 1 plus Year 2)	\$	

Contract No. A919 – FURNISH AND INSTALL NEW REPLACEMENT ELECTRIC FEEDER CABLES FOR A TWO (2) YEAR PERIOD 00401 Supplement to Bid Forms

A reference list generated by the bidder is acceptable provided all of the information listed below is supplied. REFERENCE QUESTIONNAIRE

WERE LIENS CLAIMS OR STOP NOTICES FILED?					
WERE ANY PENALTIES IMPOSED? ATTACH EXPLANATION	·		i i		
WAS TIME EXTENSION NECESSARY YES / NO ATTACH EXPLANATION		# 11 m			
APPROX. DATE COMPLTD MO. / YR.				411	
& TEL. NO. OF PERSON IN CHARGE					
CHECK PRIME OR SUB CONT. PR SUB					
PROJECT LOCATION & SPECIFIC TYPE OF WORK PERFORMED BY YOUR ORGANIZATION AND CONTRACT PRICE					
NAME OF OWNER COMPLETE ADDRESS AND TELEPHONE NUMBER					

00402

PASSAIC VALLEY SEWERAGE COMMISSION

ACKNOWLEDGMENT OF RECEIPT OF CHANGES TO BID DOCUMENTS FORM

CONTRACT NO. A919

FURNISH AND INSTALL NEW REPLACEMENT ELECTRIC FEEDER CABLES FOR A TWO (2) YEAR PERIOD

Pursuant to N.J.S.A. 40A:11-23.1a et seq., the undersigned bidder hereby acknowledges receipt of the following notices, revisions, or addenda to the bid advertisement specifications or bid documents. By indicating date of receipt, bidder acknowledges the submitted bid takes into account the provisions of the notice, revision or addendum. Note that the PVSC's record of notice to bidders shall take precedence and that failure to include provisions of changes in a bid proposal may be subject for rejection of the bid. If there were no revisions or addenda write NONE on the top line, sign the acknowledgment below and submit with the bid documents.

	Local Unit Reference Number or Title of Addendum/Revision	How Received (mail, fax, pick-up, etc.)	Date Received
12			
		Post of Long Co.	
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			lining" To the
	A SIL CONTRACTOR OF THE SILVER	"Year of the way	
4974	A THE SECOND SEC		

Name of Bidder: Ti (Company Name)	ravis Inc.
By Authorized Repressignature:	entative:
Print Name and Title:	Anthony E. DiGiovanni, Estimator
Date: 10/18/1	3

Acknowledgment by Bidder:

00403 (To be used if the contract value is expected to exceed \$100,000.00)

PASSAIC VALLEY SEWERAGE COMMISSION CONTRACT NO. <u>A919</u> - SUBCONTRACTOR LISTING

Failure to complete this Section may be a cause for the bid to be rejected.

Mandada ba Dankamana

The undersigned proposes to use the following subcontractors to perform the work indicated (use additional sheets as required).

	Work to be Performed	Name(s) and Address of Subcontractor(s)**	License Number(s)
1.	Plumbing & Gas Fitting and all Kindred Work	None	
2.	Heating and Ventilation and all Kindred Work	None	
3.	Electrical Work	None	
4.	Structural Steel and Ornamental Iron Work	None	
	Anthony E. DiGiovanni, Est	imator	
1	Name and Title of Authoriz	ed Representative	
	Signature of Authorized F	Representative	

**IMPORTANT NOTE: Whenever a Bid sets forth more than one subcontractor for any of the specialty trade categories (1) through (4) specified hereinabove in this section, the Bidder shall submit to PVSC a certificate signed by the bidder listing each subcontractor named in the Bid for that category. The certificate shall set forth the scope of work for which the subcontractor has submitted a price quote and which the Bidder has agreed to award to each subcontractor should the Bidder be awarded the contract. The certificate shall be submitted to PVSC simultaneously with the list of subcontractors. The certificate may take the form of a single certificate listing all subcontractors or, alternatively, a separate certificate may be submitted for each subcontractor.



05/17/2012 Registration Date: Expiration Date:

State of New Jersey

Department of Labor and Workforce Development Division of Wage and Hour Compliance

Public Works Contractor Registration Act

Pursuant to N.J.S.A. 34:11-56.48, et seq. of the Public Works Contractor Registration Act, this certificate of registration is issued for purposes of bidding on any contract for public work or for engaging in the performance of any public work to:



Responsible Representative(s):

Athony DiGiovani, President

Responsible Representative(s):

Robert G. Travis, Owner Peter M. Barba, Owner

Department of Labor and Workforce Development

and may be revoked for cause by the Commissioner

of Labor and Workforce Development.

This certificate may not be transferred or assigned

NON TRANSFERABLE

00404 PUBLIC WORKS CONTRACTOR REGISTRATION

PASSAIC VALLEY SEWERAGE COMMISSION 600 WILSON AVENUE NEWARK, NEW JERSEY 07105

PUBLIC WORKS CONTRACTOR REGISTRATION

CONTRACT NO. A919

FURNISH AND INSTALL NEW REPLACMENT ELECTRIC FEEDER CABLES FOR A TWO (2) YEAR PERIOD

- 1. In accordance with "The Public Works Contractor Registration Act," P.I., 1999, c238 (N.J.S.A 34:11 56.48 et seq.) amended by P.L. 2003, C91
 - "No contractor shall bid on any contract for public work as defined in section 2 of P.L 1963, c150 (C34:11 56.26) unless the contractor is registered pursuant to this act. No contractor shall list a subcontractor in a bid proposal for the contract unless the subcontractor is registered pursuant to P.L 1999, c238 (C34:11 56.48 et seq.) at the time the bid is made. No contractor or subcontractor, including a subcontractor not listed in the bid proposal, shall engage in the performance of any public work subject to the contract, unless the contractor is registered pursuant to that act." (N.J.S.A 34:11 56.51)
 - "Contractor means a person, partnership, association, joint stock company, trust, corporation, or other legal business entity or successor thereof who enters into a contract which is subject to the provisions of the "New Jersey Prevailing Wage Act," P.L 1963, c150 (C34:11 56.25 et seq.) and includes any subcontractor or lower tier subcontractor of a contractor defined herein" (N.J.S.A 34:11 56.50)
- 2. Proof of registration is required before an award can be made:
 - "Each contract shall, after the bid is made and prior to the awarding of this contract, submit to the public entity the certificates of registration for all subcontractors listed in the bid proposal. Applications for registration shall not be accepted as a substitute for a certificate of registration for the purposes of this section." (N.J.S.A 34:11 56.55)
- 3. On and after August 16, 2003, Contractors and their listed subcontractors bidding on covered work shall provide proof of the required registration prior to the contract award. [As a practical matter, proof of required registration should be submitted with the Bid].
- 4. By signing this form, the Contractor certifies that they shall provide proof of the required registration prior to the contract award.

(Name and Title of Signer - Please type)

END OF SECTION

HAZARD COMMUNICATION PROGRAM

This program has been prepared to comply with the requirements of the Federal OSHA Hazard Communication Standard (HCS) 29 CFR 1926.59 and to insure that information necessary for the safe use, handling and storage of hazardous materials is provided to and made available to employees.

This program includes guidelines on identification of material hazards and the preparation and proper use of container labels, placards and other types of warning devices.

In general, each employee of the company will be apprised of the substance of the Hazard Communication Standard, the hazardous properties of chemicals they work with and measures to take to protect themselves from these chemicals.

A. CHEMICAL INVENTORY LIST

1. Travis Inc. maintains an inventory of all known materials in use on the worksite by Travis Inc. A chemical inventory list is available from the Foreman.

2. Hazardous materials brought onto the worksite by Travis Inc. will be included on the hazardous material inventory list.

B. CONTAINER LABELING

1. All chemicals on site will be stored in their original or approved containers with a proper label attached, except small quantities for immediate use. Any container not properly labeled should be given to the Foreman for labeling or proper disposal.

2. Workers may dispense chemicals from original containers only in small quantities intended for immediate use. Any chemical left after work is completed must be returned to the

original container or the Foreman for proper handling.

3. No unmarked containers of any size are to be left in the work area unattended.

4. Travis Inc. will rely on manufacturer applied labels whenever possible, and will ensure that these labels are maintained. Containers that are not labeled or on which the manufacturer's label has been removed will be relabeled.

5. Travis Inc. will ensure that each container is labeled with the identity of the hazardous chemical contained and any appropriate hazard warnings.

C. MATERIAL SAFETY DATA SHEETS (MSDS)

- 1. Employees working with a Hazardous Material may request a copy of the Material Safety Data Sheet (MSDS). Requests for MSDS's should be made to the Foreman.
- 2. MSDS should be available and standard chemical reference may also be available on the site to provide immediate reference to safety information.

3. An emergency procedure to gain access to MSDS's information will be established.

4. MSDS's that meet the HCS requirements must be fully completed and received at the job site either prior to, or at the time of receipt of the first shipment of any potentially hazardous

D. EMPLOYEE TRAINING

Each employee who works with or is potentially exposed to hazardous materials will receive initial training on the safe use of those hazardous chemicals. Additional training will be provided for employees whenever a new hazard is introduced into their work areas.

The training will include these elements:

- Hazardous material properties including visual appearance and odor; also, methods that can be used to detect the presence or release of hazardous materials.
- 2. Physical and health hazards associated with potential exposure to workplace chemicals.
- Procedures to protect against hazards, e.g. personal protective equipment, work practices, and emergency responses.
- 4. Hazardous chemical spill and leak procedures.
- 5. Information on the Hazard Communication Standard specifically,
 - 1. Labeling and warning systems.
 - 2. An explanation of Material Safety Data Sheets, including

Where MSDS's are located, how to understand their content, and how employees may use appropriate hazard information.

A record of each training session, the material covered, the names of employees attending, and the trainer(s) will be maintained on the job site and a copy sent to the Company office.

E. PERSONNEL PROTECTIVE EQUIPMENT (PPE)

Required PPE is available from the Foreman. Any employee found in violation of PPE requirements may be subject to disciplinary actions up to and including discharge.

F. EMERGENCY RESPONSE

- Any incident of over exposure or spill of a hazardous chemical substance must be reported to the Foreman at once.
- 2. The Foreman or the immediate supervisor will be responsible for ensuring that proper emergency response actions are taken in leak/spill situation.

G. HAZARDS OF NON-ROUTINE TASKS

- Supervisors will inform employees of any special tasks that may arise which would involve possible exposure to hazardous chemicals.
- Review of safe work procedures and use of required PPE will be conducted prior to the start of such tasks. Where necessary, areas will be posted to indicate the nature of the hazard involved.

H. INFORMING OTHER EMPLOYERS

- 1. Other onsite employers are required to adhere to the provisions of the Hazard Communication Standard.
- Information on hazardous materials known to be present will be exchanged with other employers. Employers will be responsible for providing necessary information to their employees.
- 3. Other site employers will be provided with a copy of Travis Inc.'s hazard communication program.

I. POSTING

Travis Inc. has posted information for employees at this job site on the Hazard Communication Standard. This information can be found at _____

Further information on this written program, the Hazard Communication Standard, and applicable MSDS's is available from Travis Inc. The phone number is (201) 808-9848. The Fax number is (201) 808-1295.

MATERIAL SAFETY DATA SHEETS

A. Aerosols: Cleaners & Lubricants & Coatings

WD-40
2-26
Lectra Clean
40-705 Switch & Contact Cleaner
40-725 Cable Cleaner
40-635 6% Silicone Lube
Electrical Quality Silicone
Zinc-It
Z.R.C. Cold Galvanizing Compound

B. Bulk Chemical

CO Contact Cleaner (Trichlorotriflouroethane)

C. Fuels & Oils (Petroleum)

Liquid Petroleum Gas (LPG)
15-PBG High VI Hydraulic Oil
Texaco 1537 Aircraft Hydraulic Oil
Rigid Nu Clear Thread Cutting Oil
Light Thread Cutting Oil (463/B)

D. Adhesives & Sealants

Carlon Standard Clear PVC Cement
Carlon Standard Clear PVC Solvent Cement
Carlon All Weather Quickset Clear PVC Solvent Cement
Duxseal (Sealing Putty)
GE 5000 Silicone Rubber Sealant
GE 5010 Silicone Rubber Sealant
Chico A Sealing Compound
Chico X Sealing Fiber
3M Brand Fire Barrier CP-25 N/S No-Sag Caulk

E. Specialty Lubricants

Yellow 77 Wire Pulling Lubricant Aqua-Gel Wire Pulling Lubricant Polywater Lubricant WJ

F. Welding Powders

Cadweld Electrical Welding Material Cadweld Aluminum Welding Material Cadweld One Shot Molds

G. Articles. Manufactured

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Copper or Aluminum Electrical Wire and Cable Ridgid Conduit, EMT, Coupling, etc. Zinc Plated Steel Anchors Zinc Diecast Anchors Rayovac Alkaline Batteries Diamond Impregnated Cutting & Grinding Heads





ERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Manufacturer: WD-40 Company

Address:

1061 Cudahy Place (92110)

P.O. Box 80607

San Diego, California

92138-9021

Emergency Telephone:

Chemical Name:

(619) 275-1400 T Organic Mixture

Trade Name:

WD-40 Aerosol

II. HAZARDOUS INGREDIENTS

Chemical Name	CAS Number	%	Exposure Limit ACGIH/OSHA
Aliphalic Petroleum Distillates	8052-41-3	50	100 ppm (PEL)
A-70 Hydrocarbon Propellant	68476-85-7	25	1000 ppm (PEL)
Petroleum Base Oil	8012-95-1	> 15	5 mg/M³ (TWA)
Corresion Inhibitor	Proprietary Mixture	< 10	5 mg/M³ (TWA)
Wetting Agent	Proprietary Mixture	< 5	500 ppm (PEL)
Fragrance	Proprietary Mixture	< 5	NDA

III. PHYSICAL DATA

Bolling Point:

Vapor Density: (air = 1)

Solubility in Water:

Specific Gravity (H,0 =1)

Percent Volatile (volume):

NA

Greater than 1 Insoluble

.710 @ 70°F

Evaporation Rate:

Vapor Pressure:

Appearance:

Odor:

Not determined 50 PSI @ 70°F

Light amber

Characteristic odor

IV. FIRE AND EXPLOSION

Flash Point:

Flammable Limits:

Extinguishing Media:

Special Fire Fighting Procedures:

Unusual Fire and Explosion Hazards:

NA to aerosol can's

(propellant portion) [Lel] 1.8% [Uel] 9.5%

CO, Dry Chemical

None

Considered "extremely flammable" under Consumer Product

Salety Commission regulations.

V. HEALTH HAZARD INFORMATION

Threshold Limit Value .

· Aliphatic Petroleum Distillates (Stoddard solvent) lowest TLV (ACGIH 100 ppm.)

Symptoms of Overexposure

Inhaled Vapor: May cause anesthesia, headache, dizziness, nausea and upper respiratory irritation.

Skin Contact: May cause drying of skin and or Irritation. Eye Contact: May cause irritation, tearing and redness.

Swallowed: May cause irritation, nausea, vomiting and diarrhea.

Aspiration into Lungs: May cause chemical pneumonitis.

First Aid Emergency Procedures

Swallowed:

Do not induce vomiting, seek medical attention.

Eye Contact:

Immediately flush eyes with large amounts of water for 15 minutes.

Skin Contact: Wash with soap and water.

Inhaled:

Remove to fresh air. Give artificial respiration if necessary, if breathing is difficult, give

oxygen.

Suspected Cancer Agent

Yes No X

The components in this mixture have been found to be noncarcinogenic

by IARC and NTP.

Stability: Conditions to avoid: Incompatability: Hazardous decomposition products: Hazardous polymerization:	Stable X Unstable NA Strong oxidizing materials NA May occur Will not occur X
dissipated. Waste Disposal Method .	cans should be placed in plastic bag or open pall until pressure hured or incinerated; bury in land fill. Liquid should be incinerated o
VIII. SPECIAL HANDLING INFORM.	ATION
Ventilation: Respiratory Protection: Protective Gloves: Eye Protection: Other Protective Equipment:	Sufficient to keep solvent vapor less than TLV. None required. None required. None required. None required.
IX. SPECIAL PRECAUTIONS Keep from sources of ignition, do not take in puncture, incinerate or store container above.	nternally. Avoid excessive inhalation of spray particles. Do not
X. TRANSPORTATION DATA	e 120-7.
Domestic Surface Description: Consumer Commodity Hazard Class: ORM-D D No.: NONE Label Required: Consumer Commodity (ORM	A-D) imable Gas-Aerosol products)
abel Required: Consumer Commodity (ORM	-D-AIR)
NATURE: R. Miles 72 mile	TITLE: Technical Director

MATERIAL SAFETY DAT. E ET

MANUFACTURED BY: CRC CHEMICA	MSDS002004 Phone (215) 674-4300				
885 LOUIS DRIVE, WARMINSTER, PA			1 110/16/12	15) 6/4-430	0
1. INGREDIENTS	CAS #	ACGIH TLV	OS' (A	Other Limits	
Petroleum Distillate	64742-47-8	NA	NA	200ppm	-
1,1,1 Trichloroethane	71-55-6	350		доорры	
*Inhibited paraffinic oil	NA		As mist		29
Carbon Dioxide	124-38-9	5000	1110711		23
					4
*The oil and additives are	not hazardous acc	ording to	OSHA st	andard	
The carbon dioxide is the	propellent for th	S Contai	ner b		
85 psig at 70°F.		S Conca.	ner. Pr	essure	×
	or Density Heavier th	han air			
opearance and Odor Amber liquidubility Medliqible in wat	id, pleasant odor				
ppearance and Odor Amber liquidity Medicible in wat FIRE AND EXPLOSION DATA shpoint 170°F Method COC	er.	Flam	mable Limits		
ppearance and Odor Amber liquidubility Medicible in water Single Service of the S	er. ry Chemical, CO,	Flam	UEL	• 1	
ppearance and Odor Amber liquidubility Medligible in wat FIRE AND EXPLOSION DATA shpoint 170°F Method COC inquishing Media Foam, Fog. Disual Hazards Aerosol contain	er.	Flam	UEL	• 1	
ppearance and Odor Amber liquidity Medicible in wat FIRE AND EXPLOSION DATA shpoint 170°F Method COC inquishing Media Foam, Fog. Disual Hazards Aerosol contain	er. ry Chemical, CO,	Flam	UEL	• 1	
ppearance and Odor Amber ligure of the property of the propert	er. ry Chemical, CO,	Flam	UEL	• 1	
ppearance and Odor Amber liquidubility Medicible in wat FIRE AND EXPLOSION DATA shpoint 170°F Method COC inquishing Media Foam, Fog. Disual Hazards Aerosol contain REACTIVITY AND STABILITY willing Stable ardous decomposition products Therm	ry Chemical, CO2	Flame LEL men heate	d above	130°F.	ono
ppearance and Odor Amber liquidity Medicible in wat FIRE AND EXPLOSION DATA shpoint 170°F Method COC inquishing Media Foam, Foq. Disual Hazards Aerosol contain REACTIVITY AND STABILITY billity Stable	ry Chemical, CO2 ners may explode wh	Flame LEL men heate	UEL d above	130°F.	ono
ppearance and Odor Amber liquidublity Medicible in wat plubility Medicible in wat properly and the properly and the properly and the properly and the properly and stable ardous decomposition products Therm erials to avoid Strong oxidizer	ry Chemical, CO2 ners may explode wh	Flame LEL men heate	d above	130°F.	ono:
pearance and Odor Amber liquiduplity Medicible in wat substitute in Water Street Stree	ry Chemical, CO2 ners may explode wh	Flame LEL men heate	d above	130°F.	ono
ppearance and Odor Amber liquidity Medicible in wat plubility Stable ardous decomposition products Therm prials to avoid Strong oxidizer PROTECTION INFORMATION illation Mechanical ventilation	ry Chemical, CO, ners may explode wh	Flam LEL ten heate	Orine, cossibly p	130°F.	ono
FIRE AND EXPLOSION DATA shpoint 170°F Method COC inquishing Media Foam, Fog. Di usual Hazards Aerosol contain REACTIVITY AND STABILITY bility Stable ardous decomposition products Therm erials to avoid Strong oxidizer PROTECTION INFORMATION illation Mechanical ventilate iratory Self-contained brea	ry Chemical, CO2 ners may explode wh	Flam LEL ien heate ide, chl and po	Orine, cossibly p	130°F.	•
ppearance and Odor Amber liquidity Medicible in wat plubility Medicible in wat properly and Explosion DATA ashpoint 170°F Method COC anguishing Media Foam, Fog. Disusual Hazards Aerosol contains REACTIVITY AND STABILITY polity Stable ardous decomposition products Therm erials to avoid Strong oxidizer PROTECTION INFORMATION	ry Chemical, CO, ners may explode who hal-Hydrogen chlores	Flam LEL ien heate ide, chl and po	Orine, cossibly p	130°F.	•

6. HEALTH H	AZARD DATA							
Primary Routes	7	& Inha						
-	toms of Exposure	a TUUA	ation					
1. Acute Overexp		tion -	Mandanha	444				
	21111424	ETOU -	Headache,	01221	ness & n	ausea -	may als	o hai
	hetic effect	. Eyes	- burnin	dand	irritați	on. Ski	n - cau	ses
2. Chronic Overe	defatting.							
Z. CINORIO OFFICE	cosure Dermi	titus						
Medical Condition	s Generally Aggrav	ated by Ext	oosure Bre	athing	condition	วทร		
Chemical Lated as Carcin							H	
or Potential Caternogen			rogram	HotCX	Monographs	Yes D No 1877	OSHA	NOX ST
Emergency and Fir	St Aid Procedures							
1 Introducion			mptoms pe					
7 France	move to fres	h air -	apply ar	tifici	al respi	ration i	f nece	ssarv
Z. Eyes Flus	h with large	amount	s of wate	r.			**	
3. Skin - Wash	with soap as	nd wate	T.					
4 Imposition	not induce v			a nhue	detan	allam a		
7. SPILL OR LE	AK PROCEDU	RES		A MAYS	u.i.au.			
Preceutions to be taken in	Store in a							
iteds to be taken in case Agreement of residence of soil in a closed		te area	a, absorb	with	inert ma	terial a	nd plac	e
					100			
Vaste Disposal	Partially us	ed or f	ull aeros	sols a	re ‼azaro	lous Wast	e if	
	Dispose of i							recuil
SPECIAL PRE	ECAUTIONS AN	ND USE	DIRECTION	NS	•			
erosols may	explode if	content	s are hea	ted al	oove 130°	F,		
Japors are he	eavier than a	air and	will ter	nd to	collect i	n low ar	eas.	
						•		
					<u> </u>			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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EPARED BY: A.	P. Reed						EVILET EVI	
	DATE OF REVISION	Nov.	1985			77 M M A		
						-		

MATERIAL SAFETY DATA SHEET

	H Cha	MSDS002018 Phone (215) 674-4300				
MANUFACTURED BY: CRC CHEMIN			Pho	ne (215) 6	574-4300)
885 LOUIS DRIVE, WARMINSTER. P.	A. 18974					
1. INGREDIENTS	CAS #	ACC TL	SIH OSI		Other Limits	%
1,1,1 Trichloroethane	71-55-6	350	350			72
Perchloroethylene	127-18-4	50				24
Carhon Dioxide	124-38-9	500	0			
,						
pearance and Odor Colorless Substity Slight solubility	liquid - Irritati	(Air = 1 nd odor	at high		inic	
pearing Point NA pearance and Odor Colorless substity Slight solubility aterials FIRE AND EXPLOSION DATA	Vapor Densmy 4.8 liquid - Irritati y in water - good	(Air = 1 nd odor	at high	y orga		
pearing Point NA pearance and Odor Colorless stubility Slight solubility aterials FIRE AND EXPLOSION DATA	Vapor Densmy 4.8 liquid - Irritati y in water - good	(Air = 1 nd odor	at high for man Flammable	y , orga Limits	212°F	
pearing Point NA pearance and Odor Colorless slubility Slight solubility aterials FIRE AND EXPLOSION DATA shpoint Flore Method TCC, singuishing Media Water fog	Vapor Densmy 4.8 liquid - Irritati y in water - good A TOC, COC	(Air = 1 nd odor solvent	at high for man Flammable LEL 7.5	y orga Limits UEL	212°F	
pearing Point NA pearance and Odor Colorless plubility Slight solubility paterials FIRE AND EXPLOSION DATA patentials Method TCC, 12 page 15	Vapor Densmy 4.8 liquid - Irritati y in water - good	(Air = 1 nd odor solvent	at high for man Flammable LEL 7.5	y orga Limits UEL	212°F	
pearing Point NA pearance and Odor Colorless slubility Slight solubility aterials FIRE AND EXPLOSION DATA shpoint Flore Method TCC, singuishing Media Water fog	Vapor Densmy 4.8 liquid - Irritati y in water - good A TOC, COC	(Air = 1 nd odor solvent	at high for man Flammable LEL 7.5	y orga Limits UEL	212°F	
pearance and Odor Colorless plubility Slight solubility saterials FIRE AND EXPLOSION DATA shpoint Flone Method TCC, singuishing Media Water fog usual Hazards Aerosols may	Vapor Density 4.8 liquid - Irritati y in water - good A TOC, COC explode if their	(Air = 1 nd odor solvent	at high for man Flammable LEL 7.5	y orga Limits UEL	212°F	
peezing Point NA peearance and Odor Colorless plubility Slight solubility naterials FIRE AND EXPLOSION DATA shipoint None Method TCC, singuishing Media Water fog usual Hazards Aerosols may REACTIVITY AND STABILITY bility Good - Avoid exposu	Vapor Densmy 4.8 liquid - Irritati y in water - good A TOC, COC explode if their	(Air = 1 nd odor solvent tempera	for man Flammable LEL 7.5	y orga Limits UEL eeds 1	212°F 14.5% 30°F	
pearance and Odor Colorless plubility Slight solubility materials FIRE AND EXPLOSION DATA minimum from Method TCC, fringuishing Media Water fog minimum Hazards Aerosols may REACTIVITY AND STABILITY bility Good - Avoid exposition products The	Vapor Densmy 4.8 liquid - Irritati y in water - good A TOC, COC explode if their	(Air = 1 nd odor solvent tempera	for man Flammable LEL 7.5 ture exc	y orga Limits UEL eeds 1	212°F 14.5% 30°F	
peering Point NA pering Point N	Vapor Densmy 4.8 liquid - Irritati y in water - good A TOC, COC explode if their res to open flame hermal - Hydrogen e in aluminum con	(Air = 1 nd odor solvent tempera es, arcs chlorid	Flammable LEL 7.5 ture exc and hig	y orga Limits UEL eeds 1 h temp	212°F 14.5% 30°F	
pearance and Odor Colorless substity Slight solubility saterials FIRE AND EXPLOSION DAT, shpount Tone Method TCC, Singuishing Media Water fog usual Hazards Aerosols may REACTIVITY AND STABILITY bility Good - Avoid exposusardous decomposition products The terials to avoid Avoid storage	Vapor Densmy 4.8 liquid - Irritati y in water - good A TOC, COC explode if their res to open flame hermal - Hydrogen e in aluminum con	(Air = 1 nd odor solvent tempera es, arcs chlorid	Flammable LEL 7.5 ture exc and hig	y orga Limits UEL eeds 1 h temp	212°F 14.5% 30°F	
pearance and Odor Colorless plubility Slight solubility paterials FIRE AND EXPLOSION DATA paterials Method TCC, 100 Transport Flore Flo	Vapor Densny 4.8 liquid - Irritati y in water - good A TOC, COC explode if their res to open flame mermal - Evdrogen e in aluminum cont	(Air = 1 nd odor solvent tempera es, arcs chlorid tainers	Flammable LEL 7.5 ture exc and hig	y orga Limits UEL eeds 1 h temp	212°F 14.5% 30°F	
pearance and Odor Colorless plubility Slight solubility naterials FIRE AND EXPLOSION DATA ISHDOINT Flone Method TCC, Singuishing Media Water fog usual Hazards Aerosols may REACTIVITY AND STABILITY bility Good - Avoid exposurardous decomposition products The terials to avoid Avoid storage luminum and zinc powder. PROTECTION INFORMATION Tillitation TLV - Use mechanic	Vapor Densmy 4.8 liquid - Irritati y in water - good A TOC, COC explode if their fires to open flame mermal - Evdrogen e in aluminum cont cal means if neces	(Air = 1 nd odor solvent tempera es, arcs chlorid tainers	Flammable LEL 7.5 ture exc and hig e, chlor or conta	Lumms UEL eeds 1 h temp	212°F 14.5% 30°F	
pearance and Odor Colorless plubility Slight solubility paterials FIRE AND EXPLOSION DATA paterials Method TCC, 100 Transport Flore Flo	Vapor Densmy 4.8 liquid - Irritati y in water - good A TOC, COC explode if their fires to open flame mermal - Evdrogen e in aluminum cont cal means if neces	(Air = 1 nd odor solvent tempera es, arcs chlorid tainers ssary mask or	Flammable LEL 7.5 ture exc and hig e, chlor or conta-	Lumms UEL eeds 1 h temp	212°F 14.5% 30°F	

F	Primary Routes of Entry The 3-44
	igns and Symptoms of Exposure
1	. Acute Overexposure Inhalation - headaches, dizziness, anesthesia,
	anconsciouness. Eyes - causes pain and some irritation. Skincauses
	irritation on repeated exposures
	Chronic Overexposure Repeated overexposures may cause liver and kidney effections
M	edical Conditions Generally Aggravated by Exposura High levels (8000 ppm +) of vapor may
	ause cardiac arrthymias
	micel Listed as Carcinogen Nerbonal Tosiosiogy Yes D JARC Yes D OSHA Yes D Sential Carcinogen Propriam No DE Monographia No 3D No 32
***************************************	ergency and First Aid Procedures (If symptoms persist, call a physician)
	maiation Remove to fresh air, apply artificial respiration if
2. E	yes riush for 15 minutes with large amounts of water.
3. S	Remove contaminated clothing. Wash exposed skin with soap
4. In	gestion Do not induce vomiting - Call a physician.
7. 5	PILL OR LEAK PROCEDURES
(eps t	on the state of sound Usually not a problem with aerosols - Area should
re	ventilated and absorbent used to pick up excess material.
	Disposal Discarded filled cans or partially used cans are Fazardous te - Dispose of in conformance to Regulations
	ECIAL PRECAUTIONS AND USE DIRECTIONS
VO	d prolonged skin contact or breathing of vapors. Since vapors are
eav	ier than air, aerosols should not be used in confined areas or low
pot	s without adequate ventilation. If vapors are suspected in a low
rea	, do not enter unless special breathing apparatus is used and an
bse	rver is present for assistance.
	aerosols away from heat.
EPAR	ED BY: A. P. Reed
CIN	AL DATE OR DATE OF REVISION NOV. 1985

MATERIAL SAFETY DATA SHEE FOR JUSTINGS, RESINS AND RELATED ERIALS (APPROVED BY U.S. DEPARTMENT OF LABOR)

· SECTION I Manufacturers Name: IDEAL INDUSTRIES Emergency Phone No: 815/895-5181 Street Address: 1000 PARK AVE City, State, and Zip Code: SYCAMORE , IL Code Identification: 40-705 60178 Rev. Date: 11/19/85 Product Class (AEROSOL) CLEANERS Date: 06/13/88 Trade Name: 40-705 SWITCH & CONTACT CLNR Lab No. : 32850 SECTION II - HAZARDOUS INGREDIENTS PEL * TLV * TLV * * *
PPM * PPM * MG/M3* LEL * CAS NUMBER* *INGREDIENT * PERCENT* *TRICHLOROTRIFLUORDETHANE * 1000 * 1000 *7600.00*NONE* 00076-13-1* 75 *DICHLORODIFLUOROMETHANE 25 1000 * 1000 *4950. 00*NQNE* 00075-71-B* # * * * # * * * *AEROSOL - CONTENTS UNDER PRESSURE *Carcinogenicity: THIS PRODUCT IS NOT CONSIDERED TO BE A CARCINOGEN * BY THE NATIONAL TOXICOLOGY PROGRAM, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, OR THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION *Pursuant to Proposition 65: CERTAIN RAW MATERIALS USED. IN MAKING THIS PRODUCT MAY CONTAIN SMALL AMOUNTS OF MATERIALS AS IMPURITIES WHICH ARE REGULATED BY PROPOSITION 65. SEE SECTION IX. SECTION III - PHYSICAL DATA Boiling Range: PROPELLANT BELOW 0.0 F Vapor Density: HEAVIER THAN AIR EVAPORATION RATE FASTER THAN ETHER Percent Volatile Weight Per *PROPELLANTS By Weight: 100 Gallon:

*

Customer No: 06258 Name: AL INDUSTRIES: 32850 (PAGE 2) SECTION IV - FIRE AND EXPLOSION HAZARD DATA __ Category: CONSUMER COMMODITY Flash Point: NONE LEL: SEE ORM-D SECTION II Extinguishing Media: NOT APPLICABLE Unusual Fire and Explosion Hazards: KEEP AT ROOM TEMPERATURE AS EXPOSURE TO DIRECT SUNLIGHT OR OTHER HEAT MAY CAUSE BURSTING (SEE, SECTION VI, IX). Special Fire Fighting Procedures: WATER MAY BE INEFFECTIVE - WATER MAY BE USED TO KEEP FIRE EXPOSED CONTAINERS COOL. SECTION V - HEALTH HAZARD DATA Threshold Limit Value: (SEE SECTION II HAZARDOUS INGREDIENTS) Effects of Overexposure: IN A CONFINED AREA VAPORS IN HIGH CONCENTRATION ARE ANESTHETIC. IRRITANT TO SKIN AND UPPER RESPIRATORY SYSTEM. OVER-EXPOSURE MAY RESULT IN LIGHT-HEADEDNESS, STAGGERING GAIT, GIDDINESS AND POSSIBLE NAUSEA. HARMFUL DR FATAL IF SWALLDWED REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE, ALSO KIDNEY AND LIVER DAMAGE. Medical Conditions Prone to Aggravation by Exposure: NONE ESTABLISHED. tes of Entry: Inhalation: YES Skin: YES Ingestion: YES . mergency and First Aid Procedures: Breathing: REMOVE PATIENT TO FRESH AIR. Eyes: FLUSH WITH WATER FOR AT LEAST 15 MINUTES. Skin: WASH WITH SOAP AND WATER. Swallowing: CALL PHYSICIAN IMMEDIATELY. DO NOT INDUCE VOMITING. SECTION VI - REACTIVITY DATA Stability: STABLE Conditions to Avoid: DO NOT STORE ABOVE 120 F Incompatability (NONE) Hazardous Decomposition Products By open flame: NONFLAMMABLE - HOWEVER IF SPRAYED INTO OPEN FLAME, FUMES MAY CONTAIN TOXIC FUMES OF CHLORIDES AND FLUORIDES. HYDROGEN CHLORIDE, AND PHOSGENE GAS. Hazardous Polymerization: WILL NOT OCCUR SECTION VII - SPILL OR LEAK PROCEDURES

sueps to be taken in case material is released or spilled: VENTILATE AREA - ESPECIALLY LOW PLACES WHERE VAPORS WILL COLLECT. AVOID BREATHING OF VAPORS AND REMOVE WITH INERT ABSORBENT.

Vaste disposal method: DO NOT INCINERATE - DISPOSE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS REGARDING POLLUTION.

Customer No: 06258 Nem --EAL INDUSTRIES No.: 32850 (PAGE ·************************* · 我你你你我我我我我我我我我我我我我我我我我我我我我

SECTION VIII - SPECIAL PROTECTION INFORMATION

Respiratory Protection: AVOID BREATHING OF VAPOR OR SPRAY MIST (SEE SECTION X)

> PROVIDE LOCAL EXHAUST VENTILATION IN VOLUME AND Ventilation:

PATTERN TO KEEP TLV OF ALL HAZARDOUS INGREDIENTS IN SECTION II BELOW ACCEPTABLE LIMIT, AND LEL

3)

IN SECTION II BELOW STATED LIMIT.

Protective Gloves: RECOMMENDED FOR PROLONGED OR REPEATED CONTACT.

Eye Protection: FOR PROLONGED USE IN CLOSE QUARTERS RECOMMEND SAFETY

GLASSES WITH UNPERFORATED SIDESHIELDS.

Other Protective Equipment:

SECTION IX - SPECIAL PRECAUTIONS

Precautions to be taken in handling and storing:

DO NOT STORE ABOVE 120 F. KEEP AT ROOM TEMPERATURE AS EXPOSURE TO DIRECT SUNLIGHT OR HEAT MAY CAUSE BURSTING.

Other Precautions:

KEEP AWAY FROM CHILDREN. DO NOT PUNCTURE OR INCINERATE. DO NOT SPRAY NEAR FIRE OR OPEN FLAME.

Pursuant to Proposition 65:

PROPOSITION 65 APPLIES INITIALLY TO A LIST OF 29 CHEMICALS NAMED BY THE GOVERNOR OF CALIFORNIA A YEAR AGO AS CARCINOGENS OR REPRODUCTIVE TOXINS. WARNING REQUIREMENTS FOR SPECIFIC CHEMICALS TAKE EFFECT ONE YEAR AFTER THEY ARE ADDED TO THE COVERNOR'S LIST. OTHER CHEMICALS ALREADY ADDED TO THE GOVERNOR'S LIST WILL BE REGULATED LATER UNDER PROPOSITION 65.

SECTION X HAZARDOUS MATERIAL IDENTIFICATION

COMMUNICATION OF PHYSICAL PROPERTY, HEALTH, AND SAFETY INFORMATION IS A KEY FACTOR IN OUR PRODUCT SAFETY PROGRAM. WITH THIS INFORMATION YOU CAN BETTER FULFILL YOUR OBLIGATION TO EDUCATE EXPOSED PERSONNEL IN THE PROPER HANDLING TECHNIQUES REQUIRED TO MAINTAIN SAFETY IN THE WORKPLACE. LISTED IN THIS SECTION IS NPCA-HMIS CLASSIFICATION FOR THIS PRODUCT.

> HMIS. CLASSIFICATION CODE

Health: 1 SLIGHT HAZARD Flammability: MINIMAL HAZARD 0

Reactivity: 0 MINIMAL HAZARD

Personal protection: D FACE SHIELD, GLOVES, APRON

THE ABOVE INFORMATION PERTAINS TO THIS PRODUCT AS CURRENTLY FORMULATED, AND IS BASED ON THE INFORMATION AVAILABLE AT THIS TIME. ADDITION OF REDUCERS OR OTHER ADDITIVES TO THIS PRODUCT MAY SUBSTANTIALLY ALTER THE COMPOSITION AND HAZARDS OF THE PRODUCT. SINCE CONDITIONS OF USE ARE OUTSIDE OUR CONTROL, WE MAKE NO WARRANTIES, EXPRESS OR IMPLIED, AND ASSUME NO LIABILITY IN CONNECTION WITH ANY USE OF THIS INFORMATION.

Customer No: 06258 Name: IDEAL INDUSTRIES Lab No. : 36363

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

DOT Category: CONSUMER COMMODITY Flash Point: NONE

ORM-D

LEL: SEE SECTION II

Extinguishing Media: NOT APPLICABLE

Unusual Fire and

Explosion Hazards: KEEP AT ROOM TEMPERATURE AS EXPOSURE TO DIRECT SUNLIGHT OR

OTHER HEAT MAY CAUSE BURSTING (SEE, SECTION VI, IX).

Special Fire Fighting

Procedures:

WATER MAY BE INEFFECTIVE - WATER MAY BE USED TO KEEP FIRE

EXPOSED CONTAINERS COOL.

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value: (SEE SECTION II HAZARDOUS INGREDIENTS)

Effects of Overexposure: IN A CONFINED AREA VAPORS IN HIGH CONCENTRATION ARE ANESTHETIC. IRRITANT TO SKIN AND UPPER RESPIRATORY SYSTEM. DVER-EXPOSURE MAY RESULT IN LIGHT-HEADEDNESS, STAGGERING GAIT, GIDDINESS AND POSSIBLE NAUSEA. HARMFUL OR FATAL IF SWALLOWED

REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED Chronic: OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE, ALSO KIDNEY AND LIVER DAMAGE.

Medical Conditions Prone to Aggravation by Exposure: NONE ESTABLISHED.

outes of Entry: Inhalation: YES Skin: YES Ingestion: YES

Emergency and First Aid Procedures:

Breathing: REMOVE PATIENT TO FRESH AIR.

Eyes: FLUSH WITH WATER FOR AT LEAST 15' MINUTES.

Skin: WASH WITH SOAP AND WATER.
Swallowing: CALL PHYSICIAN IMMEDIATELY. DO NOT INDUCE VOMITING.

SECTION VI - REACTIVITY DATA

Stability: STABLE Conditions to Avoid: DO NOT STORE ABOVE 120 F

Incompatability (NONE)

Harardous Decomposition Products

By open flame: NONFLAMMABLE - HOWEVER IF SPRAYED INTO OPEN FLAME, FUMES MAY CONTAIN TOXIC FUMES OF CHLORIDES AND FLUORIDES.

HYDROGEN CHLORIDE, AND PHOSGENE GAS.

Hazardous Polymerization: WILL NOT OCCUR

SECTION VII - SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled:

VENTILATE AREA - ESPECIALLY LOW PLACES WHERE VAPORS WILL COLLECT. AVOID BREATHING OF VAPORS AND REMOVE WITH INERT ABSORBENT.

Waste disposal method:

DO NOT INCINERATE - DISPOSE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS REGARDING POLLUTION.

MATERIAL SAFETY DATA SHEET FOR JOATINGS, RESINS AND RELATED N. ERIALS (APPROVED BY U.S. DEPARTMENT OF LABOR)

SECTION I Manufacturers Name: IDEAL INDUSTRIES Emergency Phone No: 815/895-5181 Street Address: 1000 PARK AVE City, State, and Zip Code: SYCAMORE Code Identification: 40-725 , IL 60178 Rev. Date: 01/08/86 Product Class (AEROSOL) CLEANERS Date: 06/13/88 Trade Name: 40-725 CABLE CLEANER Lab No.: 36363 SECTION II - HAZARDOUS INGREDIENTS PEL * TLV * TLV * * *INGREDIENT PPM * PPM * MG/M3* LEL * CAS NUMBER* # PERCENT* METHYL CHLOROFORM * 350 * 350 *1900.00*NONE* 00071-55-6* 75 * CARBON DIOXIDE 5000 * 5000 *9000.00*NONE* 00124-38-9* **C5** Æ * * * *AEROSOL - CONTENTS UNDER PRESSURE *Carcinogenicity: THIS PRODUCT IS NOT CONSIDERED TO BE A CARCINOGEN
* BY THE NATIONAL TOXICOLOGY PROGRAM, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, OR THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION *Pursuant to Proposition 65: CERTAIN RAW MATERIALS USED IN MAKING THIS PRODUCT MAY CONTAIN SMALL AMOUNTS OF MATERIALS AS IMPURITIES WHICH ARE F REGULATED BY PROPOSITION 65. SEE SECTION IX. SECTION III - PHYSICAL DATA Boiling Range: PROPELLANT BELOW O. O. F. Vapor Density: HEAVIER THAN AIR EVAPORATION RATE FASTER THAN ETHER Percent Volatile Weight Per *PROPELLANTS By Weight: 100 Gallon: N. A.

MATERIAL SAFETY DATA SHEETS FOR COATINGS, RESINS AND RELATED MATERIALS (APPROVED BY U.S. DEPARTMENT OF LABOR)

SECTION I Manufacturers Name: IDEAL INDUSTRIES Emergency Phone No: 815/895-5181 Street Address: 1000 PARK AVE City, State, and Zip Code: SYCAMORE Code Identification: 40-635 , IL Rev. Date: 01/14/86 Product Class (AEROSOL) LUBRICANTS Date: 06/13/88 Trade Name: 40-635 6 % SILICONE LUBE Lab No.: 43935 SECTION II - HAZARDOUS INGREDIENTS PEL * TLV * TLV * *
PPM * PPM * MG/M3* LEL * CAS NUMBER* *INGREDIENT * PERCENT* 70 50 *1800.00*1.1 * 00110-54-3* * 500 * *A ISOBUTANE 1000 * 1000 *1800.00*1.8 * 00075-28-5* 10 PROPANE FA 1000 * 1000 *1800.00*2.3 * 00074-78-6* 10 * * × . . # * * * *AEROSOL - CONTENTS UNDER PRESSURE 55 +/- 5 PSIG *Carcinogenicity: THIS PRODUCT IS NOT CONSIDERED TO BE A CARCINOGEN BY THE NATIONAL TOXICOLOGY PROGRAM, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, OR THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION *Pursuant to Proposition 65: CERTAIN RAW MATERIALS USED IN MAKING THIS PRODUCT MAY CONTAIN SMALL AMOUNTS OF MATERIALS AS IMPURITIES WHICH ARE REGULATED BY PROPOSITION 45. SEE SECTION IX. SECTION III - PHYSICAL DATA Boiling Range: PROPELLANT BELOW O.OF Vapor Density: HEAVIER THAN AIR EVAPORATION RATE FASTER THAN ETHER Percent Volatile Weight Per *PROPELLANTS By Weight: 94 Gallon: N. A.

*

Customer No: 06258 N : IDEAL INDUSTRIES .ab No. : 36363

SECTION VIII - SPECIAL PROTECTION INFORMATION

Respiratory Protection: AVOID BREATHING OF VAPOR OR SPRAY MIST (SEE SECTION X)

Ventilation: PROVIDE LOCAL EXHAUST VENTILATION IN VOLUME AND

PATTERN TO KEEP TLV OF ALL HAZARDOUS INGREDIENTS IN SECTION II BELOW ACCEPTABLE LIMIT, AND LEL

IN SECTION II BELOW STATED LIMIT.

Protective Gloves: RECOMMENDED FOR PROLONGED OR REPEATED CONTACT.

FOR PROLONGED USE IN CLOSE QUARTERS RECOMMEND SAFETY Eye Protection:

QLASSES WITH UNPERFORATED SIDESHIELDS.

Other Protective Equipment:

SECTION IX - SPECIAL PRECAUTIONS

Precautions to be taken in handling and storing:

DO NOT STORE ABOVE 120 F. KEEP AT ROOM TEMPERATURE AS EXPOSURE TO DIRECT SUNLIGHT OR HEAT MAY CAUSE BURSTING.

Other Precautions:

. .

KEEP AWAY FROM CHILDREN. DO NOT PUNCTURE DR INCINERATE. DO NOT SPRAY NEAR FIRE OR OPEN FLAME.

Pursuant to Proposition 65:

PROPOSITION 65 APPLIES INITIALLY TO A LIST OF 29 CHEMICALS NAMED BY THE GOVERNOR OF CALIFORNIA A YEAR AGO AS CARCINOGENS OR REPRODUCTIVE TOXINS. WARNING REQUIREMENTS FOR SPECIFIC CHEMICALS TAKE EFFECT ONE YEAR AFTER THEY ARE ADDED TO THE GOVERNOR'S LIST, OTHER CHEMICALS ALREADY ADDED TO THE GOVERNOR'S LIST WILL BE REGULATED LATER UNDER PROPOSITION 65.

SECTION X HAZARDOUS MATERIAL IDENTIFICATION

COMMUNICATION OF PHYSICAL PROPERTY, HEALTH, AND SAFETY INFORMATION IS A KEY FACTOR IN OUR PRODUCT SAFETY PROGRAM. WITH THIS INFORMATION YOU CAN SETTER FULFILL YOUR OBLIGATION TO EDUCATE EXPOSED PERSONNEL IN THE PROPER HANDLING TECHNIQUES REQUIRED TO MAINTAIN SAFETY IN THE WORKPLACE. LISTED IN THIS SECTION IS NPCA-HMIS CLASSIFICATION FOR THIS PRODUCT.

> HMIS. CLASSIFICATION CODE

Health: 2 MODERATE HAZARD Flammability: 0 MINIMAL HAZARD Reactivity: 0 MINIMAL HAZARD

Personal protection: D FACE SHIELD, GLOVES, APRON

THE ABOVE INFORMATION PERTAINS TO THIS PRODUCT AS CURRENTLY FORMULATED, AND IS BASED ON THE INFORMATION AVAILABLE AT THIS TIME. ADDITION OF REDUCERS OR OTHER ADDITIVES TO THIS PRODUCT MAY SUBSTANTIALLY ALTER THE COMPOSITION AND HAZARDS OF THE PRODUCT. SINCE CONDITIONS OF USE ARE DUTSIDE OUR CONTROL. WE MAKE NO WARRANTIES, EXPRESS OR IMPLIED, AND ASSUME NO LIABILITY IN CONNECTION WITH ANY USE OF THIS INFORMATION.

Customer No: 06258 Name: IL _ INDUSTRIES La. io.: 43935 (PAGE 2)

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Category: CONSUMER COMMODITY Flash Point: PROPELLANT BELOW 20 F LEL: SEE ORM-D (T. O. C.) SECTION II

Extinguishing Media: CARBON DIOXIDE, DRY CHEMICAL OR FOAM.

Jnusual Fire and

Explosion Hazards: DO NOT SPRAY NEAR OPEN FLAME. KEEP AT ROOM TEMPERATURE AS EXPOSURE TO DIRECT SUNLIGHT OR OTHER HEAT MAY CAUSE BURSTING.

Special Fire Fighting

WATER MAY BE INEFFECTIVE - WATER MAY BE USED TO KEEP FIRE Procedures: \

EXPOSED CONTAINERS COOL.

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value: (SEE SECTION II HAZARDOUS INGREDIENTS)

Effects of Overexposure: IN A CONFINED AREA VAPORS IN HIGH CONCENTRATION ARE ANESTHETIC. IRRITANT TO SKIN AND UPPER RESPIRATORY SYSTEM. OVER-EXPOSURE MAY RESULT IN LIGHT-HEADEDNESS, STAGGERING GAIT, GIDDINESS AND POSSIBLE NAUSEA.

CONTAINS PETROLEUM DISTILLATES - HARMFUL OR FATAL IF SWALLOWED

REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED Chronic: OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE, ALSO KIDNEY AND LIVER DAMAGE.

Medical Conditions Prone to Aggravation by Exposure: PROLONGED AND REPEATED EXPOSURE TO N-HEXANE MAY DAMAGE PERIPHERAL NERVE TISSUE (THAT OF THE ARMS ANDS LEGS) AND RESULT IN MUSCULAR WEAKNESS AND LOSS OF SENSATION IN THE EXTREMITIES (PERIPHERAL NEUROPATHY).

Rdutes of Entry: Inhalation: YES Skin: YES Ingestion: YES

Emergency and First Aid Procedures:

Breathing: REMOVE PATIENT TO FRESH AIR.

Eyes: FLUSH WITH WATER FOR AT LEAST 15 MINUTES.

Skin: WASH WITH SOAP AND WATER.

Swallowing: CALL PHYSICIAN IMMEDIATELY. DO NOT INDUCE VOMITING.

SECTION VI - REACTIVITY DATA

Stability: STABLE Conditions to Avoid: DO NOT STORE ABOVE 120 F incompatability (NONE)

lazardous Decomposition Products

By open flame: CARBON MONOXIDE, CARBON DIOXIDE. lazardous Polymerization: WILL NOT OCCUR

SECTION VII - SPILL OR LEAK PROCEDURES

teps to be taken in case material is released or spilled: REMOVE ALL SOURCES OF IGNITION, VENTILATE AVOID BREATHING VAPORS (SEE SECTION X) AND REMOVE WITH INERT ABSORBENT

te disposal method:

DO NOT INCINERATE - DISPOSE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS REGARDING POLLUTION.

Customer No: Q6258 N. .: IDEAL INDUSTRIES

SECTION VIII - SPECIAL PROTECTION INFORMATION

Respiratory Protection: AVOID BREATHING OF VAPOR OR SPRAY MIST (SEE SECTION X)

Ventilation: PROVIDE LOCAL EXHAUST VENTILATION IN VOLUME AND

PATTERN TO KEEP TLV OF ALL HAZARDOUS INGREDIENTS IN SECTION II BELOW ACCEPTABLE LIMIT, AND LEL

IN SECTION II BELOW STATED LIMIT.

RECOMMENDED FOR PROLONGED OR REPEATED CONTACT. Protective Gloves:

FOR PROLONGED USE IN CLOSE GUARTERS RECOMMEND SAFETY Eye Protection:

GLASSES WITH UNPERFORATED SIDESHIELDS.

Other Protective Equipment:

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Other Precautions:

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Pursuant to Proposition 65:

PROPOSITION 65 APPLIES INITIALLY TO A LIST OF 29 CHEMICALS NAMED BY THE GOVERNOR OF CALIFORNIA A YEAR AGO AS CARCINDGENS OR REPRODUCTIVE TOXINS. WARNING REQUIREMENTS FOR SPECIFIC CHEMICALS TAKE EFFECT ONE YEAR AFTER THEY ARE ADDED TO THE GOVERNOR'S LIST. OTHER CHEMICALS ALREADY ADDED TO THE GOVERNOR'S LIST WILL BE REGULATED LATER UNDER PROPOSITION 65.

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> HMIS. CLASSIFICATION CODE

Health: 2* MODERATE HAZARD Flammability: SEVERE HAZARD 4 Reactivity: 0 MINIMAL HAZARD

Personal protection: D FACE SHIELD, GLOVES, APRON

* - CHRONIC EFFECTS MAY BE PRESENT. SEE SUPERVISOR FOR FURTHER INFORMATION.

THE ABOVE INFORMATION PERTAINS TO THIS PRODUCT AS CURRENTLY FORMULATED, AND IS BASED ON THE INFORMATION AVAILABLE AT THIS TIME. ADDITION OF REDUCERS OR OTHER ADDITIVES TO THIS PRODUCT MAY SUBSTANTIALLY ALTER THE COMPOSITION AND HAZARDS OF THE PRODUCT. SINCE CONDITIONS OF USE ARE OUTSIDE OUR CONTROL. WE MAKE NO WARRANTIES, EXPRESS OR IMPLIED, AND ASSUME NO LIABILITY IN CONNECTION WITH ANY USE OF THIS INFORMATION.

MATERIAL SAFETY DATA

		(Aerosol) #2094	# MSDS002094			
	NUFACTURED BY: CRC CHEMI		# 2094	Phone (2	15) 674-43	000
885	LOUIS DRIVE, WARMINSTER, P	A. 18974				
	NGREDIENTS	CAS #	ACGIH TLV	OSHA PEL	Other Limits	
	methyl polysiloxane	63148-62-9	NA	NA		3
_1,1	,1 Trichloroethane	71-55-6	350	350		51
-	ane	64742-89-8	NA	500	100	42
*Car	bon dioxide	124-38-9	5000			4
		The second secon				1
* Camb						
Carr	oon dioxide functions	as propellent for	r this prod	uct. P	essure	of
aero	sol is 85 psic at 70	°F.				
				-		7 7 1
(100/1-1)						
****		-				
2. PHY	SICAL DATA (Propel:	lent not included)				Testalmo, c
Specific (A	apor Pressure NA		olatile 97		0.00
Boiling P	ount 152°F(Initial) E	vaporation Rate Rapid		olatile 97		
Freezing			**************************************			
		apor Density Heavier	than air		-	-
Solubility		er white liquid -	solvent od	or		
	TOTALLE IN WE	CEI.	1			
3 FIRE	AND EXPLOSION DATA					
Clachasia	1-0					
			Flamo	nable Limits	MA	
Extinguish	the state of the s	dioxide, Dry che	micals LEL	UEL		
I tonium time to						
Unusual H	azaros Aerosol cans n	ay explode when h	eated above			
	ACTUSUI CANS I	ay explode when h	eated above			
4. REAC	TIVITY AND STABILITY	ay explode when h	eated above			
4. REAC	TIVITY AND STABILITY Stable	ay explode when h	eated above	130°F.		
4. REAC Stability Stazardous (TIVITY AND STABILITY Stable decomposition products Ther	ay explode when h	eated above	130°F.		
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4. REAC Stability fazardous to Aaterials to PROTE	TIVITY AND STABILITY Stable decomposition products There avoid Strong oxidize CTION INFORMATION Required in a confi	mal(Carbon monoxiders.	eated above	130°F.		l pos
4. REAC Stability fazardous i Materials to PROTE entilation espiratory	TIVITY AND STABILITY Stable decomposition products There avoid Strong oxidize CTION INFORMATION Required in a confi	mal(Carbon monoxions.	eated above	130°F.		l pos
4. REAC Stability fazardous i Materials to PROTE entilation espiratory	TIVITY AND STABILITY Stable decomposition products There avoid Strong oxidize ECTION INFORMATION Required in a conficely contained by a cont	mal(Carbon monoxiders.	de, hydroge	n chlori		l pos

6. HEALTH HAZARD DAT	'A			
Primary Routes of Entry Inh	nalation and Skin			
Signs and Symptoms of Exposure				
1. Acute Overexposure Inhal	ation - Headache,	dizziness, m	nausea, anes	sthesia &
unconsciousness, Ty				
irritating to skin,				
2. Chronic Overexposure - Pro	olonged high level	s of the n-h	exane may d	arage nerva
tissue - high levels				
Medical Conditions Generally Aggs	ravated by Exposure			
Chemical Listed as Caronopen or Potential Caronopen	National Toxicology Program	Yes D LAAC Noock Monograd	Yes D one No Rix	OSHA YH I No Ry
Emergency and First Aid Procedure	s (If symptoms pe	reist call	a physicia	
1. Inhalation Remove to fr	esh air - apply ar			
	e amounts of water		SPII CLON I	reeded.
0.0112	and water - Remov		ted clothin	Magney Street
4. Ingestion Do not induce			CCC CLOCKLIN	
7. SPILL OR LEAK PROCED				
Procesusions to be taken in	a cool dry area.			
Annual a messed or solled Remove liquid and put in a va	sources of ignition to the source of ignition to the ignition to the source of ignition to ignition to the source of ignition to ignition to the source of ignition to ignition to	Maria de la composição de		sorb
	sed and unused ae:			
discarded. Dispose in B. SPECIAL PRECAUTIONS	CONFORMANCE WITH	THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.	ate & local	regulation
Aerosols may explode i			- 1300-	
erosors may exprode 1.	r exposed to tempe	eratures ove	T 130 F.	
				A A A A A A A A A A A A A A A A A A A
			i i i i i i i i i i i i i i i i i i i	В при меру серенции виси
REPARED BY: A.B. Reed				
RIGINAL DATE OR DATE OF REVISI	ON Nov. 1985			

MATERIAL SAFETY DATA SHEET

GIH _V	OSHA PEL NA	A 6 1 1 1 1	300
LV	OSHA PEL	Other	
LV	PEL	A 6 1 1 1 1	
		1 I den (e.s.	
		Limits	*
			27.
0	100		2.
0	200	1	7.
0	500		4.0
	200	+	32.0
	200	900	6.
+	1000	800	10
-	7000		10
+			
t for	r this	product	
Flamm	able Limit	s NA	
LEL	UEI		
ins n	nay exp	lode if	
	*		
			
lord	ne ne	eethle -	hosas
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	-		
-		***************************************	
	<u> </u>		
are		LV.	
			hlorine, possible pos



Z.R.C. COLD GALVANIZING COMPOUND (AEROSOL)

MAIENIAL SAFELY DATA SHEET FOR COAT! "S, RESU" NU HELATLO MATLINALS

HAZ I her

- Extreme * High

- Moderate i • Slight 0 - insignificant

Sener Lat Toxicity

Reactivity

Section I

MANUFACTUFER'S NAME Z.R.C. Products Company

TELEPHONE NT. (617) 328 6700

PRODUCT CLASS: Esterified epoxy zinc rich metal primer

TRADE NAME. I.R.C. Cold Galvanizing Compound (Aerosol)

STREET ADDRESS: 21 Newport Ave., Quincy, Mass., 02171

DATE OF PREPARATION: January lat 1987

MANUFACTURER'S CODE IDENTIFICATION: 8281-1000

Lab. # 30588

Section II - HAZARDOUS INGREDIENTS

INGREDIENT (CASI)	PERCENT by weight	LEL	TLV ppm	(mg/K ³)	ppm	PEL (mg/M ³)	VAPOR PRESSURE mm # 20°C
Toluene (CAS# 108-88-3)	fs	1.2	TWA 100 STEL 150	(375) (540)	TWA 200	Celling 300 Peak 500 (10 minutes)	36,7 (£ 30°C)
Methylene Chloride (CASE 75-09-2)	20	15.5	TWA 100 STEL 500	(350) (1740)		Celling 1000 Peak 2000 in any 2 hrs	348.9
Zinc (CASI 7440-66-6)	38.4	na			TWA (Dust)	50 (15) ppcf)	nk .
Zinc 'Oxide (CASE 1314-13-2)	1.6	n#	TWA (fume) TWA (dust) STEL(fume)	(5) (10) (10)	TWA' (Fume) (5)	na
Xylene (CAS# 1230-20)	10	1.0	TWA 100 STEL 150	(435) (655)	TWA 100	(435)	6
V.M.&P. Naphtha (CAS# 8032-32-4)	5	0.9	TWA 300 STEL 400	(1350) {1800}	TWA 300	(1350)	2
Propane (CAS# 74-98-6)	10	2.3	TWA 1000		TWA 1000	(1800)	(123pela @70°F)
Aerosol contents under pressure of 5545psi	,		ACGIH Values		OSHA Value		

Section III - PHYSICAL DATA - FIRE AND EXPLOSION HAZARD DATA

BOILING RANGE LIGHTER THAN AIR VAPOR VAPOR DESITY THAN AIR DENSITY THE HEAVIER THAN AIR

WEIGHT PER 11.2 SPECIFIC 1.34

GRAVITY N/A

DSHA

O SLOWER THAN ETHER PASTER THAN ETHER

EVAPORATION RATE

VAPOR 50 + 10mm @ 21°C FLASH Below (T.O. PO INT 20°F (-7°C)

SY VEKEKE weight 55% UEL LIMITS IN AIR 66.4%

PERCENT VOLATILE

LEL 0.9%

GALLON

DOT FLAMMABILITY CLASS IFICATION

Consumer Commodity - Hazard Class ORM-D-AIR Fianmable Class 1A. OSHA Class 29(1910-106a) Label: Extremely Fammable - RSP. CFR-16-1500.3(6) (V)

AUTO IGNITION NOT SCLUBILITY TEMPERATURE Desermined IN WATER Insignificant REACTIVITY IN WATER See Section IV

APPEARANCE AND ODOR Gray liquid with odor typical of allphatic, aromatic and halogenated hydrocarbon mix.

EXTINGUISHING MEDIA Approved Class B Fire Extinguisher, foam or dry chamical. DO NOT USE WATER. Combustion in a fimited amount of air can generate toxic carbon monoxide. Use full protective equipment and self-contained breathing apparatus for respiratory protection in flighting fires in enclosures. In a fire situation or when the material is heated it becomes a highly flammable liquid with a moderate explosion hazard. Once ignited the product will burn readily in air. air.

MISUAL FIRE AND EXPLOSION MAZARDS Keep containers closed tightly, isolate from heat, electrical equipment, sparks and open flame. Zinc present in a finely divided form, is hazardous when atomized in air and, if sparked, an explesion is possible. Closed containers may burst or explode when exposed to heat. Application to hot surfaces requires special precautions, During emergency conditions, overexposure to decomposition products (gaseous exides of carbon and nitrogen and hydrogen chloride) may cause a health hazard. Symptoms may not be immediately apparent, Obtain medical attention. Heavier than air vapors may flow along surfaces to distant ignition sources and flash back. Holsture and acid contamination can result in hydrogen day acid the causing many to hydre with increased pressure. Cans so deacid contamination can result in hydrogen gas evolution causing cans to buige with increased pressure. Cans so deformed should not be moved, opened or punctured. Call (617) 328-6700. See also Sections IV and V.

SPECIAL FIRE FIGHTING RROCENIRES DO NOT USE WATER IN ANY FORM. Water may be used to cool closed containers to

prevent pressure build up and possible autoignition or explosion when exposed to extreme heat, but care should be taken to provent water access to well paint and spray residues. See also Section VII.

^{*}CAS &s are Identification numbers assigned by Chemical Abstract Service for reference to hazardous information on file at the American Chemical Society. For information call 1-800-848-6538, For health emergencies call Poison Control Center (24 hours at 1-213-664-2121, for transporation emergencies call CHEMTREC 1-800-424-9300.

Section IV - PHYSICAL HAZARDS

STABILITY

STABLE UNSTABLE HAZARDOUS POLYMERIZATION

MAY OCCUR WILL NOT OCCUR

MATERIALS AND CONDITIONS TO AVOID This material is considered to be stable under its normal handling and storage MATERIALS AND CONDITIONS TO AVOID This material is considered to be stable under ris normal handling and storage conditions. It can react violently with strong exidizing agents such as chlorine, exygen, as well as whier, weak and concentrated acids and alkalies, Store in dry areas away from exidizing agents (chlorine, exygen), all acids, alkalies and water Avoid dusting and accumulations of spray residues.

MAZSMOUS DECRMPOSITION PRODUCTS Thermal degradation and water and alkali contact may produce hydrogen chloride and Núdesan mith additional state of avoides and firm May produce fumes of zinc exides and the number of contact may produce at another at another states.

and hydregen with additional risks of explosion and fire, May produce fumes of zinc oxides and the oxides of carbon and Aliregen and hydrogen chipcide when heated to decomposition, Acid contact will produce hydrogen.

Section V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE 100 gpm

OSHA PERMISSABLE EXPOSURE LIMIT Mixture. (see Section 11)

PRIMARY ROUTE OF ENTRY Innaistion and skin contact MEDICAL CONDITIONS GENERALLY Respiratory, brain and central AGGRAVATED BY EXPOSURE nervous system conditions, dermaittis and other skin afficilons. Reports have linked methylene chieride ex-SIGHS AND SYMPTOMS OF OVER-EXPOSURE posure and cardiovascular problems.

Prepare is an asphysiant. Solvents contained in the mixture are central nervous system depressants. Symptoms of overexposure include drowsiness, dizziness, headeche, siurred speech, intexication with euphoria and/or depression leading or support and unconsciousness. Note and throat irritation may occur from inhalation. Skin contact may cause defatting and dermailtis. Eye contact with the liquid causes tears, burning, irritation, conjunctivitis, ingestion will cause polarism. ing and may be fatal; Avaid espiration if ingested, Do not induce vomiting. Lung contact may cause chemical pneumonilia. During welding and burning operations hazardous decomposition products may be evolved from the dried film. These may include but not be limited to zinc oxides as well as the gaseous skides of carbon and nitrogen. Exfilm. These may include but not be limited to zinc oxides as well as the gaseous skides of tarbon and nitrogen. Excessive inhalation of these tumes may produce symptoms known as tume fever and "ginc shakes" among other effects. Consult physician. b.) Chronic: Reports have associated repeated and prolonged overexposure to solvents with permanent damage to brain and central nervous system, Methylane chieride may produce an increase in carboxy hemoglobin. Methylene Chloride is considered to be a carcinogen by the National Toxicology Program, the International Agency for Research on carpors on the Occupational Safety and Health Administration (Suspected in Animals).

EMERGENCY AND FIRST AID PROCEDURES

1.) Inhalation: Remove to fresh air, Keep warm and quiet, Give artificial respiration if required. Get medical assistance,
2.) Eyes: Wash eyes immediately with large amounts of water for at least 15 minutes. Take remove peint wet clothing. Consuit physician if irritation persists.
4.) Ingestion: Do not induce vomiting of good hygiene during and after use. Wash thoroughly before smoking or sating.

Section VI - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION in guidoor or open areas with unrestricted ventilation, use approved high efficiency ACCPRATORY PROTECTION in outdoor or open areas with unrestricted ventilation, use approved high atticiency mechanical respirator to remove particles of overspray during apray application. In areas of restricted vanifiation, use high afficiency chemical/mechanical filters designed to remove a combination of particulates and vapor, in confined

areas, use approved air line type respirators or hoods.

VENTILATION Work place areas require exhaust ventitation in accordance with OSHA regulation 29 CFR Part 1910 (1970) to maintain vapor levels below the TLV (especially during appraying, misting, or heating). Use an approved high efficiency respirator of the full face canister type (for timited time and concentrations), air supplied type of self-contained type respirators for extended exposures involving high or unknown vapor concentrations or for non-routine or conditional. Exhaust local should be maintained at least 100 lim. PROTECTIVE GLOVES Neoprena gloves and aprona should be used to prevent prolonged or repeated skin contact. Use

protective creams when skin contact is likely.

EYE PROTECTION Safety goggles with unperforated side shields or face shield should be used where splashing of solvent into eyes is possible. An eye wash fountain should also be available in areas where splashing is probable. When large of the non-sparking type. Wear chemical resistant boots. Remove and wash or discere contaminated clothing.

Section VII - SPECIAL PRECAUTIONS - SPILL OR LEAK PROCEDURES

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE This extremely flammable liquid should be stored in a cool, clean, well ventilated fire resistant storage room or in a solvent storage cabinet that meets OSHA requirements. Do not store in direct sunlight, Store large quantities only in buildings in compliance with OSHA 1910,105. high heat should be excluded. Prohibit smoking in these areas. Ensure sufficient ventilation to prevent accumulation of behave various in the storage of summs. Avail aminorand contact with skin. Do not surrouse drage. high heat should be excluded. Prohibit smoking in these areas. Ensure sufficient ventilation to prevent accumulation of heavy vapors in low lying areas or sumbs. Avoid prolonged contact with skin. Do not puncture, drag or stide container. Do not store above 120°F.

DTHER PRECAUTIONS Any deformed cans should not be moved, opened or punctured., call [617] 328-6700. Do not take internally. Keep away from children. Empty container may contain extremely flammable residues and

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED For massive soils, evacuate the area. For all splits eliminate ignition sources. Dike and contain splits with dry inert materials (sand, earth, etc.). Eliminate all sources of moisture, and do not use water in clean up operations. Recover as much of the free into a sever or surface waters. Do not flush splits with dry inert materials (sand, earth, etc.). It is possible for disposal, and use an absorbent to pick up the residue. Avoid discharging paint directly may be slippery on floor.

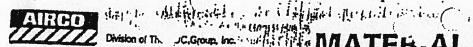
WASTE DISPOSAL METHOD Dispose of the absorbed material or the free waste liquid in dry containers. Dispose of all materials including empty cans according to local, state and federal regulations. DO NOT INCINERATE, do not flush to sewers. Containers may explicit if heated even when empty, it is recommended that solid waste by landfilled only al approved hazardous disposal sites using approved contractors.

DISCLAIMER: While the data and suggestions contained herein are based on information we believe to be reliable, it is gathered without warrant, of any kind. Users should consider these data only as a supplement to other information for gathered by then and must make indecendent determinations of suitability and completeness of information from all sources to assure proper use and once of these materials and the solety and respicteness of information from all sources to assure proper use and once of these materials and the solety and realth at employees and customers.

MATERIAL SAFETY DATA SHEET

MANUFACTURED BY: CRC CHEMICA	Cleaner (Bulk) #20	77, 2078	# MSDS	002077	
			Phone (21	5) 674-430	20
885 LOUIS DRIVE, WARMINSTER, PA	18974				
1. INGREDIENTS	CAS #	ACGIH TLV	OSHA PEL	Other Limits	%
Trichlorotrifluoroethane	76-13-1	1000			100
					100
					$\nabla \mathcal{T}$
		+			
2. PHYSICAL DATA					
Consider to the	or Pressure 5.5psia	700	1 1		
N-31 6 1		-	latile 10	0	
Francisco C.	or Density 6.5 (air	Carbon tet	= 1)		
Appearance and Odor Colorless 1		- 11		······	
Solubility Slight solubility in		in many on			72
		ari majiv GL	daute 13	coulcs	
3. FIRE AND EXPLOSION DATA					
Flashpoint Mone Method TCC, TOC	н	Flamm	able Limits	Non-	
xinguishing Media Not needed		LEL -		"One	
Inusual Hazards Material vapori	zes quickly.		- 1 Occ		
- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1					
REACTIVITY AND STABILITY					
dability Very stable					
azardous decomposition products Halog	gens, halogen acid	is, possibi	lity of	phosos	ne (m
rowdered metals	such as aluminum,	, magnesium	calci	um.	
inc			, 00200		
PROTECTION INFORMATION					PHILIPANA.
nulation Maintain concentratio	n below TLV.				
spiratory Self-contained breat	hing apparatus ab	OVE TIV	***		
	and and an	LV.			
oves Meonrene ner Protective Equipment Protective	C A	v godales			

Primary Routes of Entry Signs and Symptoms of E	Inhalation and Skin
	Inhalation - Drowsiness, lightheadedness possible cardia
arrhythmias at	high concentration. Skin - defatting action, may cause
The state of the same appropriate the same at the	es - may irritate eyes.
2. Chronic Overexposure	May cause skin irritation with repeated skin contact.
Medical Conditions Gener	rally Aggravated by Exposure Impaired cardiovascular function such
cardiac arrhythm	mias might be sensitized by inhalation.
Chemical Land at Caronogen or Potermal Caronogen	Netronal Toxicology Yar D IARC Yet D OSHA Yet D Program NopCX Menoproons No XIX He RS
mergency and First Aid P	(11 dymponia persise dari a physician)
	to fresh air - apply artificial respiration if necessar
	large amounts of water.
. Skin wash with	water.
	vomiting - call a physician.
. SPILL OR LEAK PR	ROCEDURES
	e to high volatility material quickly evaporates.
	evacuate personnel until concentration is below TLV
or use serr-conta	ained breathing apparatus.
/aste Disposal If po	ossible pump into drums for reclamation.
SPECIAL PRECAU	TIONS AND USE DIRECTIONS
	neavy and will collect in low areas. Oxygen would be
apors are very h	
	phyxiation could result. Good ventilation is a must
isplaced and asp	



Division of The JC. Group, Inc. 1997 1997 1997

ERIAL SAFETY DATA SHEET

575 Mountain Avenue Murray Hill New Jersey 07974 Telephone: 201-464-8100 TWX: 710-984-7970

> Welding Consumables and Related Products Conforms to OSHA 1910.1200

IDENTIFICATION

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1. 18 1 40 1

PRODUCT NAME Propane

CHEMICAL FAMILY: Aliphatic Hydrocarbon

Liquified Petroleum Gas DOT HAZARD CLASS: Flammable Gas

(LPG) Dimethyl Hethane

DOT I.D. NUMBER: UN 1075

CAS NUMBER: 74-98-6

> CHEMTREC: 800-424-9300

· j

HEALTH HAZARD DATA

Mid

TIME WEIGHTED AVERAGE EXPOSURE LIMIT:

Propane is defined as a simple asphyxiant. Oxygen levels should be maintained at greater than 18 Molar percent, at normal atmospheric pressure which is equivalent to a partial pressure of 135 mm Hg. (ACCIH, 1984-85).

SYMPTOMS OF EXPOSURE:

Inhalation: Moderate concentrations so as to exclude an adequate supply of oxygen to the lungs causes dizziness, drowsiness and eventual unconsciousness. It is also a narcotic which acts as a depressant on the central nervous system. : " " " " ; " .

Contact with rapidly evaporating liquid could cause frostbite or cryogenic "burns".

TOXICOLOGICAL PROPERTIES:

Breathing high concentrations causes a narcotic effect; however, the major , property is the exclusion of an adequate supply of oxygen to the lungs.

Frostbite effects are a change in color of the skin to gray or white possibly followed by blistering believe Trinchipage 111 1 18 18 18 18 18 18

RECOMMENDED FIRST AID TREATMENT:

PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE TO PROPANE. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS AND BE COGNIZANT OF EXTREME FIRE AND EXPLOSION HAZARD. 146 The sale and

DATE OF ISSUE 3/1/88

A service on gifting as a Inhalation: Consciou sons should be assisted to an and inhale fresh air. k removal from the contaminated a is most important. Unconscious persons should be moved to an uncontaminated area, given mouth-to-mouth resuscitation and supplemental oxygen. Further treatment should be symptomatic and supportive

Dermal Contact or Frostbite: Remove contaminated clothing and flush affected areas with lukewarm water. DO NOT USE HOT WATER. A physician should see the patient promptly if the cryogenic "burn", has resulted in blistering of the ... dermal surface or deep tissue freezing.

Hazardous Mixtures of Other Liquids, Solids, or Gases:

Propane is flammable over a wide range in air.

PHYSICAL DATA

Boiling Point: [-43.7°F (-42.1°C) -42] | 4. 4(2

Liquid Density @ Boiling Point: 36.3, 1b/ft3 (582 kg/m3),

THE PARTY OF THE PARTY OF

Vapor Pressure @170°F, (21

Air: 1.56-Specific Gravity 6,70 F, ligtm (A

Solubility in Water: Negligible in it is

Freezing Point: -305.8°F.(-187.7°C)

Appearance and Odor: Colorless, odorless gas

FIRE/EXPLOSION HAZARDS DATA

. . .

Flash Point (Method Used): -156°F (-104°C) Closed cup

Auto Ignition Temperature: 896°F

LEL: 2.2

UEL: 9.5

Extinguishing Media: Water, carbon dioxide, dry chemical

Electrical Classification: Class 1, Group D

Special Fire Fighting Procedures: If possible, stop the flow of propane. water spray to cool surrounding containers.

Unusual Fire and Explosion Hazards: 1970 of the of a salar conduct of a base Propane is heavier than air and may travel a considerable distance to a source of ignition. Should flame be extinguished and flow of gas continue, increase ventilation to prevent flammable mixture formation in low areas or pockets.

FAIRING FAIR STANFARM

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4 Cope . Lory of The

Stability: Stable 1 1 adjusted by 5 11 4 year of the state of the stat

Incompatibility (Materials to Avoid): Oxidizers

Hazardous Decomposition Products: None "Hift Car-The mil Cheep on the . " of Triple to

Hazardous Polymerization: Will not occur

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE HATERIAL IS RELEASED OR SPILLED! A Fr 19

Evacuate all personnel from affected area. We appropriate protective equipment. If leak is in user's equipment, be certain to purge piping with an inert gas prior to attempting repairs. If leak is in container, or container . valve, contact CHEHTREC. for emergency assistance or your closest Airco

"18/12/40 A WHICH THAT WILL IN THE SECTION OF THE S Waste Disposal Method: 'you' head allowed place at a second to the secon

Do not attempt to dispose of waste or unused quantities. Return in the day like shipping container properly labeled, with any valve outlet plugs or caps secured and valve protection cap in place to Airco for proper disposal. 一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个

SPECIAL PROTECTION INFORMATION

Respiratory Protection: Positive pressure air line with mask or aself-contained breathing apparatus should be available for emergency use.

Ventilation: Hood with forced ventilation.

Special: And the state of the s Mechanical (Gen.): In accordance with electrical codes

Other:

Protective Gloves: Plastic or rubber

Eye Protection: Safety goggles or glasses

Other Protective Equipment: Safety shoes, safety shower

SPECIAL PRECAUTIONS

1 . Fr . P

Special Labeling Information:

DOT Shipping Name: Liquified

petroleum gas ... DOT Hazard Class: Flammable gas

)DOT Shipping Label: Flammable gas DOT L.D. No.: UN 1075

Special Handling Recomme. de la appresa de la constitución de

Use only in well-ventilated areas. Valve protection caps must remain in place unless container is secured with valve outlet piped to use point. Do not ... drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure reducing regulator when connecting cylinder to lower pressure (<250 psig) piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder.

For additional handling recommendations, consult Compressed Gas Association's Pamphlets P-1 and P-14 and Safety Bulletin SB-2.

Special Storage Recommendations: fine the state of the st Protect containers from physical damage. (Store in cool, dry, well-ventilated area of non-combustible construction sway from heavily trafficked areas and in the memergency exits. Do not allow the temperature where cylinders are stored to exceed 130°F (54°C). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in-first out" inventory system to prevent full

For additional storage recommendations, consult Compressed Gas Association's Pamphlets P-1 and P-14 and Safety Bulletin SB-2.

Special Packaging Recommendations:

Propane is noncorrosive and may be used with any common structural material.

Other Recommendations or Precautions:

Earth-ground and bond all lines and equipment associated with the propane system. Electrical equipment should be non-sparking or, explosion proof. Compressed gas cylinders should not be refilled except by qualified producers of compressed gases. Shipment of a compressed gas cylinder which has not been filled by the owner or with his (written) consent is a violation of Federal Law (49CFR).

Their fatte letter

Safety Data-G-74

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Printed in U.S.A.

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. FECTS	OF OVEREXPOSURE - Conc	A Avoid		HRESHOLD	LUE
ery !	ow order of toxicity			THER UMIT	JRE LIMIT
					5mg/m ³
Children Alles	ROUTES OF ENTRY Inneleto		Other (specify)		
EMERGEN	CY AND FIRST AID PROCEDU	RES SKIN: wash	with soan and	water EVEC	flush with water
irritati	on subsides. INGESTI	ONS: obtain m	nedical assistance	ce.	HILLS With water
			-REACTIVITY	DATA	
STABILITY	STABLE CONDI	TIONS TO AVOID			•
INCOLURATION	BILITY (materials to avoid)	Strong oxidize	rs, strong bases	strong acids	
	S DECOMPOSITION PRODUCTS	CO2 and carbo	n monoxide ma	y be formed	
POLYMERIZ			3 10 XVOID		
		X			
STEX TO RE	SECTIO	N VII-SPILL	OR LEAK PR	ROCEDURES	3
			Contain sp	ill with inert n	naterial, recover f
liquid. A	dvise EPA if material	enters sewer o	or other waterc	ourse.	
	incinera	te or ice landf			
CERCIA (Sun	MINNER REPORTABLE OUT ANTE	W /le their	III meeting all I	ocal regulation	ns.
	The stranger district in	I (III MORY	III meeting all 1	ocal regulation	ns
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VOLATILE ORG	OUS WASTE NO. (40 CFR 261 ANIC COMPOUND (VOC) (46)	23)	arl 0%	ocal regulation	ns.
CRA HAZAR	OUS WASTE NO. (40 CFR 261 ANIC COMPOUND (VOC) (46)	23)	ed .	ocal regulation	nis
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MATERIAL SAFETY DATA SHEET

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'Argent Lin							(313)	427-5533	
				, Michigan 48150			MANUF	ACTURER'S D-U-N 08-429-7621	-5 NO.
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CHEMICAL FAMILY					FO	RMULA			
Petroleum 0	11						Proprietary		
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128-37-0	1-	-5		idation Inhibitor		PACKAN TO	Byth, alux	1150-8413	
68457-79-4	. 5	1		nc dialkyl dithiopi	ocenhado.	rice Vo		No_	
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OR DENSITY (AIR - 1			>1	EVAPORATION RATE (H20 -11	NII			
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GUISHING MEDIA		niimus S	E						
AL FIRE FIGHTING P	ROCE	DURE	s	or dry chemcial	preferred,	COSS	cceptable		
			Wear	self-contained he	eathing an	3==4.			
	**********		11 10111	self-contained br	Earning ahl	MINI	S in contined a	reas	

Protective Equipment (Type)	TROL PROCEC	URES	Code Ho.	1537
Eves Protective go	Igles or face	shield optional.		ELEN SIEV
Exposed employ	es should ex	ercise reasonable p	etronal cleanli	ness, this
includes cleans;	ng exposed s	kin areas several t	imes daily with	w bns dags
and laundering o	e dry cleani	ng soiled work clot	hing at least w	me ak Iv.
Inhalation - Hone re	quired if ex	posures are within	permissible con	centrations
			Samuel S	see below.
/entilization Required; Hormal	x	Other		
recautionary Label				
	AUTION: COMB	Company of the Compan		
		heat and open flam	d.	
		ate ventilation.		
AV	ard brotoude	d breathing of vapo for repeated conta	r or mist.	
Elici de la	om brorenda	or repeated conta	ct with skin.	
ermiealble Concentrations:				
Air 5 mg/m of at	t for mineral	oil mist averaged	OVEZ Other	•
an 8 hour dail	exposure,	A Store such da		- 41
required only when m	iterial is co	ntained in package	m meat and ope	n Ilame. Pl
110 gallons or in tar	k car or tar	k truck.	·A OT POHORYHEY	MINE SYCEPU
OT Proper Shipping Name: C	combustible 1	iquid, N.O.S.		
OT Hazard Class (If applicable)	Combustible	liquid.		•
	100 mg//pa			
HEMICAL AND PHYSICA	AL PROPERTI	ES		
lling Point ('F) H.D.		Vapor Pressure 10		€ 200°F
		Ambor Liesanie 70	(mmHg)	4 200.1
cilic Gravity 0.860	(HsQ = 1)	Vapor Denaity 1.1	0 (46-1)	● 200°F
serance and OdorRed :	Liquid		**	
of constituted named as a N. D.				
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And a property of a sample -		Frahoren Treat	3 - 1	1 = 1
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rdous Polymerizations faterial Reacts Violently With: Water H PROTECTION INFORM on Termp. *F N.D.	Occur X Hone of t	Do not easur hose listed below. trong Oxidizers Flash Point F. (Method)	Others 160 PM minimum	closed.
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PROTECTION INFORM Temp. *F N.D. The Evolved When Subjected to the party of the par	Hone of to	Do not occur hose listed below. frong Oxidizers Flash Point F. (Method) UpperN.D. Carbon monoxi. hydes and ketones.	Others 160 PM minimum cup lass than die, carbon dies	closed. 200°F
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osity N.D. rdous Polymerizations faterial Reacts Violently With: Water H PROTECTION INFORM on Termp. *F N.D.	Hone of the set of Combustion sulfur, alder or Combustibles, or catho	Fish Point F. (Method) Upper N.D. Carbon monoxinydes and ketones. poedures According a liquid fires may noticed. Une we to	Others 180 PM minimum cup less than die, carbon die to the Mations be extinguished for to been fire	closed. 200°F cide, oxides al Fire Pro-

TEXACO INC. INDUSTRIAL HYDIENE, TOXICOLOGY, AND MATERIAL SAFETY DATA SHEET



NOTE: NO REPRESENTATION IS MADE AS TO THE ACCURACY OF THE INFORMATION . HEREIN, SEE PAGE # FOR CONDITIONS UNDER WHICH DATA ARE FURNISHED.

Trade Hame and Synonyms	
1537 Aircraft Mydraulic Oil 15	
Manufacturer's Hame	Emergency Telephone No.
Texaco Inc.	(914) 831-3400 Ext. 406
Address	
P.O.Box 509, Beacon, NY 12508	
Chemical Name and/or Family or Description	
General	Electric D6811A
THIS PRODUCT IS CLASSIFIED AS:	NOT HAZANDOUS:
X HAZARDOUS BY DEFINITION HO.(8)	1 ON ATTACHED EXPLANATION SHEET 4
Transfer at DEstruitor nodal	- On All Montes and Demander of the Control of the
WARNING STATEMENT: CAUTICAL	COMBUSTIBLE
PHYSIOLOGICAL EFFECTS:	
Effects of Exposure	
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Acule:	
Eyes . N.D.; believed to be mi sall	a levitablas
clas W.D. 1 Dallaged to be set pery	A TITIECTHA.
Skin H.D.; believed to be mi , wall	y irritating.
Respiratory System N.D.; believed to b	e minimally irritating if not in excess of
	rations; see page 2.
Chronic !	Other
H.D.	
ensitization Properties	
8kin: Yes No Yinknown	Respiratory: Yes No Xunknown
edlen Leihel Dose (LOss, LCss) (Species)	Irritation Index, Estimation of Irritation (Species)
Appen adulti posa irom' rosol (shacise)	militation mark, Estimation of mitation (Species)
ral N.D.; bellowed to be S.E. ga. Reg (x)	-18kin u n - eee showe
Nelation un	Eyes U.D. tas About
	E/W
irms N.D., believed to be > 10 garkg	Symptoms of Exposure
(rabbit),	
	then mogathle minimal irritation.
HERGENCY AND FIRST AID PROCEDURES	
at Ald areas	
II Ald Harth	
Eyes rough with most reign material	
Eyes The As with mos Traign material plenty of water.	
Eyes As with mos . raign material	
Eyes Pou As with most reign material plenty of water. Skin Hone considered necessary:	s, should eye contact occur, flush eyes wit
Eyes rough as with most reign material plenty of water.	s, should eye contact occur, flush eyes wit
Eyes raign material plenty of water, Skin None considered necessary: Ingestion Hone considered necessary	s, should eye contact occur, flush eyes wit
Eyes Pou As with most reign material plenty of water. Skin Hone considered necessary:	s, should eye contact occur, flush eyes wit
Eyes Pon As with mos raign material plenty of water. Skin None considered necessary: Ingestion Hone considered necessary	s, should eye contact occur, flush eyes wit
Eyes ron As with most reign material plenty of water. Skin None considered necessary: Ingestion None considered necessary	s, should eye contact occur, flush eyes wit

*H.D.—Hot Determined; *H.A.—Not Applicable (—Less Ther;)—Greater Than

FORM 0-391 3-79

: 3:

COMPOSITION			Gode No	1537 .
Components Presenting a Bignificant Hazard	М.	Other Components		44
None.		Mineral oil Phenolic antioxidant CASE[128-39-2] Triaryl phosphate Hethacrylate copolyme Red dye CASE[2653-64-7]	· ·	75 0. 0. 25 70 j
			••, •	

ENVIRONMENTAL PROTECTION

Waste Disposal Mathod Dispose in accordance with local laws and regulations governing disposal of oily wastes. A waste oil contractor or disposal specialist is suggested.

Procedures in Case of Breskage or Leekage Contain spill. Absorb with inert porous material. Dispose of in accordance with local laws and regulations governing disposal of oily wastes. Contact a waste oil contractor or disposal specialist if necessar Remarks.

None.

. ,:

ADDITIONAL COMMENTS

TEXACO INTENDS TO COMPLY FULLY WITH PROVISIONS OF THE TOXIC SUBSTANCES CONTROL ACT

State of Michigan Critical Materials Act (Revised 1980).

Hone present.

To determine applicability or effect of any law or regulation with respect to this product, user should consult his legal advisor or the appropriate government agency. Texaco does not undertake to furnish advice on such matters.

Pr. R. T. Richards		Tille:	Manager,	Industrial	Byglene
	UKLEL		and Toxi		
Deta: 5/1/80	D New	To Revised, Superseder	, 5	1/79	

		SEC		REACTIVITY DATA	
STABILITY	UNSTABLE		CONDITIO	NS TO AVOID	
	STABLE	×	SPARK	S AND OPEN FLAMES	
INCOMPATABILITY (I	Materials to avoid)	STRO	American Comment	AND OXIDANTS	
HAZARDOUS DECOM UPON COMBUS	APOSITION PRODUCTS TION: CO, CO2, OX	Alan Elements			
HAZARDOUS	MAY OCCU			CONDITIONS TO AVOID	
POLYMERIZATION	WILL NOT	DOCUR		Nove :	
			X	NONE	
		SECTION	VI HEAL	TH HAZARD DATA	
ROUTE(S) OF ENTRY:		INHA	LATION?	skin?	INGESTION?
			х	x	X
HEALTH HAZARDS	S (ACUTE & CHRO	NIC): CAUS	ES IRRITA	ATION: MAY BE SKIN DEFATTER	UPON PROLONGED
OR REPEATED CO			AN III		
ARCINOGENICITY:		NT	TP?	IARC MONOGRAPHS?	OSHA REGULATED?
All I					
		NOT L	ISTED	NOT LISTED	NOT LISTED
		NOT L	ISTED	NOT LISTED	NOT LISTED
GNS & SYMPTOMS				NOT LISTED	NOT LISTED
MIST INHALATIO	N MAY CAUSE DE	ZZINESS, N	AUSEA A		NOT LISTED
MIST INHALATION DICAL CONDITION ERGENCY AND FIR	N MAY CAUSE DE	ZZINESS, N BGRAVATEI	AUSEA A	ND DIFFICULTY BREATHING. OSURE: SENSITIVE DRY SKIN ONTACT, IMMEDIATELY FLUSH	EYES WITH PLENTY (
MIST INHALATION DICAL CONDITION ERGENCY AND FIF	N MAY CAUSE DE IS GENERALLY AG RST AID PROCEDU T 15 MIN., CALL A	ZZINESS, N BGRAVATEI IRES: IN CA PHYSICIAN	AUSEA A D BY EXP	ND DIFFICULTY BREATHING. OSURE: SENSITIVE DRY SKIN ONTACT, IMMEDIATELY FLUSH KIN WITH SOAP AND WATER. IF	EYES WITH PLENTY OF SWALLOWED, DO NO
MIST INHALATION DICAL CONDITION ERGENCY AND FIF TER FOR AT LEAST UCE VOMITING, GE	N MAY CAUSE DE IS GENERALLY AG RST AID PROCEDU T 15 MIN., CALL A ET MEDICAL ATTER	ZZINESS, N AGRAVATEI IRES: IN CA PHYSICIAN NTION, REA	AUSEA A D BY EXP ASE OF C	ND DIFFICULTY BREATHING. OSURE: SENSITIVE DRY SKIN ONTACT, IMMEDIATELY FLUSH	EYES WITH PLENTY OF SWALLOWED, DO NO DES. LAUNDER BEFOR

Form Approved Budget Bureau No. 44-R1387

U.S. DEPARTMENT OF LABOI.

WORKPLACE STANDARDS ADMINISTRATION

Bureau of Labor Standards

2016-6002

MATERIAL SAFETY DATA SHEET

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<	1	X	0	\geq
Γ	X	,	Y	
		\vee		

FORMULA / TRADE SECRET	SECTI	I NO		
MANUFACTURER'S NAME RIDGE TOOL: COMPANY			EMERGENCY TE 216/323-5581	LEPHONE NO.
ADDRESS (Number, Street, City, State and ZIP Code) 400 CLARK STREET, ELYRIA, OHIO 44035				
IDENTITY RIDGID NUCLEAR THREAD CUTTING OIL		240	DATE PREPARED 9/29/87	
CHEMICAL FAMILY PETROLEUM HYDROCARBON				

SECTION II HAZARDOUS INGREDIENTS						
HAZARDOUS COMPONENTS:	OSHA PEL	ACGIH TLV,	46			
PARAFFINIC MINERAL OIL CAS: 64742-50-3	5mg/M³	5mg/M³	**************************************			
	,					

SECTION III PHYSICAL DATA							
BOILING POINT (°F.)	480°F.	SPECIFIC GRAVITY (H ₂ O=1)	0.87.				
VAPOR PRESSURE (mm Hg.)	0.01 @ 20°C.	PERCENT VOLATILE BY VOLUME (%)	0				
VAPOR DENSITY (AIR = 1)		EVAPORATION RATE (BLITYL =1)	1				
SOLUBILITY IN WATER	NIL.	ACETATE MELTING POINT	-18°C. MAX				

SECTION IV FIRE	AND EXPLOSION HAZARD DATA		
FLASH POINT (Method used) 340°F. (PMCC) 385°F. (ASTM D-92)	FLAMMABLE LIMITS NOT DETERMINED	Lei	Uel
EXTINGUISHING MEDIA WATER FOG, DRY CHEMICAL, CO2, OR FOAM			
SPECIAL FIRE FIGHTING PROCEDURES WEAR SELF CONTAINED BREATHING APPARATE	JS. KEEP FIRE EXPOSED CONTAINERS	COOL WITH W	ATER.
UNUSUAL FIRE AND EXPLOSION HAZARDS			

MATERIAL SAFETY DATA SHEET

PRODUCT NAME	OR KI	JMBE	R (see it	appears on (abel)	CTION I	Harry.	GM CO	MMON CODE	
		LIG	HTT	HREAD CUTTING	OIL (463/B)			wwou cops	
Argent Lin		-				8344	EMERGI	NCY TELEPHONE	NO.
ADDRESS (Number			ry. Steen	and Zin Codel			(313)	427-5533	
11986 Broom	Mio	4	franci	a Michigan 48150			MANUF	O8-429-7621	-5 N
HAZMOOUS MATT	HIM	DESC	JUPTION	L PROPER SHIPPING NAM	E. HAZARD CL	ISS, HA	ZARD ID NO. 149 CFF	172.1011	
Petroleum O	13								
			. 100 01						
CHEMICAL FAMILY		No.			FO	RHULA			
Petroleum Ol							roprietary		
				SECTION II - (list all i	- INGREI	DIEN ts)	TS		
CAS REGISTRY NO.	*W	% V		CHEN		Listed as a Carcino in NTP, IARC or OS			
			n	NCPENTENTS CON	CIDEBER		D. D. O. P. C. C.	1910(z) (spe	ואוסו
64741-88-4	70	-90	B	NGREDIENTS CON	The second secon				
		1000		olvent refined para	ffinic distil	late*		No.	
68425-16-1	5+			ert-nonyl sulfides		·		No.	
7778-18-9	5-	10	Sr	ifirized bydrocarb		No	Щ		
		-							
								A T	
					110 21 111	11 // 172			-
			* 5	mg/m ³ ACGIH TI	V and OCU	A DE			~~
			c	il mists	T HOW USE	A_F	1 IOF Mineral		
			71, 1119						
						***************************************			-
ING POINT 600			S	ECTION III — P	HYSICAL	DA	TA		
		<u> </u>		SPECIFIC GRAVITY (H,C		.89			
PARESSURE 5	mm f	to [pei	PERCENT VOLATILE BY	VOLUME (%)	0	PERCENT SOLID &	4	
or density (AIR = 1				EVAPORATION RATE (= 1)				
JBILITY IN WATER			NII	pH ==		/			
MANCE AND ODOR	200			Iron Renue Class C		2 1	IS MATERIAL:	LICUID SO	UD
			INIERI	ium Brown Fluid, S	ultur Odor		GAS PAS	TE POWDER	
ec.	<u> </u>	O *	n,	FIDE AND TH	(DI 00101				
32	U11	~!\	114 -	- FIRE AND EX	PLOSIO	A HA	ZARD DATA	4	
HPOINT 320-			method	used COC	FLAMMABL	LIMIT	S LEI	VEL	
GUISHING MEDIA			D					M	
II Sin S nine		1100	FLA (hemical or foam p	referred.	COza	cceptable		
AL FIRE FIGHTING PE	MULEL	'UKE	-	self-contained bre		_			

None

	SET ON VI. RECAUTI	ONS FOR SAFE HAND 'NG V
STEPS TO	D BE TAKEN IN CASE MA, LAIAL IS RELEAS	ED OR SPILLED:
IN CASE O	F SPILL, DO NOT USE WATER: SOAK UP WITH	SAND, EARTH OR OTHER INERT MATERIAL. PUT IN A SUITABLE
CONTAINE	ER. DISPOSE OF IN ACCORDANCE WITH LO	CAL, STATE AND FEDERAL REGULATIONS.
WASTE DIS	SPOSAL METHOD: BURY IN AN APPROVED LA	NDFILL OR INCINERATE IN ACCORDANCE WITH LOCAL, STATE
AND FEDE	RAL REGULATIONS, AVOID CONTAMINATIO	N OF SEWERS AND WATERWAYS.
PRECAUTIO	NS TO BE TAKEN IN HANDLING AND STOP	ING:
AVOID CONT	FACT WITH EYES, SKIN AND CLOTHING. REM	OVE CONTAMINATED CLOTHING, LAUNDER BEFORE REUSE.
WASH THOP	ROUGHLY AFTER HANDLING, AVOID BREAT	HING MIST OR VAPORS.
U He		
		*
	,	•
THER PREC	CAUTIONS:	-
INCE EMPTI	ED CONTAINERS RETAIN PRODUCT RESID	JE, FOLLOW LABEL WARNINGS EVEN AFTER CONTAINER
EMPTIED.		, OLDAY DISCE MAININGS ET AN ALTOOM AINER
	•	
		TROL MEASURES
SPIRATORY PRO	OTECTION (Specify type) VED RESPIRATOR IF EXPOSED TO HOT VI	APOR OR MIST
NTILATION	LOCAL EXHAUST RECOMMENDED	SPECIAL N/A
	MECHANICAL (General) N/A	OTHER
OTECTIVE GLOV	/ES NEOPRENE OIL IMPERVIOUS OR OIL REPELLENT BARRIER CREME.	EYE PROTECTION SAFETY GLASSES OR GOGGLES
HER PROTECTIVE	/E EQUIPMENT	AS REQUIRED TO AVOID SKIN CONTACT.
	CTICES: WASH AFTER HANDLING	THE THEORIES TO THOSE ONLY CONTINUE.
GEINIO FRAC	THOUS. WASH AFTER HANDLING	

WE BELIEVE THE STATEMENTS, TECHNICAL INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE RELIABLE, BUT THEY ARE GIVEN WITHOUT WARRANTY OR GUARANTEE OF ANY KIND, EXPRESSED OR IMPLIED, AND WE ASSUME NO RESPONSIBILITY FOR ANY LOSS, DAMAGE, OR EXPENSE, DIRECT OR CONSEQUENTIAL, ARISING OUT OF THEIR USE.

1	. 15 UP OVI	EREXPOSUR	E Co. 11 1	Avoid		THRESHOLL IT VALUE CO	
	wold he	esthine e	Il as mist			OTHER LIMIT	$19/m^3$
		SHITING C	III AS IIIISI		The contract of		
PRIMA	RY ROUTE	OF ENTRY	Inculation [] S	kin Contac	Diner (specify		
EMERG	ENCY AND	FIRST AID	ROCEDURES				
				CIN: wa	sh with soap	and water. EYES: flush with wat	er unti
L	ritation	subsides.	INGESTION	(obtal	medical ass	stance	
			050	ma			4 (-)
	UNSTA	BLE	SEC.	IUN V	T-REACTIVE	TY DATA	
STABILITY			CORDITIONS	O AVOID			· Fryngste
INCOME A		Y	Strong oxi	dizers, s	trong bases		
		natarials to s	rvoid			suifide chiorine sulfur	
HAZARDO	US DECOM	APOSITION I	HODUCTS:			couride chlorine sulfur	
HAZARDO	us	MAY OC	CUR	CONDITIO	VS TO AVOID		
POLYMERI	ZATION	WILL NOT	XCCUR X				
	North			Wiges Ut			348
STEPS TO B	LE TAKEN	N CASE UL	TERIAL IS RELEAS	I-SPILL	OR LEAK	PROCEDURES	
		II COSE MA	PERMAL IS RELEAS	SED ON SPI	Contain	spill with inert material, recover	
liquid	d. Incin	erate or	dispose in an	approve	ed manner.	Ant Atti meri marerial recover	free
	David Mic.	INOD	Eletet				
			QUANTITY Un the	1 21.0.1.	covery		
Cha Hazu	TOOUS WA	STE HO. 140	CFR 281.33)	eli elifant			
			OC) (as peckaged	minut ye	ter!		
Theoretica	_						
		TO ON			D Analytical	Isqui	
	187			// () ()			
SPIRATORY	PROTECT	ECTION (specify	V VIII-SPE	CIAL P	ROTECTIO	N INFORMATION	
		Out (Specify	(Abe)		ne normally r		
		XHAUST (S		c n	CFM	SPECIAL	
MILATION							1
MEATION	MECHAN	VICAL IGener	ral) (Specify Retai			ОТНЕЯ	
TECTIVE G	LOVES (45)	edity spel					
TECTIVE G	LOVES (45)	edity spel	ral) (Specify Rate)				asses
TECTIVE G	LOVES (45)	edity spel				OTHER ON (specify type) Gogales or safety ali	asses
TECTIVE G	LOVES (45)	edly systl PMERT	PVC		EYE PROTECTI	ON tapecity type! Gogales or safety ql	asses
TECTIVE GI	TIVE EQUI	edly noel PMENT	PYC	(.SPEC	EYE PROTECTI	ON tapecity type! Gogales or safety ql	asses
OTECTIVE GI	TIVE EQUI	edly noel PMENT	PVC	(-SPEC	IAL PRECA	ON (specify troe) Gogales or safety qu	
TECTIVE GI	TO BE TAK	PMENT S EN IN HAND	PVC ECTION IX	(-SPEC	IAL PRECA	ON tapecity type! Gogales or safety ql	
TECTIVE GI	TO BE TAK	PMENT S EN IN HAND E and into	PVC ECTION IX UNG AND STORE Ense heat so	(-SPEC	IAL PRECA	UTIONS Josed when not in use. Store awa	
TECTIVE GI	TO BE TAK	PMENT S EN IN HAND E and into	PVC ECTION IX UNG AND STORE Ense heat so	(-SPEC	IAL PRECA	UTIONS Josed when not in use. Store awa	
CAUTIONS T	D BE TAK	PMENT S EN IN HAND e and into	PYC ECTION I) UNG AND STORI Ense heat so	(-SPEC	IAL PRECA	ON (specify troe) Gogales or safety qu	
CAUTIONS T	TO BE TAKE	PMENT S EN IN HAND e and into	PVC ECTION IX UNG AND STORI ense heat so oil saturates	(-SPEC	IAL PRECA	UTIONS Josed when not in use. Store awa	
CAUTIONS TO PRECAUTE	TO BE TAKE	PMENT S EN IN HAND e and into Remove les with 2 d Hazard	PVC ECTION IX UNG AND STORE ense heat so oil saturates 29 CFR Pare	(-SPEC NG Kee Urce. I clothir	IAL PRECA	UTIONS Josed when not in use. Store awa	
From one product part Z, 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	O BE TAKE	PMENT SEN IN HAND e and into Remove les with 2 d Hazard y crid Hec	PVC ECTION IX UNG AND STORI ENSE heat so Oil saturates 29 CFR Part Ous Substant oith Adminis	(-SPEC NG Kee Urce. I clothin 1910, ces, trution	IAL PRECA	ON (specify most Gogales or safety quality of the Common o	
CAUTIONS T from one ek PRECAUT s product part Z, 1 cupationa HA), 29 (80-53348	O BE TAKE	PMENT SEN IN HAND e and into Remove les with 2 d Hazard y and Hed 10.1200 F	PVC ECTION I) UNG AND STORI ENSE heat so Oil saturates 29 CFR Part lous Substanta Ith Adminis	(-SPEC NG Kee Urce. i clothir 1910, ces, tration ster 48,	EYE PROTECTO	UTIONS Josed when not in use. Store awa	
FROM OBJECTIVE GIVEN PRECAUTIONS TO PRECAUTIONS TO PRECAUTIONS TO PRECAUTIONS TO PRODUCE PORT Z, 12 (1941), 29	O BE TAKE TO BE T	PMENT S EN IN HAND e and into Remove les with 2 d Hazard y cord Hed 10.1200 F vember 1 he State	PVC ECTION IX UNG AND STORI ENSE heat so Oil saturates 29 CFR Part lous Substant Ith Adminis rederal Regil 983. This pr	(-SPEC NG Kee Urce. 1 clothic 1910, ces, tration ster 48,	EYE PROTECTO CIAL PRECA p container of ng and wash t	ON (specify most Gogales or safety quality of the Common o	
from one expectation of the part Z, 1 cupations (HA), 29 (80-53348) complies	TO BE TAKE TO BE	PMENT S EN IN HAND e and into Remove les with 2 d Hazard y cord Hed 10.1200 F vember 1 he State	PVC ECTION IX UNG AND STORI ENSE heat so Oil saturates 29 CFR Part Ous Substant oith Adminis	(-SPEC NG Kee Urce. 1 clothic 1910, ces, tration ster 48,	EYE PROTECTO	ON (specify most Gogales or safety quality of the Common o	

MATERIAL SAFETY DATA SER

DATE OF ISSUE: February 11, 1

Section L. Identity of Material

Emergency Prone Number 303/623-5716 COLLECT

Symon yus	PVC Plastic Pipe Cement		
Formula PVC	Resin in Solvent Solution Chemic	al Family	PVC Organisol
Regulated Identification	DOT Proper Shipping Name: CEMENT		
	Shipping ID Number: NA 1133 EPA Haz	ardous Wast	e ID Number . D-001
	Hazardous Ingredients	×	CAS Number
Methy Cyclol	esin bydrofuran 1 Brhyl Ketooe Dexanone Silica	10-14 26-32 48-54 4-8 1-2	9002-86-2 109-99-9 078-93-3 108-94-1 7631-86-9

Section 2. Hazard Specifications

							ILV,	PEL a	nd STEL:	De Milita		
Known Ha	zards	Ihde	r 29 OFR 1910.1200				HF:	TL	<i>1</i> 200 mm	500		
	YE	SN	10	Y	ES	NO		F: TLV-200 ppm, 590 mg/m ³ PEL-200 ppm, 590 mg/m ³ SIEL-250 ppm, 735 mg/m ³		mg/m ³		
Combustible Liquid	1	X	Skin Hazard	7		-	CYH: TLV-25 ppm, 100 mg/m³ (skin) PEL-50 ppm, 200 mg/m³ STEL-100 ppm, 400 mg/m³		TLV-25 ppm, 100 mg/m³ (skin) PEL-50 ppm, 200 mg/m³		•	
Flammable Material	X		Bye Hazard	X								
Pyrophoric Materia	1	X	Toxic Agent	Х		M	K:		200 ppm,			
Explosive Material		X	Highly Toxic Agen	E	1			PEL-200 ppm, 590 mg/m ³ SIEL-300 ppm, 885 mg/m ³				
hstable Material		X	Sensitizer		X		NFPA Hazard Signal					
ater Reactive Mat.		X	Carcinogen	+	X	He	ılth		1			
cidizer .		X	Reproductive Toxin	X		Sta	bilit	-y	0		Flammability Special	3
ganic Peroxide		Х	Blood Toxin		X	+		rd CL			special	NONE
crosive Material		Х	Nervous Sys. Toxin	Х	·	Flannable Liquid		i sai				
ipressed Gas		X 1	Lung Toxin	X		EPA	Hazar	rd Was	te Clas			
itant	х	I	Liver Toxin	Х		5 11	175	n wi Trolo			a Maan	
		K	Sidney Toxin	х		Ignitable Wast Toxic Waste						

Section 3. Health Hazan

	WENT CEMENT
	of Exposure: ROUIE: Inhale X Ingest X Skin X Eye X
Inhala Ingesti Skin:	tion: May cause irritation of mucous membrane, nose & throat, headache, dizziness, nauses, numbres, the extremities and narcosis in high concentrations. Has caused ONS depression, liver damage in animals, & high concentrations have caused retardation of fetal development in rats. On: May be aspirated into the lungs or cause systemic effects described under inhalation. Chronic contact may lead to irritation and dermatitis. Ouronic exposure to vapors of high concentration may cause dermatitis. May possible be absorbed through the skin. Vapors or direct contact may cause irritation.
	Section 4. Emergency Response Data
Exposure	First Aid Measures: INHALATION - Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give articicial respiration. Keep victim quiet and warm. Call a poison control center or physician immediately. SKIN - Flush with water, then wash thoroughly with soap & water. Remove contaminated clothing & wash before reuse. Call a poison control center or physician if irritation persists. EYES - Flush with water for 15 min. & call a poison control center or physician if an irritation persists. INCESTION - Drink plenty of water. DO NOT INDUCE VOMITING, and call a poison control center or physician immediately. Avoid alcoholic beverages. Never give anything by mouth to an unconscious person.
Fire	Special Procedures: For Small Fires: Use dry chemical, CO2, water or foam extinquisher. For Large Fires: Evacuate area and call Fire Department immediately.
Spills	Steps To Be Taken: Ventilate area, stop leak if it can be done without risk. Take up with sand, earth or other absorbing material. Dispose of according to local, state & Rederal Reg.
	Section 5. Safe Usage Data
	Eyes: Safety Glasses with Side Shields
Protective Equipment Types	Respiratory: NIOSH Approved cannister respirator in absence of adequate ventilation. Gloves: Rubber Gloves.
	Other: Eye wash and safety shower should be available.
Ventilation	General Mechanical: Exhaust ventilation capable of maintaining emissions at the point of use below PEL. Local Exhaust: Open doors & windows. If used in enclosed area, use exhaust fan to remove fumes
Precautions	Handling & Storage: Keep away from heat, sparks and flames; store in cool, dry place.
	Other: Containers, even those that have been emptied, will retain residue and vapors. Handle empty containers as if they were full.

CARLON STANDARD CLEAR PVC SOLVENT CEMENT

Section 6. Physical Hazard Data

Flamability	LFL= 1.8 UFL= 11.8		<pre>% Volume</pre> <pre>% Volume</pre>		Flashpoint: Method Used:	5 - 8°F. Tag Closed Cup
Stability	Stable X Unstable	J	ons To Avoid: H			xide/hydrogen chloride/sm
Hazardous Polymerization	May Occur Will Not Occ	α	nditions to Avoid			
ncompatibility	Materials To Acids, or Calcium,	idizing m	aterials, alkalis n Hypochlorite),	, chlorinate	ed inorganics (P	otassium,
		Secti	on 7. Physical	and Chemical	Properties	
oiling Pt: 1	51 °F	66 °C	Vapor Density (A	Mr 1) 2.5	Volatile Comp	conents 88 + 2%
apor Press: 14	5 mally @ 20	° psi	pH N/A		Sp. Gravity:	
olubility In Hy	: Negligib	le	Will Dissolve In TETRAHYDROFU		Evaporation R	ate:
pearance:	Clear Liqui	đ			Is Ma	terial: Paste Powder
or:	Ether-like.	1 W • 11 III			Sol	id (Liquid) Gas
		Section	n 8. Hanufactur	er of Suppl	ier Data	
om Name & Mailir	g Address:	Name (Print): Pau	1 E. Naton		
OATEY CO. P. O. Box 359	906	Signat	we: Ball	/ · = -	la tar	
4700 W. 160ci Cleveland, Oc (216) 267-710	44135	Title:		orate Chemis		
		Date:	Febru	ery 11, 198	6	
		Energen	cy Telephone No.		(303) 623-5716	(4.11)

DATE OF ISSE: February 17, 1986

Section 1. Identity of Materi.

Energency Phone Number 303/623-5716 COLLECT

Synonyms: PVC	Plastic Pipe Cement		
	Resin in Solvent Solution	Chemical Family	PVC Organisol
Regulated Identification	DOT Proper Shipping Name: CEMENT		
	Shipping ID Number NA 1133	EPA Hazardous Waste	ID Number D-001
	Hazardous Ingredients	ž i	CAS Number
	PVC Restin	12-17	9002-86-2
	Tetrahydrofuran .	65-75	. 10 9-99-9
	Funed Silica	1-2	7631 -86-9
	Cycloheranone	10-16	108-94-1

Section 2. Hazard Specifications

						TLV, PEL and SIEL:	a in the second	
Known Haza	rds [hder	29 CFR 1910.1200			THF: TLV-200 ppm, 590 mg		
	YES	NO		YES	N	PEL-200 ppm, 590 mg/ STEL-250 ppm, 735 mg		
Combustible Liquid		X	Scin Hazard	х		CYH: TLV-25 ppm, 100 mg/m	r ³ (skdin)	
Flammable Material	X		Eye Hazard	x		Pří-50 ppm, 200 ng/n STEL-100 ppm, 400 ng		
Pyrophoric Material		X	Toxic Agent	X.		MEK:	,	
Explosive Material		X	Highly Toxic Agent		X	NONE		
hstable Material		X	Sensitizer		x	NFPA Haz	ard Signal	
ater Reactive Mat.		X.	Carcinogen		х	Health 1	Flammability	3
xidizer		x	Reproductive Toxin	x		Stability 0	Special	NONE
rganic Peroxide	1	X.	Blood Toxin		X	DOT Hazard Class		
orrosive Material		х	Nervous Sys. Toxin	х		Flam	able Liquid	
compressed Gas		Х	Long Toxin	Х		EPA Hazard Waste Class		
ritant	х		Liver Toxin	х		Ignita	ble Waste	
		1	Cidney Toxin	X				

	of Exposure: BOUTE:
Eyes &	Skin: Vapors and direct contact may cause irritation, pain and reduess. May possibly be absorbing through the skin.
Inhalat	ion & Ingestion: May cause irritation of mucous membranes, nauses, dizziness, headache, gastrointestinal irritation, decreased blood pressure and central nervous depression. Extremely high concentrations may cause a narcotic or anesthetic effect. Has caused liver and kidney damage in animals.
	Section 4. Harrymory Response Data
Exposure	First Aid Measures: INHALATION - Move to fresh air. If breathing is difficult, give oxygen. If not breathing give articicial respiration. Keep victim quiet and warm. Call a poison control center or physician immediately. SKIN - Flush with water, then wash thoroughly with soap & water. Remove contaminated clothing & wash before reuse. Call a poison control center or physician if irritation persists. EMES - Flush with water for 15 min. & call a poison control center or physician if an irritation persists. INCESTION - Drink plenty of water. DO NOT INDICE VOMITING, and call a poison control center or physician immediately. Avoid alcoholic beverages. Never give anything by mouth to an unconscious person.
Fire	Special Procedures: For Small Fires: Use dry chemical, CO2, water or foam extinquisher. For Large Fires: Evacuare area and call Fire Department immediately.
Spills	Steps To Be Taken: Ventilate area, stop leak if it can be done without risk. Take up with sand, earth or other absorbing material. Dispose of according to local, state & Rederal Reg.
	Section 5. Safe Usage Data
Protective	Byes: Safety Glasses with Side Stields
Equipment Types	Respiratory: NIOSH Approved cannister respirator in absence of adequate ventilation. Gloves: Rubber Gloves.
·	Other: Eye wash and safety shower should be available.
Ventilation	General Mechanical: Exhaust ventilation capable of maintaining emissions at the point of use below MIL. Local Exhaust: Open doors & windows. If used in enclosed area, use exhaust fan to remove fumes
Precautions	Handling & Storage: Keep away from heat, sparks and flames; store in cool, dry place.
	Other: Containers, even those that have been emptied, will retain residue and vapors. Handle empty containers as if they were full.

CARLON ALL WEATHER QUICKSET -CLEAR PVC SOLVENT CEMENT

Section 6. Physical Hazard Data

Flampaulity	UFL= 12		% Volume % Volume		shpoint: od Used:	5 - 8°F. Tag Closed On	
Stability	Stable X	Condit	ions To Avoid: Hea	it, sparks and	open flame.		
Scalinary	Unstable	Hazard	ous Decomp. Pdts.: C	arboo monosodd	e/carbon diox	ide/hydrogen chlo	ride/smoke
Hazardous Polymerization	May Occur		Conditions to Avoid:				
	Will Not Occ	ur X		NONE			
Incompatibility		ddizing	materials, alkalis, um Hypochlorite), co	chlorinated i	norganics (Po r alloys.	ctassium,	
		Sect	cion 7. Physical an	d Chemical Pro	perties		
Boiling Pt:	151 F	66 °C	Vapor Density (Air	r 1) 2.5 V	Compositive Composition	opents 81 - 85%	
Vapor Press: 1	45 manag @ 20)° psi	pH N/A	S	p. Gravity:	0.94 + 0.01	
Solubility In H	o: Negligit	le	Will Dissolve In: TETRAHYDROFURA		vaporation Ra	te: 1) 5.0 - 8.0	
dor:	Clear Liqu Ether-like				Is Mat	erial: Paste	Powder
		Sect	ion 8. Manufacturer	of Supplier		d (Liquid)	Gas
irm Name & Maili	ng Address:			E. Naton			
OATEY CO. P. O. Box 3:	5906	Signs	iture: Jack	i E. W	this		
4700 W. 1600 Cleveland, ((216) 267-71	th Street H 44135	Title	: Corpora	ate Chemist			
		Date:	Februar	y 17, 1986	•		
		1					

Section 1. Identity of Material

Energency Phone Number 303/623-5716 COLLECT

oduct Name of	Number: CARLON STANDARD CLEAR PVC CEMENT	
Synonyms	PVC Plastic Pipe Cement	
Formula PVC	Resin in Solvent Solution Chemical Family	PVC Organisol
Regulated Identification	DOT Proper Shipping Name: CEMENT	
	Shipping ID Number: NA 1133 EPA Hazardous Wa	aste ID Number D-001
	Hazardous Ingredients %	CAS Number
Tetra Methy Cyclo Aceto	desin hydrofuran 1 Ethyl Ketone hexanone Silica 10-14 35-45 <15 7-15 10-30 1-2	109-99-9 078-93-3 108-94-1

mazard specifications	Section	2.	Hazard	Specifications
-----------------------	---------	----	--------	----------------

						TLV, FEL and STEL:		***************************************
Known Haza	ards	Under	29 OFR 1910.1200	201	************	TH: TLV-200 ppm, 59	O mg/m ³	
1	YE	SN	0	YES	N	PEL-200 ppm, 59 STEL-250 ppm, 7	0 mg/m ³ 35 mg/m ³	1727
Combustible Liquid		X	Skin Hazard	X		CYH: TLV-25 ppm, 100	mg/m³ (skin)	····
Flammable Material	X		Eye Hazard	X		FEL-50 ppm, 200 STEL-100 ppm, 40		
Pyrophoric Material		X	Toxic Agent	X		MEK: TLV-200 ppm, 590) mg/m ³	
Explosive Material		Х	Highly Toxic Agent		X	FEL-200 ppm, 590 STEL-300 ppm, 68	2 mg/w ₃ , , , , , , , , , , , , , , , , , , ,	
Unstable Material		X	Sensitizer		X	· NFPA Ha	zard Signal	···
Mater Reactive Mat.		X	Carcinogen		Х	Health 1	Flarmability 3	
xidizer	= - <u>!</u> 	X	Reproductive Toxin	Х		Stability 0	Special NONE	
Irganic Peroxide		Х	Blood Toxin		Х	DOT Hazard Class		
orrosive Material		X	Nervous Sys. Toxin	X		Flam	mable Liquid	
ompressed Gas		Х	Lung Toxin	X		EPA Hazard Waste Class		
ritant	X		Liver Toxin	X			able Waste	
			Kidney Toxin	X	\dashv		Waste	

Section 3. Health Hazard Data

Effects of Exposure:

ENTRY ROUTE:

Inhale · X Ingest X

Skin X Eye X

Inhalation: May cause irritation of mucous membrane, nose & throat, headache, dizziness, nausea, numbness of the extremities and narcosis in high concentrations. Has caused ONS depression, liver damage in animals, & high concentrations have caused retardation of fetal development in rats.

Ingestion: May be aspirated into the lungs or cause systemic effects described under inhalation.

Skin: Orronic contact may lead to irritation and dermatitis. Orronic exposure to vapors of high concentration may cause dermatitis. May possible be absorbed through the skin.

Eye: Vapors or direct contact may cause irritation.

Section 4. Emergency Response Data

Exposure	First Aid Measures: IN-MLATION - Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give articleal respiration. Keep victim quiet and warm. Call a poison control center or physician immediately. SKIN - Flush with water, then wash thoroughly with soap & water. Remove contaminated clothing & wash before reuse. Call a poison control center or physician if irritation persists. EYES - Flush with water for 15 min. & call a poison control center or physician if an irritation persists. INTESTION - Drink plenty of water. DO NOT INDUCE VOMITING, and call a poison control center or physician immediately. Avoid alcoholic beverages. Never give anything by mouth to an unconscious person.
Fire	Special Procedures: For Small Fires: Use dry chemical, CO ₂ , water or foam extinquisher. For Large Fires: Evacuate area, and call Fire Department immediately.
Zbijja	Steps To Be Taken: Ventilate area, stop leak if it can be done without risk. Take up with sand, earth or other absorbing material. Dispose of according to local, state & Federal Reg.

Section 5. Safe Usage Data

	Eyes: Safety Glasses with Side Shields
Protective Equipment	Respiratory: NIOSH-Approved cannister respirator in absence of adequate ventilation.
Types .	Gloves: Rubber Gloves.
	Other: Eye wash and safety shower should be available.
Ventilation	Ceneral Mechanical: Exhaust ventilation capable of maintaining emissions at the point of use below FEL. Local Exhaust: Open doors & windows. If used in enclosed area, use exhaust fan to remove fumes
Precautions	Handling & Storage: Keep away from heat, sparks and flames; store in cool, dry place:
· · · · · · · ·	Other: Containers, even those that have been emptied, will retain residue and vapors. Handle empty containers as if they were full.

Flammability	IFL= 1.8 IFL= 11.8		% %	Volume Volume	Flashmi Methi		0 - 5°F. Tag Closed Oup	9(
Stability	Stable X	Condit	ions To	Avoid: Heat	, sparks and ope	n flame.		
	Unstable	Hazard	ous Dec	comp. Pdts.: Ca	rbon monoxide/ca	rbon dioxi	ide/hydrogen chlor	ide/snoke.
Hazardous Polymerization	May Occur		Conditi	ons to Avoid:				
POTNIES TRACTOR	Will Not Occ	гХ			NOVE			
Incompatibility		idizing and Sodi	.π Hypα	ochlorite), cop	hlorinated inorg per or copper al	loys.	tassium,	
		Sect	ion 7.	Physical and	Chemical Propert	ties		
Boiling Pt:	151 °F	66 °C	Vapor	r Density (Air	1) 2.5 Volat	ile Compo	nents 88 + 2%	
Vapor Press: 14	5 mmHg @ 20	° psi	рН	N/A	Sp. 0	ravity:	0.94 + 0.01	
Solubility In H ₂	O: Negligio	le		Dissolve In: ETRAHYCRCFURAN		ration Ra	te:) 5.5 - 8.0	•
ppearance:	Clear Liqu	id		Ŧ		Is Mate	erial: Paste	Powder
dor:	Ether-like.	84				Solid	(Liquid)	Gas
		Sect	ion 8.	Manufacturer	of Supplier Data	1		
irm Name & Maili	ng Address:	Name	(Print	:): Paul E	. Naton			
OATEY CO. P. O. Box 35	904	Signa	iture:	Ball	0 £ 71	alon		
4700 W. 160t	h Street.	Title	:	Corpora	te Chemist	(. · ·	

4700 W. 160th Street. Cleveland, OH 44135 (216) 267-7100)

Date:

July 11, 1988

Emergency Telephone No.

(303) 623-5716 (Collect)

MATERIAL SAFETY DATA SE .I	MSDS NUMBER IP 9486					
PRODUCT IDEN	Company of the Control of the Contro					
THADE NAME DUXSEAL	GENERIC NAME Sealing put	tv				
MANUFACTURER'S NAME Manville Building Materials Corporation	CAS NUMBER					
ADDRESS (STREET)	PHONE NUMBER (303) 978-3	120				
P. O. Box 5108 CITY STATE ZI						
Denver Colorado 802	1.7		•			
PRODUCT II		·				
MATERIAL Chrysolite asbestos fiber (encapsulated)	CAS NUMBER 1332-21-4	96	TLV			
Liquid chlorinated paraffin	63449-39-8	50 45 ′				
Vegetable oil	None	5				
II . PHYSICA	L DATA					
DILING POINT	SPECIFIC GRAVITY					
I/A	1.2					
LUBILITY IN WATER	PERCENT VOLATILE	PERCENT VOLATILE				
PEARANCE AND ODOR						
rown putty - slight oleic odor			Company of the Compan			
III . FIRE AND EXP						
ASH POINT > 400°F	FLAMMABLE LIMITS	EL	UEL			
INGUISTING MEDIA						
	,					
Tinguishing media /A Ecial FireFighting procedures						
/A	,					
/A ECIAL FIREFIGHTING PROCEDURES USUAL FIRE OR EXPLOSION HAZARDS						
/A ECIAL FIREFIGHTING PROCEDURES USUAL FIRE OR EXPLOSION HAZARDS -IV • HEALTH HAZARDS	INFORMATION					
/A ECIAL FIREFIGHTING PROCEDURES USUAL FIRE OR EXPLOSION HAZARDS - IV • HEALTH HAZARD HAZARD BY ROUTES OF EXPOSUR	INFORMATION					
/A ECIAL FIREFIGHTING PROCEDURES USUAL FIRE OR EXPLOSION HAZARDS -IV • HEALTH HAZARD HAZARD BY ROUTES OF EXPOSUR	INFORMATION					
ECIAL FIREFIGHTING PROCEDURES USUAL FIRE OR EXPLOSION HAZARDS IV • HEALTH HAZARD HAZARD BY ROUTES OF EXPOSUR ALATION /A ESTION Tansient irritant to the gastrointesting	INFORMATION E (Indicate chronic or acute)					
ECUAL FIREFIGHTING PROCEDURES USUAL FIRE OR EXPLOSION HAZARDS IV • HEALTH HAZARD HAZARD BY ROUTES OF EXPOSUR ALATION ALATION Tansient irritant to the gastrointesting	INFORMATION E (Indicate chronic or acute)					
CAL FREFIGHTING PROCEDURES USUAL FRE OR EXPLOSION HAZARDS IV • HEALTH HAZARD HAZARD BY ROUTES OF EXPOSUR ALATKON A ESTION Tansient irritant to the gastrointesting	INFORMATION E (Indicate chronic or acute)					
ECUAL FIREFIGHTING PROCEDURES USUAL FIRE OR EXPLOSION HAZARDS IV • HEALTH HAZARD HAZARD BY ROUTES OF EXPOSUR ALATION ALATION TANSIENT ITTITANT to the gastrointesting TANGENTACT	INFORMATION E (Indicate chronic or acute)					
CONTACT	INFORMATION E (Indicate chronic or acute)					
CA CONTACT One HASORPTION AUSUAL FRE OR EXPLOSION HAZARDS IV • HEALTH HAZARD HAZARD BY ROUTES OF EXPOSUR ALATION (A CONTACT ONE HASORPTION	INFORMATION E (Indicate chronic or acute)					
ECIAL FIREFIGHTING PROCEDURES USUAL FIRE OR EXPLOSION HAZARDS IV • HEALTH HAZARD HAZARD BY ROUTES OF EXPOSUR ALATION ALATION ARESTRON Fansient irritant to the gastrointesting A CONTACT DIRE N AUSORPTION DIRE	INFORMATION E (Indicate chronic or acute)					
ECIAL FIREFIGHTING PROCEDURES USUAL FIRE OR EXPLOSION HAZARDS IV • HEALTH HAZARE HAZARD BY ROUTES OF EXPOSUR ALATION /A ESTION Tansient irritant to the gastrointestine /A H CONTACT ONE H ABSORPTION	INFORMATION E (Indicate chronic or acute)					

A STREET, SALES OF THE PARTY OF	
Y	
	FIRST AID
LALATION	
<u>^</u>	
JESTION .llow material to be nat	turally eliminated.
E CONTACT	
1/A	
IN CONTACT	
3/A	
ON ABSORPTION .	
1/A	
	CONDITIONS FOR SAFE USE (When over TLV)
SPIRATORY PROTECTION	
ot required.	
E PROTECTION to provide the control of the control	
OTECTIVE OLOVES	
HER PROTECTIVE CLOTHING/EQUIPMENT	
NTILATION REQUIREMENTS	
ot necessary at tempera	tures below 400°F.
	VII + REACTIVITY DATA
A STATE OF THE STA	WILL HAZARDOUS POLYMERIZATION OCCUR?
MATERIAL STABLET	No
COMPATIBILITY	CONDITIONS TO AVOID Temperatures exceeding 400°F
zardous decomposition products ydrogen chloride	
	VIII . SPILL OR LEAK PROCEDURES
EPS TO BE TAKEN IF MATERAL IS SPILLED	
weep up any waste discar	rd in a closed container.
STE DISPOSAL METHOD	le local state and federal regulations.
SELING REQUIRED?	DOT REGULATED? DOT NUMBER
RA REGULATED?	IRCHA RUMBER
RA REGULATED!	RCRA NUMBER
	IX • SPECIAL PRECAUTIONS
CIAL PRECAUTIONS FOR HANDLING AND	IX • SPECIAL PRECAUTIONS STORAGE
	IX • SPECIAL PRECAUTIONS STORAGE
CIAL PRECAUTIONS FOR HANDLING AND FOID Storage at elevated	IX • SPECIAL PRECAUTIONS STORAGE
CIAL PRECAUTIONS FOR HANDLING AND	IX • SPECIAL PRECAUTIONS STORAGE
CIAL PRECAUTIONS FOR HANDLING AND FOID Storage at elevated	IX • SPECIAL PRECAUTIONS STORAGE
CIAL PRECAUTIONS FOR HANDLING AND FOID Storage at elevated	IX • SPECIAL PRECAUTIONS STORAGE
CIAL PRECAUTIONS FOR HANDLING AND FOID Storage at elevated	IX • SPECIAL PRECAUTIONS STORAGE

While the information and recommendations set forth herein are believed to be accurate as of the date hereof, THE MANUFACTURE.

VAKES NO WARRANTY WITH RESPECT THERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON.

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PAGE: GE5000

1 1

MANUFACTURED BY:

EMERGENCY TELEPHONE:

GENERAL ELECTRIC CO. SILICONE PRODUCTS DIV WATERFORD, NY 12188 (518) 237-3330 (24 HRS)

SUPPLIED BY:

GENERAL ELECTRIC CO. SILICONE PRODUCTS DIV WATERFORD, NY 12188 (518) 237-3330 (24 HRS)

REVISED: 01/23/89

PREPARER: DA POLSINELLI

*** I PRODUCT IDENTIFICATION

**

PRODUCT IDENTIFICATION: GE5000

CHEMICAL FAMILY

SILICONE RUBBER SEALANT

CHEMICAL NAME: SILICONE RUBBER SEALANT

FORMULA: MIXTURE

*** II PRODUCT COMPONENTS ***

	APPI WG1		OSHA		CAS REG
PRODUCT COMPOSITION			PEL	UNITS	NO.
وين والله والله حاله الله الله وله حبه حياء فله الله على الله الله عنه بعي والله					
A. HAZARDOUS					
TRADE SECRET COMPONENT	1-5	NE	NE	NA	
METHYLTRIMETHOXYSILANE B, NON-HAZARDOUS	1-5	10REC	* E	PPM	1185-55-3*

FORMULATION INFORMATION:

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*** III PHYSICAL DATA ***

**PRODUCT INFORMATION * VOLATILE BY VOLUME: <4 : NA (F) NA (C) BOILING POINT EVAPORATION RATE MM HG JAPOR PRESSURE(20 C): NA (BUTYL ACETATE=1) UAPOR DENSITY (AIR=1): NA : NA (F) NA (C) SPECIFIC (
: NA (F) NA (C) (WATER=1)
: SOLID DENSITY SPECIFIC GRAVITY : UNKN FREEZING POINT : NA MELTING POINT : UNKN KG/M3 PHYSICAL STATE DENSITY : SOLID ACID/ALKALINITY : UNKNOWN MEG/G : AMMONIA DOOR : NA : TRANSLUCENT COLOR DOOR THRESHOLD : 46.8 (PPM) SOLUBILITY IN WATER(20C): INSOLUBLE SOLUBILITY IN ORGANIC SOLVENT: PARTIAL, TOLUENE (STATE SOLVENT)

*** IV FIRE AND EXPLOSITION DATA ***

FLASH PT: NA (F) NA (C) BY NA IGNITION TEMP: UNKN(F) UNKN (C)

FLAMMABLE LIMITS IN AIR(%): LOWER NA UPPER NA

SENSITIVITY TO MECHANICAL IMPACT (Y/N): N

STATITUTY TO STATIC DISCHARGE:

SENSITIVITY TO STATIC DISCHARGE IS NOT EXPECTED.

INGUISHING MEDIA:

ALL STANDARD FIREFIGHTING MEDIA

SPECIAL FIREFIGHTING PROCEDURES:

NONE KNOWN.

*** V REACTIVITY DATA ***

TABILITY:

HAZARDOUS:

X STABLE UNSTABLE POLYMERIZATION WILL NOT OCCUR LAZARDOUS DECOMPOSITION/COMBUSTION PRODUCTS:

CARBON MONOXIDE.

CARBON DIOXIDE.

SILICON DIOXIDE.

METHANOL.

AMMONIA.

NCOMPATIBILITY (MATERIALS TO AVOID):

NONE KNOWN.

ONDITIONS TO AVOID:

VAPOR AND/OR LIQUID REACT WITH WATER TO FORM AMMONIA.

*** VI HEALTH HAZARD DATA ***

CUTE SIGNS/EFFECTS OF OVEREXPOSURE:

NGESTION:

NONE KNOWN

'N CONTACT:

UNCURED PRODUCT CONTACT MAY IRRITATE THE SKIN.

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PAGE: GE5000

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INHALATION:

CAUSES MODERATE RESPIRARTORY IRRITATION.

APPLIES ONLY IN UNCURED STATE.

EYE CONTACT:

UNCURED PRODUCT CONTACT IRRITATES EYES.

MEDICAL CONDITIONS AGGRAVATED:

NONE KNOWN.

OTHER:

NONE KNOWN.

CHRONIC EFFECTS OF OVEREXPOSURE:

NONE KNOWN.

EMERGENCY AND FIRST AID PROCEDURES:

INGESTION:

RINSE MOUTH WITH WATER SEVERAL TIMES.

SKIN:

TO CLEAN FROM SKIN, REMOVE COMPLETELY WITH A DRY CLOTH OR PAPER TOWEL, BEFORE WASHING WITH DETERGENT AND WATER.

INHALATION:

MOVE PERSON TO FRESH AIR.

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND GET MEDICAL ATTENTION IF IRRITATION PERSISTS.

NOTE TO PHYSICIAN: NONE KNOWN.

TOXICITY:

TRADE SECRET COMPONENT

1000(RAT)

ACUTE ORAL LD50: ACUTE DERMAL LD50:

MG/KG MG/KG 5400 (RAT)

ACUTE INHALATION LC50:

>200 MG/L

OTHER:

NONE.

AMES TEST:

UNKNOWN

TOXICITY:

METHYLTRIMETHOXYSILANE

ACUTE ORAL LD50:

12,500 (RAT) MG/KG

ACUTE DERMAL LD50:

MG/KG NONE FOUND

ACUTE INHALATION LC50:

NONE FOUND

OTHER:

NONE.

AMES TEST:

UNKNOWN

PRINCIPALS ROUTES OF EXPOSURE:

ORAL.

DERMAL - SKIN.

EYES.

INHALATION.

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HIS PRODUCT OR ONE OF ITS INGREDIENTS PRESENT 0.1% OR MORE IS NOT LISTED AS A CARCINOGEN OR SUSPECTED CARCINOGEN BY ITP, IARC, OR OSHA RODUCTS/INGREDIENTS

THIS SPACE RESERVED FOR SPECIAL USE.

PREVENTATIVE MEASURES (SECTIONS VII, VIII, IX)

*** VII SPECIAL PROTECTIVE EQUIPMENT ***

RESPIRATORY PROTECTION:

USE IN A WELL VENTILATED AREA.
USE APPROVED NIOSH RESPIRATORY PROTECTION IF TLV EXCEEDED.....
OR OVER EXPOSURE IS LIKELY.

PROTECTIVE GLOVES:

CLOTH GLOVES.

EYE AND FACE PROTECTION:

SAFETY GLASSES.

THER PROTECTIVE EQUIPMENT:

NONE KNOWN.

TENTILATION:

USE ONLY IN WELL VENTILATED AREA.

*** VIII SPILL, LEAK AND DISPOSAL PROCEDURES ***

(CTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
WIPE, SCRAPE OR SOAK UP IN AN INERT MATERIAL AND PUT IN A
CONTAINER FOR DISPOSAL.
WASH WALKING SURFACES WITH DETERGENT AND WATER TO REDUCE SLIPPING HAZARD.
WEAR PROPER PROTECTIVE EQUIPMENT AS SPECIFIED IN THE PROTECTIVE
EQUIPMENT SECTION.

ISPOSAL METHOD:
DISPOSAL SHOULD BE MADE IN ACCORDANCE WITH FEDERAL, STATE AND
LOCAL REGULATIONS.
BURY IN A LICENSED LANDFILL OR BURN IN AN APPROVED INCINERATOR
ACCORDING TO FEDERAL, STATE, AND LOCAL REGULATIONS.

*** IX SPECIAL PRECAUTIONS ***

RECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

KEEP CONTAINER CLOSED WHEN NOT IN USE.

AVOID CONTACT WITH SKIN AND EYES.

REMOVE CONTACT LENSES BEFORE USING SEALANT. DO NOT HANDLE
LENSES UNTIL ALL SEALANT HAS BEEN CLEANED FROM THE FINGERTIPS, NAILS AND CUTICLES. RESIDUAL SEALANT MAY REMAIN ON
FINGERS FOR SEVERAL DAYS AND TRANSFER TO LENSES AND CAUSE
SEVERE EYE IRRITATION.

USE MECHANICAL VENTILATION TO STAY BELOW TLV OF 25 PPM AMMONIA.
PRODUCT RELEASES METHANOL DURING APPLICATION AND CURING.

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PAGE: GE5000

PRODUCT RELEASES AMMONIA DURING APPLICATION AND CURING. UNCURED PRODUCT CONTACT MAY IRRITATE EYES. UNCURED PRODUCT CONTACT MAY IRRITATE SKIN.

ENGINEERING CONTROLS:

EXHAUST VENTILATION EYEWASH STATIONS. USE IN A WELL VENTILATED AREA.

*** X SHIPPING AND REGULATORY CLASSIFICATION DATA

DOT SHIPPING NAME: NONE DOT HAZARD CLASS: NONE DOT LABELS(S): NA UN/NA NUMBER: NA PLACARDS:

NONE EXPORT: NA

EPA HAZARD WASTE: NA

SARA HAZARD CLASS:

TO BE DETERMINED

WHMIS HAZARD CLASS:

D2B TOXIC MATERIALS

CPSC CLASSIFICATION: EYE IRRITANT

TRANSPORTATION CLASS:

NA

RID (OCTI) NA ADR (ECE) NA RAR (IATA) NA

NFPA/HMIS CLASSIFICATION FLAMMABILITY O , REACTIVITY O , HEALTH 2

SCHEDULE B:

ECCN:

ADDITIONAL INFORMATION:

THIS PRODUCT OR ITS COMPONENTS ARE ON THE EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICALS (EINECS)...........

************************************ THESE DATA ARE OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT AS A PRODUCT SPECIFICATION. NO WARRANTY, EITHER EXPRESSED OR IMPLIED, IS MADE. THE RECOMMENDED HANDLING PROCEDURES ARE BELIEVED TO BE GENERALLY APPLICABLE. HOWEVER, EACH USER SHOULD REVIEW THESE RECOMMENDATIONS IN THE SPECIFIC CONTENT OF THE INTENDED USE.....

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C = CEILING LIMIT NEGL = NEGLIGIBLE
EST= ESTIMATED NF = NONE FOUND
NA = NOT APPLICABLE UNKN = UNKNOWN
NE = NONE ESTABLISHED REC = RECOMMENDED
ND = NONE DETERMINED V = RECOMM. BY VENDOR
BY-PRODUCT = REACTION BY- SKN = SKIN
PRODUCT, TSCA INVENTORY TS = TRADE SECRET

STATUS NOT REQUIRED UNDER R = RECOMMENDED 40 CFR PART 720.30(H-2) MST = MIST

1

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PAGE: GE5010

MANUFACTURED BY:

EMERGENCY TELEPHONE:

GENERAL ELECTRIC CO. SILICONE PRODUCTS DIV WATERFORD, NY 12188

(518) 237-3330 (24 HRS)

SUPPLIED BY:

GENERAL ELECTRIC CO. SILICONE PRODUCTS DIV WATERFORD, NY 12188

(518) 237-3330 (24 HRS)

REVISED: 01/23/89

PREPARER: DA POLSINELLI

I PRODUCT IDENTIFICATION *** ***

PRODUCT IDENTIFICATION: GE5010

CHEMICAL FAMILY

SILICONE RUBBER SEALANT CHEMICAL NAME: SILICONE SEALANT

FORMULA: MIXTURE

*** *** II PRODUCT COMPONENTS

	ACGIH	OSHA		CAS REG
*	TLV	PEL	UNITS	NO.
	-			
7-6	25	25	אסם	
				1185-55-3*
7-2	TO	TO	PPM	TT03-22-2"
	WGT.	1-5 25	WGT. % TLV PEL 1-5 25 25	WGT. * TLV PEL UNITS 1-5 25 25 PPM

FORMULATION INFORMATION:

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PAGE: GE5010

*** III PHYSICAL DATA

```
**PRODUCT INFORMATION
                        (F) NA
BOILING POINT
                                  (C)
                                        % VOLATILE BY VOLUME:<4
               : NA
VAPOR PRESSURE(20 C): NA
                        MM HG
                                        EVAPORATION RATE
UAPOR DENSITY(AIR=1): NA
                                      (BUTYL ACETATE=1)
FREEZING POINT : NA (F) NA
                                  (C) SPECIFIC GRAVITY
                                                          :1.05
MELTING POINT
                  : NA
                        (F) NA (C) (WATER=1)
PHYSICAL STATE
                  : SOLID
                                       DENSITY
                                                          :1048
                                                                   KG/M3
                  : AMMONIA
DDOR
                                       ACID/ALKALINITY
                                                          : UNKNOWN
                                                                   MEG/G
COLOR
                  : WHITE
DDOR THRESHOLD
                : 46.8 (PPM)
SOLUBILITY IN WATER (20C): INSOLUBLE
SOLUBILITY IN ORGANIC SOLVENT: PARTIALLY IN TOLUENE
(STATE SOLVENT)
```

*** IV FIRE AND EXPLOSITION DATA *** NA (F) NA (C) BY NA IGNITION TEMP: UNKN(F) UNKN (C) FLASH PT: PLAMMABLE LIMITS IN AIR(%): LOWER NA UPPER NA SENSITIVITY TO MECHANICAL IMPACT (Y/N): N PUSITIVITY TO STATIC DISCHARGE:

SENSITIVITY TO STATIC DISCHARGE IS NOT EXPECTED.

INGUISHING MEDIA:

ALL STANDARD FIREFIGHTING MEDIA

PECIAL FIREFIGHTING PROCEDURES: NONE KNOWN.

> V REACTIVITY DATA **

TABILITY:

HAZARDOUS:

X STABLE UNSTABLE POLYMERIZATION WILL NOT OCCUR AZARDOUS DECOMPOSITION/COMBUSTION PRODUCTS:

CARBON MONOXIDE. CARBON DIOXIDE. SILICON DIOXIDE. METHANOL.

AMMONIA.

COMPATIBILITY (MATERIALS TO AVOID):

NONE KNOWN.

)NDITIONS TO AVOID:

VAPOR AND/OR LIQUID REACT WITH WATER TO FORM AMMONIA.

VI HEALTH HAZARD DATA ***

UTE SIGNS/EFFECTS OF OVEREXPOSURE: **GESTION:**

NONE KNOWN

'N CONTACT:

UNCURED PRODUCT CONTACT MAY IRRITATE THE SKIN.

3

MATERIAL SAFETY DATA SHEL. COPYRIGHT GENERAL ELECTRIC CO.

PAGE:

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INHALATION:

CAUSES MODERATE RESPIRARTORY IRRITATION.

APPLIES ONLY IN UNCURED STATE.

EYE CONTACT:

UNCURED PRODUCT CONTACT IRRITATES EYES.

MEDICAL CONDITIONS AGGRAVATED:

NONE KNOWN.

OTHER:

AMMONIA RELEASED DURING CURING.

CHRONIC EFFECTS OF OVEREXPOSURE:

NONE KNOWN.

EMERGENCY AND FIRST AID PROCEDURES:

INGESTION:

RINSE MOUTH WITH WATER SEVERAL TIMES.

SKIN:

TO CLEAN FROM SKIN, REMOVE COMPLETELY WITH A DRY CLOTH OR PAPER TOWEL, BEFORE WASHING WITH DETERGENT AND WATER.

INHALATION:

MOVE PERSON TO FRESH AIR.

EYES:

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND GET MEDICAL ATTENTION IF IRRITATION PERSISTS.

NOTE TO PHYSICIAN: NONE KNOWN.

TOXICITY:

TRADE SECRET COMPONENT

MG/KG

ACUTE ORAL LD50: ACUTE DERMAL LD50:

1000(RAT) 5400 (RBT) MG/KG

ACUTE INHALATION LC50:

>200 MG/L

OTHER:

NONE.

AMES TEST:

UNKNOWN

TOXICITY:

METHYLTRIMETHOXYSILANE

12,500 (RAT) MG/KG

ACUTE ORAL LD50: ACUTE DERMAL LD50:

MG/KG

ACUTE INHALATION LC50:

NONE FOUND NONE FOUND

OTHER:

NONE.

AMES TEST:

UNKNOWN

PRINCIPALS ROUTES OF EXPOSURE:

ORAL.

DERMAL - SKIN.

EYES.

INHALATION.

MATERIAL SAFETY DATA SHEET COPYRIGHT GENERAL ELECTRIC CO.

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HIS PRODUCT OR ONE OF ITS INGREDIENTS PRESENT 0.1% OR MORE S NOT LISTED AS A CARCINOGEN OR SUSPECTED CARCINOGEN BY TP, IARC, OR OSHA RODUCTS/INGREDIENTS

THIS SPACE RESERVED FOR SPECIAL USE.

PREVENTATIVE MEASURES (SECTIONS VII, VIII, IX)

*** VII SPECIAL PROTECTIVE EQUIPMENT ***

ESPIRATORY PROTECTION:

USE IN A WELL VENTILATED AREA.

USE APPROVED NIOSH RESPIRATORY PROTECTION IF TLV EXCEEDED.....
OR OVER EXPOSURE IS LIKELY.

ROTECTIVE GLOVES:

CLOTH GLOVES.

YE AND FACE PROTECTION:

SAFETY GLASSES.

THER PROTECTIVE EQUIPMENT:

NONE KNOWN.

ENTILATION:

USE ONLY IN WELL VENTILATED AREA.

*** VIII SPILL, LEAK AND DISPOSAL PROCEDURES ***

CTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
WIPE, SCRAPE OR SOAK HP IN AN INCRE MATERIAL AND

WIPE, SCRAPE OR SOAK UP IN AN INERT MATERIAL AND PUT IN A CONTAINER FOR DISPOSAL.

WASH WALKING SURFACES WITH DETERGENT AND WATER TO REDUCE SLIP-PING HAZARD.

WEAR PROPER PROTECTIVE EQUIPMENT AS SPECIFIED IN THE PROTECTIVE EQUIPMENT SECTION.

SPOSAL METHOD:

DISPOSAL SHOULD BE MADE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

*** IX SPECIAL PRECAUTIONS

ECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: KEEP CONTAINER CLOSED WHEN NOT IN USE.

AVOID CONTACT WITH SKIN AND EYES.

REMOVE CONTACT LENSES BEFORE USING SEALANT. DO NOT HANDLE LENSES UNTIL ALL SEALANT HAS BEEN CLEANED FROM THE FINGERTIPS, NAILS AND CUTICLES. RESIDUAL SEALANT MAY REMAIN ON FINGERS FOR SEVERAL DAYS AND TRANSFER TO LENSES AND CAUSE SEVERE EYE IRRITATION.

USE MECHANICAL VENTILATION TO STAY BELOW TLV OF 25 PPM AMMONIA. PRODUCT RELEASES METHANOL DURING APPLICATION AND CURING. PRODUCT RELEASES AMMONIA DURING APPLICATION AND CURING. UNCURED PRODUCT CONTACT MAY IRRITATE EYES.

MATERIAL SAFETY DATA & COPYRIGHT GENERAL ELECTRIC _J.

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5

UNCURED PRODUCT CONTACT MAY IRRITATE SKIN.

ENGINEERING CONTROLS:

EXHAUST VENTILATION EYEWASH STATIONS.

USE IN A WELL VENTILATED AREA.

*** X SHIPPING AND REGULATORY CLASSIFICATION DATA

DOT SHIPPING NAME: NA DOT HAZARD CLASS: NA DOT LABELS(S): NA UN/NA NUMBER:

PLACARDS:

NONE EXPORT:

NA

EPA HAZARD WASTE: NA

SARA HAZARD CLASS:

TO BE DETERMINED

WHMIS HAZARD CLASS:

D2B TOXIC MATERIALS

CPSC CLASSIFICATION: NA

TRANSPORTATION CLASS:

NA

RID (OCTI) NA ADR (ECE) NA RAR (IATA) NA

NFPA/HMIS CLASSIFICATION FLAMMABILITY 0 , REACTIVITY 0 , HEALTH

SCHEDULE B:

ECCN:

ADDITIONAL INFORMATION:

THIS PRODUCT OR ITS COMPONENTS ARE ON THE EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICALS (EINECS)............

********************* THESE DATA ARE OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT AS A PRODUCT SPECIFICATION. NO WARRANTY, EITHER EXPRESSED OR IMPLIED, IS MADE. THE RECOMMENDED HANDLING PROCEDURES ARE BELIEVED TO BE GENERALLY APPLICABLE. HOWEVER, EACH USER SHOULD REVIEW THESE RECOMMENDATIONS IN THE SPECIFIC CONTENT OF THE INTENDED USE.........

C = CEILING LIMIT NEGL = NEGLIGIBLE EST= ESTIMATED

NF = NONE FOUND

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NA = NOT APPLICABLE UNKN = UNKNOWN

NE = NONE ESTABLISHED REC = RECOMMENDED

ND = NONE DETERMINED V = RECOMM. BY VENDOR

BY-PRODUCT = REACTION BY- SKN = SKIN

PRODUCT, TSCA INVENTORY TS = TRADE SECRET STATUS NOT REQUIRED UNDER R = RECOMMENDED40 CFR PART 720.30(H-2) MST = MIST

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved DME No. 44-81167

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

Crouse-Hinds Company			315/477-701	ONEN),
P. O. Box 4999; Syracus	Ende/	Y 13	221		
CHEMICAL HAME AND SYNONYMS			Chico A Sealing	'Ompo	haur
Inorganic Inorganic			cement and calcined gyp	in a	umina
SECTION	VII -	HAZA	RDOUS INGREDIENTS		
PAINTS, PRESERVATIVES, & SOLVENTS	, x	TLV	ALLOYS AND METALLIC COATINGS	1	TLV
PIGMENTS			BASE METAL		
CATALYST			ALLOYS .		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES	OF O	THER LIG	UIDS, SOLIDS, OR GASES	×	TLV
See Formula					(CAND)
		1000		+	
			•	-	

					EV.

SEC	TION-III	PHYSICAL DATA
BOILING POINT (*F.)	N/A	SPECIFIC GRAVITY (H)0+11
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT, VOLATILE BY VOLUME (%)
VAPOR DEHSITY (AIR-1)	R/A	EVAPORATION RATE
SOLUBILITY IN WATER	N/A	
APPEARANCE AND ODOR Similar to	Portland	Cement, wet and dry

SECTION IV -	FIRE AND	EXPLOSION HAZARD DAT	Α	
FLASH POINT (Method used)	N/A	PLANMABLE LIMITS	Let	Uel
EXTINOUISHING MEDIA .	N/A			
SPECIAL FIRE FIGHTING PROCEDURES	N/A			
			I Carry William	
UNUSUAL FIRE AND EXPLOSION HAZARDS				
None				

MANUFACTURER'S HAME

	LIMIT VALUE				
£ / / £ C 1 £ O F C	PEREXPOSURE	N/1	١		
ENTERDENCY I				•	•
EMERGENCY	IF POWC	ler ge	ts in	to eye	s, flush with water.
		SI	ECTION	IVI . PR	EACTIVITY DATA
STABILITY	UNSTABLE				S TO AVOID
	STABLE		x	N	1/A
NCOMPATABILI	TY (Materials to a	void]	11, 11		1/1
AZARDOUS DE	COMPOSITION P	RODUCTA			/A
	May .	CCUR			CONDITIONS TO AVOID
ia zardous OLYMERIZATIO	IN .			+	201
	- WILL I	NOT OCCU	JR ,	X	N/A
	EH IN CASE MA	TERIAL II	RELEAS	ED OR SPI	R LEAK PROCEDURES LLED owder before using water.
Normal	Clean up,	BWGG	RELEAS	ED OR SPI	LLED
Normal	clean up,	BWGG	RELEAS	ED OR SPI	LLED
Normal	clean up, METHOD aste dispo	BWGG	o up l	oulk po	owder before using water.
Normal STEDISPOSAL Solid wa	clean up, method aste dispo	BWGE	o up l	oulk po	LLED
Normal STE DISPOSAL SOLID W:	Clean up, METHOD aste dispo	BWGGE	o up 1 SPEC	oulk po	owder before using water. DIECTION INFORMATION
Normal STE DISPOSAL SOLID WITH	Clean up, METHOD ASTE DISPO	BWGG	· SPEC	oulk po	owder before using water. DIECTION INFORMATION red SPECIAL N/A
Normal STE DISPOSAL SOLID W: PIRATORY PRO STILATION Require	Clean up, METHOD aste dispo SECTION TECTION (Specif) LOCAL EXHAU MECHANICAL (BWGG	o up 1 SPEC	CIAL PRO	OTECTION INFORMATION red SPECIAL N/A OTHER N/A
Normal Solid was PIRATORY PRO STILATION REQUITE TECTIVE GLOVE	SECTION (SPORT) LOCAL EXHAU MECHANICAL (BWGG	· SPEC	CIAL PRO	owder before using water. DIECTION INFORMATION red SPECIAL N/A
Normal STE DISPOSAL SOLID W: PIRATORY PRO STILATION Require	SECTION (SPORT) LOCAL EXHAU MECHANICAL (BWGG	· SPEC	CIAL PRO	OTECTION INFORMATION red SPECIAL N/A OTHER N/A
Normal STE DISPOSAL SOLID W: PIRATORY PRO ITILATION REQUITE TECTIVE GLOVE ER PROTECTIVE	Clean up, Clean up, METHOD aste dispo SECTION SECTION TECTION (Specif) LOCAL EXHAU TMECHANICAL (ES E EQUIPMENT	BWGEE DBaL DN VIII V typel Generall	- SPEC N/A Not N/A	CIAL PRO	DIECTION INFORMATION red SPECIAL N/A OTHER N/A Not 'Required L PRECAUTIONS
Normal STE DISPOSAL SOLID W: PIRATORY PRO ITILATION REQUITE TECTIVE GLOVE CH PROTECTIVE AUTIONS TO BE GEP dry,	Clean up, Clean up, METHOD aste dispo SECTION SECTION TECTION (Specif) LOCAL EXHAU TMECHANICAL (ES E EQUIPMENT	BWGEE DBaL DN VIII V typel SECTIO	- SPEC N/A Not N/A	CIAL PRO	TECTION INFORMATION red SPECIAL N/A OTHER N/A N

U.S DEPARTMENT OF LABOR
Occupational Safety and Health Administration

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MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbieaking 129 CFR 1915, 1916, 1917)

		SE	CTIONI		
Crouse-Hinds Company			15/477-70	יסאנ א	c.
ADDRESS (Humber, Street City State and All P. O. Box 4999, Syraci	l Cotti use,	NY	13221		
Ceramic			Chico X Sealing Fi	ber	
SECTIO	DN II .	HAZI	ARDOUS INGREDIENTS	iti	חכ
PAINTS, PRESERVATIVES, & SOLVENTS	18	TLV			(A) #3
PIGMENTS		[United	ALLOYS AND METALLIC COATINGS	×	IUn:
CATALVET			ALLOYS		-
*Exicut			METALLIC CONTINGS	+	-
DEVENTS		W 3:	FILLER METAL PLUS COATING OF CORE FLUX		
THERS			OT-ERS		
HAZARDOUÉ MIXTURE	1 1				
See Formula	3 Dr 01	HER CI	DUIDS, SOLIDS, OR GASES	1 2	IUnits
					·
	M. Fi				
SECT	IONI	II . PI	TYSICAL DATA		
ING POINT (PF)			Seccisic CHAVITA INTO 11		
DR PRESSURE (PM Mg.).	N/1		PERCENT VOLATILE		Y
PROCHSTY MINE Y TIENSOR	N/A		(VAPORATION RATE	A	
GILITY IN WATER	Non				
ARAHCE AND ODOR NO Ordor;	fluf	Ey £	ibers, similar to cotton		

	None	D EXPLOSION HAZARD DA	T Car
ENTINGUISHING MEDIA	N/A		
PECIAL FIRE FIGHTING PROCEDURES	N/A		
NUSUAL FIRE AND EXPLOSION HAZARI	None		

				Page 2
	S	ECTIO	NV.H	EALTH HAZARD DATA
THE SHOLD LI	MIT VALUE NA			The second secon
Post	PERPOSUAL			
Of th	DEC 211cinia	igne i	LFFILA	Lion to eyes, nose, & throat of
EMERGENCY AN	ose allergic	to fi	bers.	
		74.63		
Flush	with water.			
		, we di		
		SECTIO	NVI . I	PEACTIVITY DATA
STABILITY	UNSTABLE	n E EVI	-	NS TO AVOID
	STABLE	x		
INCOMPATABILITY	(Mesenels to aroud)			
HAZARDOUS DECC	MPOSITION PRODUCT	N/A		
		None		
HAZARDOUS HOLYMERIZATION	MAY OCCUR			CONDITIONS TO AVOID
	WILL NOT DCC	UR	X	
	IN CASE MATERIAL	SACLEA	SED OR SI	OR LEAK PROCEDURES
N/A	I IN CASE MATERIAL	IS ACLEA	SEO OR SI	LLCD
N/A .ste disposal me	THOD	IS ACUEA	SEO OR SI	·LLED
N/A .ste disposal me	I IN CASE MATERIAL	IS RELEA	SED OR SI	LLCD
N/A STE DISPOSAL ME	THOD	IS ACLEA	SED OR SI	·LLCD
N/A STE DISPOSAL ME	THOD .	S ACUEA	SED OR SE	LLED
N/A STEDISPOSAL ME Solid Wa	THOO SECTION VIII	· SPEC	SED OR SE	LLED
N/A STEDISPOSAL WE Solid Wa	THOO SECTION VIII	· SPEC	SED OR SE	OTECTION INFORMATION
N/A STEDISPOSAL WE Solid Wa PIRATORY PROTEIN None requ	SECTION VIII	· SPEC	CIAL PROSE.	OTECTION INFORMATION
N/A STEDISPOSAL WE Solid Wa PIRATORY PROTEINORE TECT	SECTION VIII	· SPEC	SED OR SE	OTECTION INFORMATION SPECIAL
N/A STEDISPOSAL ME Solid Wa FIRATORY PROTEIN None required TILATION	SECTION VIII	· SPEC	CIAL PRose.	DITECTION INFORMATION SPECIAL OTHER
N/A STEDISPOSAL WE Solid Wa PIRATORY PROTEINONE TEQUE TILATION GETTIVE CLOVES allergic	SECTION VIII CITY OF THE PROPERTY OF THE PROP	· SPEC	CIAL PRose.	OTECTION INFORMATION SPECIAL
N/A STEDISPOSAL WE Solid Wa PIRATORY PROTEINONE TEQUE TILATION GETTIVE CLOVES allergic	SECTION VIII CITY OF THE PROPERTY OF THE PROP	· SPEC	CIAL PRose.	DITECTION INFORMATION SPECIAL OTHER YE PROTECTION
N/A STEDISPOSAL WE Solid Wa PIRATORY PROTEINONE TEQUE TILATION GETTIVE CLOVES allergic	SECTION VIII CITY OF THE PROPERTY OF THE PROP	· SPEC	CIAL PRose.	DITECTION INFORMATION SPECIAL OTHER YE PROTECTION
N/A STE DISPOSAL ME Solid Wa PIRATORY PROTECT NOTE TECTIVE CLOVES allergic LA PROTECTIVE EC	SECTION VIII SECTION VIII Clied of of the	· SPEC	CIAL PRO	OTECTION INFORMATION SPECIAL OTHER YE PROTECTION NONE
N/A STE DISPOSAL ME Solid Wa FIRATORY PROTEIN NOTE TEQUE TILATION MI TECTIVE CLOVES allergic LA PROTECTIVE EC	SECTION VIII SECTION VIII Clied of of the figure of the property of the prop	· SPEC	CIAL PROJECT	DITECTION INFORMATION SPECIAL OTHER YE PROTECTION None L PRECAUTIONS
Solid Wa Solid Wa Solid Wa PIRATORY PROTEINOR TECTIVE CLOVES allergic LA PROTECTIVE EC	SECTION VIII SECTION VIII Clied of of the	· SPEC	CIAL PROJECT	OTECTION INFORMATION SPECIAL OTHER YE PROTECTION NONE
Solid Wa Solid Wa Solid Wa PIRATORY PROTEINOR TECTIVE CLOVES allergic LA PROTECTIVE EC	SECTION VIII SECTION VIII Clied of of the	· SPEC	CIAL PROJECT	DITECTION INFORMATION SPECIAL OTHER YE PROTECTION None L PRECAUTIONS

3M Center St. Paul, Minnesota 55144-1000 612/733 1110

Duns No.: 00-617-3082

MATERIAL SAFETY DATA SHEET

2.

DIVISION: CERAMIC MATERIALS DEPARTMENT

TRADE NAME:

3M BRAND FIRE BARRIER CP-25 N/S NO-SAG CAULK

3M I.D. NUMBER: 80-0080-0785-0 80-0080-0785-0 80-6102-5526-9

80-6102-5526-9

80-0080-0786-8 80-0080-0786-8

80-6102-5526-9 98-0400-0714-2 98-0400-0714-2 98-0400-0715-9 98-0400-0716-7 98-0400-0716-7 98-0400-0715-9

ISSUED: FEBRUARY 22, 1989 SUPERSEDES: FEBRUARY 20, 1989 DOCUMENT: 10-9910-0

1. INGREDIENT	C.A.S. NO.	PERCENT	VALUE UNIT	LIMITS TYPE AUTH
CALCIUM CARBONATE POLYCHLOROPRINE METHYL ETHYL KETONE XYLENE SILICIC ACID, SODIUM SALT CHLORINATED OLEFIN 2-ETHYLHEXYL DIPHENYL PHOSPHATE CALCIUM HYDROXIDE WATER	471-34-1 9010-98-4 78-93-3 1330-20-7 1344-09-8 68527-02-6 7241-94-7 1305-62-0 7732-18-5	18.7 - 22.0 17.8 - 20.4 14.5 - 18.5 14.5 - 18.5 11.9 - 13.6 5.0 - 5.8 3.3 - 3.9 2.0 - 2.4 1.9 - 2.2	10 mg/m3 NONE NONE 200 PPM 100 PPM NONE NONE NONE NONE NONE NONE 5 mg/m3 NONE NONE	TWA ACGIH NONE ACGIH TWA ACGIH NONE OSHA NONE OSHA NONE OSHA TWA ACGIH NONE OSHA

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists - DSHA: Occupational Safety and Health Administration

THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICAL OR CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372:

METHYL ETHYL KETONE XYLENE

2. PHYSICAL DATA

N/D VAPOR DENSITY: N/D N/D EVAPORATION RATE:.... SOLUBILITY IN WATER: NIL SP. GRAVITY:
PERCENT VOLATILE: 1.26 32 VOLATILE ORGANICS: N/D pH: ************** N/A VISCOSITY: N/D

APPEARANCE AND ODOR: Reddish brown, Paste, Solvent odor

3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: ... FLAMMABLE LIMITS - LEL: FLAMMABLE LIMITS - UEL: 50F 1.81% 11.5% AUTOIGNITION TEMPERATURE: ... NZD

EXTINGUISHING MEDIA:

CARBON DIOXIDE, FOAM OR DRY CHEMICAL
SPECIAL FIRE FIGHTING PROCEDURES:

NONE UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE

3M General Offices

3M Center St. Paul, Minnesota 55144-1000 612/733 1110 08-76 9542

Duns No.: 00-617-3082

MATERIAL SAFETY DATA SHEET

3M

MSDS: 3M BRAND FIRE BARRIER CP-25 N/S NO-SAG CAULK FEBRUARY 22, 1989

PAGE: 2 of 3

4. REACTIVITY DATA

STABILITY: Stable
INCOMPATIBILITY - MATERIALS TO AVOID:
None
HAZARDOUS POLYMERIZATION: Will Not Occur
HAZARDOUS DECOMPOSITION PRODUCTS:

May include carbon monoxide, carbon dioxide and hydrogen chloride.

5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:

Extinguish all ignition sources. Observe precautions from other sections. Collect spilled material. Place in a U.S. Depart. of Transportation-Approved metal container, and seal.

RECOMMENDED DISPOSAL:

Dispose of waste product in a hazardous waste facility, or incinerate in a permitted hazardous waste facility. Since regulations vary, consult applicable regulations or authorities before disposal. U.S. EPA Hazardous Waste No.: DOO1 (Ignitable)

ENVIRONMENTAL DATA: Not determined.

SARA HAZARD CLASS:
FIRE HAZARD: Yes PRESSURE: No REACTIVITY: No ACUTE: Yes CHRONIC: Yes

6. SUGGESTED FIRST AID

EYE CONTACT:

Immediately flush eyes with plenty of water. Continue for 10 minutes holding eyelids open. Call a physician.

SKIN CONTACT:

Wash affected area with soap and water.

INHALATION:

If symptoms occur, remove person to fresh air. If symptoms continue, call a physician.

IF SWALLOWED:

Do not induce vomiting. If person is conscious give one to two glasses of water. Immediately call a physician.

OTHER FIRST AID:

7. PRECAUTIONARY INFORMATION

Keep away from heat, flame, sparks and other sources of ignition. Use only with adequate ventilation. Avoid breathing vapor. If vapor levels become excessive, wear a NIOSH approved organic vapor respirator. Keep container tightly closed when not in use. Avoid eye

3M General Off. 3

3M Center St. Paul, Minnesota 55144-1000 612/733 1110

Duns No.: 00-617-3082

MATERIAL SAFETY DATA SHEET

MSDS: 3M BRAND FIRE BARRIER CP-25 N/S NO-SAG CAULK FEBRUARY 22, 1989

PAGE: 3 of 3

7. PRECAUTIONARY INFORMATION (continued)

and prolonged skin contact. Keep out of reach of children.

ADDITIONAL EXPOSURE LIMITS

INGREDIENTS	VALUE UNIT	LIMITS TYPE AUTH
CALCIUM CARBONATE	10.0 mg/m3	TWA ACGIH
METHYL ETHYL KETONE	590 mg/m3	TWA ACGIH
METHYL ETHYL KETONE	300 ppm	STEL ACGIH
METHYL ETHYL KETONE	885 mg/m3	STEL ACGIH
METHYL ETHYL KETONE	200 ppm	THA OSHA
METHYL ETHYL KETONE	590 mg/m3	TWA OSHA
METHYL ETHYL KETONE	300 ppm	STEL OSHA
METHYL ETHYL KETONE	885 mg/m3	STEL OSHA
XYLENE	435 mg/m3	THA ACGIH
XYLENE	150 ppm	STEL ACGIH
XYLENE	655 mg/m3	STEL ACGIH
XYLENE	100 ppm	TWA OSHA
XYLENE	435 mg/m3	TWA OSHA
XYLENE	150 ppm	STEL OSHA
XYLENE	655 mg/m3	STEL OSHA
CALCIUM HYDROXIDE	5 mg/m3	THA OSHA

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists

- OSHA: Occupational Safety and Health Administration

8. HEALTH HAZARD DATA

EYE CONTACT: Vapor and paste may cause irritation. Symptoms may include smarting, tearing, redness, and swelling.

SKIN CONTACT: May cause irritation on prolonged or repeated contact.

INHALATION: Xylene and methyl ethyl ketone may cause respiratory system irritation and temporary nervous system impairment. Symptoms of overexposure may include dizziness, weakness, fatigue, neusea, headache, and incoordination. Xylene may cause heart, liver, kidney and blood damage based on animal studies.

INGESTION: Not an expected route of industrial exposure. Practically non-toxic.

SECTION CHANGE DATES

INGREDIENTS

SECTION CHANGED SINCE FEBRUARY 20, 1989 ISSUE

Abbreviations: N/D - Not Determined N/A - Not Applicable

The information on this Data Sheet represents our current data and best opinion as to the proper use in handling of this product under normal conditions. Any use of the product which is not in conformance with this Data Sheet or which involves using the product in combination with any other product or any other process is the responsibility of the user.



MATERIAL SAFETY DATA SHEET GENERAL INFORMATION

CATALOG NUMBER All "31" Series
EMERGENCYTELEPHONE NO. (815) 895-5181

HAZARDOUS MATERIAL DESCRIPTION, PROPER SHIPPING NAME, HAZARD CLASS, HAZARD ID NO. (48 CFR 172.101)

CHEMICAL DESCRIPTION

Water-Wax Emulsion

SECTION I - INGREDIENTS

FORMULA

CAS REGISTRY NO.	%W	CHEMICAL NAME(S)	Listed as a Carcinoper in NTP, IARC or OSHA 1910(z) (apecity)
Proprietary	<5	Paraffin Wax	No
8009-03-8	<3	Petrolatum	No
64742-53-6	<3	Naphthonic Mineral Oil (See *A)	No
9005-08-7	<4	Polyethylene Glycol Ester	No
61791-44-4	<1	Ethoxylated Alkyl Amine	No
Proprietary	0.1	Perfume	No
9004-32-4	<1	Cellulose Gum	No
532-32-1	K1	Sodium Benzoate	No
6358-31-2 <	0.1	Yellow Pigment	No
7732-11-5 <	87	Water	No

SECTION II - PHYSICAL DATA

BOILING POINT 212_FC	SPECIFIC GRAVITY (H ₂ O = 1) 0.98	PERCENT VOLATILE BY VOLUME (%)
SOLUBILITY IN WATER Hoderate	pH = 7.0 to 8.5	PERCENT SOLID BY WEIGHT (%)
APPEARANCE AND ODOR Yellow paste, slight ne	rfume odor	IS MATERIAL: LIQUID SOLID GAS CHASTE POWDER CEL

SECTION III - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT 'F	method		FLAMM	ABLE LIMITS	LEI	NO. 2 TO 1	UEL
EXTINGUISHING MEDIA	C None	C,0.C,	<u> </u>		None		None
Dry chemical. Co	. Foam: Wat	er Fog					
SPECIAL FIRE FIGHTING PR	OCEDURÉS espiratory p	rotection should	be provided	for fire fi	ghters.	Кеер	fire-exposed
containers cool	with water.				- Walter		
UNUSUAL FIRE AND EXPLO	SION HAZARDS						

^{*}None of the chemical raw materials contained in this formulation are considered hazardous under the Federal Hazards Communication Standard 29 C.E.F. 1910.1200.

EFFE	CTS OF OVEREXPOSURE - Conditions	10 Avoid	
	Mild skin irritation may re	sult with prolonged co	ontact.
THAES	SHOLD LIMIT VALUE		
Phillipping St	None est RY ROUTES OF ENTRY Inhalation	ablished.	
	ENCY AND FIRST AID PROCEDURES		ory)
SKINCO	ONTACT: Flush area with com	pious amounts of water	
INGEST	flush area with cop	pious amounts of water	
#RGE311		Consult physician or 1	ocal poison control center.
		SECTION V-REAC	
CT400 m		IS TO AVOID None	
STABILITY	SIABLE		
2004	TIBILITY (materials to avoid)	Avoid strong oxidizer	
HAZABOC	OUS DECOMPOSITION PRODUCTS: essive heat may cause the r	alana of the land	3.
HAZARDO	MAY OCCUR	1 GUNDILIUNS IO AVOID	
POLYMER		Avoid prolo	nged storate at temperatures above 120°F.
STEPS TO	SEUTION BETAKEN IN CASE MATERIAL IS BEI	N VI - SPILL AND LI	EAK PROCEDURES
Wipe	up, shovel, or vacuum spil	led material. Use at	psorbent media if required. Clean up spill
imme	diately as they can be dang	erous and slippery.	
	POSAL METHOD		
	ROUS WASTE NO. (40 CFR 261.33) RGANIC COMPOUND (VOC) (85 PBCK8	None required None required ged, minus water)	ſ.
Theoretical	Ib/gal N.A.	N.A	
		PERSONAL PROTE	ECTION INFORMATION
ESPIRATORY	PHOTECTION (specify type)		ECTION INFORMATION
	LOCAL EXHAUST (Specify Rate)	rmally none required.	
NTILATION	Mone required. MECHANICAL (General) (Specify Re		SPECIAL None
ROTECTIVE C	Recommended in closed a SLOVES (specify type) Neoprene	reas.	OTHER
HER PROTE	CZIVE FOLKBUSHE	EYE PRO Safe	TECTION (specify type) ty glasses or splash goggles.
Eye fou	CTIVE EQUIPMENT ntain in work area is recon	mended.	
	SECTIO	N VIII - SPECIAL P	RECAUTIONS
Store at	TO BETAKEN IN HANDLING AND ST t temperatures between 40°	COLLEC	
ER PRECAL	MONS erial away from children a		-
	and trout children a	na pets.	
	APAn:		
16	SECTION	IX - ADDITIONAL I	INFORMATION
IT mater	lal is used in extreme heat	(120°F), prolonged	and repeated exposure could pose a risk of
pulmonary	disease. Exposure below m	nist TLV (S mg/m³) ap	pears to be without significant health
risk.			
	THIS MATERIAL	SAFETY DATA SHI	EET PREPARED BY:
Ronal	d K. Petersen	SIGNATURE	U.S.
Produ	ct Development Chemist	12	of UAL
		118	



GENERAL INFORMATION

Lubricant CATALOG NUMBER All "31" Series
EMERGENCY TELEPHONE NO. (815) 895-5181
NAME, HAZARD CLASS, HAZARD ID NO. (48 CFR 172.101)
FORMULA Proprietary

SECTION I - INGREDIENTS

CAS REGISTRY NO.	%W	CHEMICAL NAME(S)	Listed as a Carcinoger in NTP, IARC or OSHA 1910(z) (specify)
67-56-1	< 9	Methanol (methyl alcohol)	No
7732-11-5 <	90	Water	
Proprietary <	5.5	Aqueous Acrylic Emulsion	No No
25322-68-3	< 1	Polyether	No
1310-73-2	<1	Sodium Hydroxide (10-50%)	
129-17-9 < 0.	01	Blue Pigment	No No
			110
	1		

SECTION II - PHYSICAL DATA

BOILING POINT 212 'F 'C SOLUBILITY IN WATER	SPECIFIC GRAVITY (H ₂ O = 1) 0.98	PERCENT VOLATILE BY VOLUME (%)
Complete APPEARANCE AND ODOR	pH = 7.0 to 8.1	PERCENT SOLID BY WEIGHT (%) . C10.0
Light blue gel mild odor		IS MATERIAL: LIQUID SOUD GAS PASTE POWDER CEL

SECTION III - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT rethod used C, 0, C,	FLAMMABLE LIMITS	LEL	UEL
EXTINGUISHING MEDIA		None	None
Dry chemical: CO. Form: Water For			
SPECIAL FIRE FIGHTING PROCEDURES			
Dry chemical: CO: Foam: Water Foo SPECIAL FIRE FIGHTING PROCEDURES Self-contained respiratory protection should	be provided for fire fi	obters Keen	fice-evenced
containers cool with water.		arrect at weep	THE-EXPOSED
INUSUAL FIRE AND EXPLOSION HAZARDS Heavy methanol vapors can travel to source of	ignition and floor book	1.	

Titte

Product Development Che

EFFEC	S OF OVER	EXPOSURE -	Candidana ta Austr			INFUHMATION	
The second second	10 SKIN	1rritation	could occur.	Dizzi	ness, nausea, he	adaches are sions o	of exposure to methano
THRESH	mes. Soci OLD LIMIT V	iium Hydrox ALUE	ide fumes can	be co	crosive to mucou	s membranes	
		Taran Market	ethanol fume:	200 p	Office (and the state of the st	oxide 2 mg/m ³	
TURN 12-17-17-17-17-17		RST AID PRO		ж. ф	Other (specify)		
SKIN COL	TACT: F	lush with	water for 15 n	inutes	. Inhalation:	remove to fresh air	
INGESTIC	N·		rater for 15 m				
	Ac	iminister n	ater or milk.	Cons	ult physician or	local poison contr	ol center.
1,112			SECT	TION V	-REACTIVITY	DATA	
STABILITY	UNSTABLE	= C	DO NOT		e material to te	mperatures exceedi	ng 125°F.
INCOMPAT	Bit (TY (mate	X prials to avoid)					
		OSITION PRO	Avoid	strong	oxidizers.		
			Carbon	dioxi	de and carbon mo	noxide.	
HAZARDOU	S	MAY OCCUR	CON	ONTIONS Not	TO AVOID.		
POLYMERIZ	ATION WIL	T NOT OCCUI	X				
		SE	CTION VI -	SPILL	AND LEAK PI	ROCEDURES	
TEPSTOB	TAKEN IN	CASE MATERI	AL IC DELEACED	OD CON	FC		
immed	ately as	they are	um spilled ma	terial	Use absorbent	media if required.	Clean up spills
		chey can	be dangerous	and si	ppery.		
VASTE DISPO	DOM METH						
Dispos	e of as	OD solid land:	F411 (n	d			
	W E 201		ACCOPT	Mance y	OFG local, state	and federal regul	ations
ERCLA (Sup	idund) REP	ORTABLE QUA	NTITY (in lbs)				
CRAHAZARI	OUS WAST	E NO. (40 CFF	3 261.33)	None	required.		
			(as packaged, min	None	required,		A. A. A.
Theoretica/_	Ib/gal		· ·	os nator	N.A.		
		N.A.			Analytical	Ibigal N.A.	
	PROTECTION.	SECTIO	VVII - PERS	ONAL	- PROTECTION	INFORMATION	
3FINAION!		N (specify type	If TLV ex	ceeded	, use NIOSH resp	irator	
TILATION	_ may be	HAUST (Specif	y male) to maintain			SPECIAL	
SELECTION OF	MECHANIC	AL (General) (Specify Rate	Trans.		OTHER None	
TECTIVE GI	OVES (spec	ended in c ally type) Neopre	IDSED Breas.		EYE PROTECTION	(specify type)	
EB PROTEC	TIVE EQUIF	MENT	s recommende		Safety glas	(specify type) ses or splash gogg	les.
rye roun	Lain in i						
CALITIONICT	000000	S	ECTION VIII	- SPI	ECIAL PRECAI	JTIONS	
Store at	temperat	ures betwe	SAND STORING en 25° and 12	cor			
			211 22 4110 12				
BPRECAU	IONS		dren and pet				
меср масе	ilai awa	y from chi	idren and pet	5.			
		SE	CTION IX - A	ADDIT	TONAL INFOR	MATION	
Hethanol	is consid	lered hazar	dous because	of fla	sh point and to	xological data und	er Federal Hazards
Communicat	ions Sta	ndard 29 C	FR (1910.1200)). Sc	dium Hydroxide	is hazardous becau	
and toxic						A STANSON WARE DACKET	se of its corrosive!
	characte	ristics.					se of its corrosive
	characte	ristics.					se of its corrosive
	characte	ristics. THIS MAT		ETYD	OATA SHEET PR		se of its corrosive



11222 60th Street North P.O. Box S3 Stillwater, Minnesota 55082 Telephoné: 612-430-2270

MATERIAL SAFETY DATA SHEET

Date Prepared: April 15, 1987

SECTION I. GENERAL

Product Name: POLYWATER® Lubricant WJ (Winter Grade)

Manufacturer: American Polywater Corporation

11222 - 60th Street North

P.O. Box 53

Stillwater, MN 55082 U.S.A.

Emergency Numbers: Telephone: (612) 430-2270

Telex: 551647 (Amer Polywater)

Chemical Description & Synonyms: Polymer/Water/Propylene Glycol Solution

Chemical Family: Water Solution - Water is primary ingredient.

SECTION II. HAZARDOUS INGREDIENTS

This water-based lubricant contains no known hazardous ingredients. There are no OSHA or ACGIH threshold limit values for the product or any of its ingredients.

SECTION III. PHYSICAL DATA

Appearance: An opaque, cream-colored, stringy gel with a faint characteristic odor.

Boiling Point: 220°F (104°C)

Vapor Pressure (mm Hg): .14 mm @ 72°F

Vapor Density (Air = 1): .9 to 1.1

Specific Gravity (H20 = 1): 1.02

Solubility in Water: Infinite

Viscosity: 30,000 - 50,000 cps.

Percent Volatile (Weight): 95.4%

Percent Water (Weight): 76.8%

Ignition Temperature: None

рн: 6.5 - 8.5

SECTION IV. FIRE & EXPLOSION HAZARD

Flashpoint: No flash via COC.

Flammable Limits: Product is not flammable. Product boils at 220°F (104°C).

Extinguishing Media: Does not apply.

Special Procedures: Does not apply.

Unusual Hazards: Sealed container can build pressure when exposed to high heat.

Hazardous Decomposition Products: High temperature steam, potentially carbon monoxide and carbon dioxide.

SECTION V. REACTIVITY DATA

Stability: Excellent. No special handling or conditions to avoid.

Hazardous Polymerization: Will not occur.

Incompatibility: Avoid contact with materials which react with water.

SECTION VI. HEALTH HAZARD

Threshold Limit Value: None established for POLYWATER® WJ.

Ingestion Hazard: Material contains 18.59% (wt.) propylene glycol with oral LD50 (rat) greater than 20 g/kg. Material contains 1.3% (wt.) polyacrylamide and carboxyvinyl polymers with oral LD50 (rat) greater than 4 g/kg. No effect is expected on ingestion of small quantities.

Inhalation Hazard: No inhalation hazard expected with water/propylene glycol

Skin & Eye Hazard: No dermal toxicity hazard. Contact with POLYWATER® WJ may cause skin or eye irritation in some individuals.

Effects of Exposure: No adverse health effects are expected when POLYWATER® WJ is used consistent with good industrial hygiene practice. No known medical conditions are aggravated by exposure. First Aid:

Ingestion: No first aid expected to be required. If difficulties

Inhalation: No first aid expected to be required. No inhalation

Skin Irritation: Wash area thoroughly with soap and water. If irritation continues, obtain medical attention.

Eye Contact: Flush eyes with water for 15 minutes. If irritation

Carcinogenic Status: POLYWATER® WJ is not known to be carcinogenic and is not listed nor are any of its components listed by IARC, NTP or OSHA.

SELLION VII. PRECAUTIONS FOR HANDLING AND USE

1

Spill or Leak Procedure: POLYWATER® WJ is extremely slippery. It should be washed, swept or squeegeed from floor using wet mops. Oxidizing agents, such as household bleach, can also be used to eliminate the slippery character. Outside, spills should be covered with sand, dirt, gravel or calcium chloride.

Waste Disposal Method: Dispose of waste in accordance with local, state and federal regulations. For waste disposal purposes, POLYWATER WJ is not defined or designated as hazardous.

Precautions in Handling & Storing: Keep product containers closed when not in use.

Special Precautions: Avoid spills and clean them up immediately when they occur. Product is very slippery.

SECTION VIII. CONTROL MEASURES

Respiratory Protection: None required.

Ventilation: Normal ventilation is adequate.

Protective Clothing: Impermeable gloves should be worn to prevent skin irritation on sensitive individuals.

Eye Protection: Safety glasses recommended.

SECTION IX. TRANSPORTATION

DOT Shipping Name: Not applicable.

DOBT Hazard Class: Not applicable.

DOT Label: Not applicable.

ON/RA Hazard: Not applicable.

For domestic transportation purposes, this product is not defined or designated as a hazardous material by the U.S. Department of Transportation.

Material Safety Data Sheet May be used to comply with OSHA's Hazard Communication Standard, 9 CFR 1910.1200. Standard must be consulted for specific requirements. U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072



DENTITY (As Used on Labe) CADWELD ELECTRICA		NG HATE	ERIAL		Ak.	ote Blank space snformation	on ere co deheve a	permitted. b. the spec	It any tem on must be	is not a manuad	policable, or no to notice the:
Section I	Mer Mire						1.0				
Manufacturer's Name					En	nergency Telep	none Nurr	ber			
ERICO PRODUCTS IN	c.					216-24					
Accress (Number, Street Cay,		ZIP Code)			To	lephone Humbi	er for infor	metion			181
34600 SOLON ROAD					<u> </u>	216-241	8-0100				
					De	te Prepared					
SOLON, OHIO 44135	9				-	10/28/8		net)			
				1		CELOT OF PROPERTY	on jupon			191	
Section II - Hazardous	Ingredie	nts/Ident	uty info	rmation						- Maria	
Hazardous Components (Specif	fic Chemical	Identity; Co	ommon h	(ame(s))	. 0	SHA PEL	ACGIH	TLV	Other I Recomm		% topocor
COPPER OXIDE	CAS	#1317-3	39-1		.0.			DUST			
		Walling .		0.	.1	FUKE	0.2	FUME		CALL	VALUES
ALUKINUK/COPPER	CAS	#12608-	74-1				10	FUKE			R TO 8 HR
CALCIUM FLUORIDE	CAS	#12542-	23-5	2.	.5	AS FLUORIDE AS	2.5	FLUOR	IDE	TIME.	-WEIGHTED
		III QV			5	CAO	2	CAO		AVER	+GE
CALCIUM/SILICON	LAS	#37236-	/4-1	<u>Ca 5</u> S1 5		LAU	10			SAVAS	
				21 2	,		10			CUNCE	NTRATION
					-	IS TIM		AS TIL	1	1194	WEST CONTRACTOR
TIN	CAS	77440-3	1-5		2	AS TIK	2	AS TI		AND U	INITS ARE
TIN	CAS A	77440-3	1-5			TUKE				AND U	- A*-
TIR					1	OYLDE FUKE AS V205	0.2	FUNE AS V20	Ø	100	- EAST
TLWINUK/YARADIUK		77440-3 739458-			1	OYLDE FUNE AS V205 RESPIRABI	0.2 F 0.1	FUNE AS V20	Ø	100	- 1.A54
					1	OYLDE FUKE AS V205	0.2 F 0.1	FUNE AS Y20	Ø	100	- 1.A54
	CAS /		13-4	2 0. Y 0.	05	OYLDE FUNE AS V205 RESPIRABI	0.2 E 0.1	FUNE AS Y20	Ø	100	- 1.A54
YENKI HUK\AYHYDI NK	CAS /	739458-	13-4	2 0. Y 0.	05	OYLDE FUME AS V205 RESPIRABI DUST FUMI	0.2 LE 0.1 E	OXIDE FUNE AS Y20 FUNE	Ø	100	- 1/2°
YENKI HUK\AYHYDI NK	CAS /	739458-	13-4 0-8	2 0. Y 0.	05	OYLDE FUNE AS Y205 RESPIRABL DUST FUNI DUST	0.2 LE 0.1 E	OXIDE FUKE AS V20 FUKE DUST	Ø	100	- TAN-1
ALUKINUK/YAHADIUM COPPER	CAS /	739458-	15-4 0-8 istics	0. Y 0.	05	OYLDE FUNE AS Y205 RESPIRABL DUST FUNI DUST	0.2 E 0.1 E 1.0 0.2	OXIDE FUKE AS V20 FUKE DUST	Ø	100	.)
ALUMINUM/YAHADIUM COPPER cotion III — Physical/Ch xung Pore	CAS /	739458-	13-4 0-8	0. V 0.	0 1 Spec	OYLDE FUNE AS V205 RESPIRABI DUST FUNI DUST FUNE FUNE	0.2 E 0.1 E 1.0 0.2	OXIDE FUKE AS V20 FUKE DUST	Ø	100	- TAN-1
LLUXINUX/YAHADIUM COPPER ection III — Physical/Ch	CAS /	739458-	13-4 0-8 istics	0. V 0.	0 1 Spec	OTIDE FUNE AS V205 RESPIRABI DUST FUNI DUST	0.2 E 0.1 E 1.0 0.2	OXIDE FUKE AS V20 FUKE DUST	Ø	100	.)
ALUMINUM/YAHADIUM COPPER cotion III — Physical/Ch xung Pore	CAS /	739458-	15-4 0-8 istics	2 0. V 0. 1. C.	05 0 1 Spec	OYLDE FUNE AS V205 RESPIRABI DUST FUNI DUST FUNE FUNE	0.2 E 0.1 E 1.0 0.2	OXIDE FUKE AS V20 FUKE DUST	Ø	100	5.5
ALUKINUK/YAHADIUM COPPER ection III — Physical/Choxing Point por Pressure (min Hg.) por Density (AIR = 1)	CAS /	739458-	13-4 0-8 istics	0. V 0.	0 1 Spec	OYLDE FUNE AS V205 RESPIRABI DUST FUNI DUST: FUNE rife Gravity (Hz	0.2 E 0.1 E 1.0 0.2	OXIDE FUKE AS V20 FUKE DUST	Ø	100	5.5
ALUKINUK/YAHADIUK COPPER ection III — Physical/Ch xing Poin: por Pressure (min Hg.)	CAS /	739458-	15-4 0-8 istics N/4	0. V 0.	0 1 Spec	OYLDE FUNE AS V205 RESPIRABI DUST FUNI DUST: FUNE fic Gravity (Hz	0.2 E 0.1 E 1.0 0.2	OXIDE FUKE AS V20 FUKE DUST	Ø	100	5,5 # 2000°F
ALUXINUM/YAHADIUM COPPER ection III — Physical/Che ixing Point por Pressure (min Hg.) por Density (AIR = 1)	CAS /	739458-	15-4 0-8 istics N/4	0. V 0.	0 1 Spec	OYLDE FUNE AS V205 RESPIRABI DUST FUNI DUST: FUNE fic Gravity (Hz	0.2 E 0.1 E 1.0 0.2	OXIDE FUKE AS V20 FUKE DUST	Ø	100	5,5 # 2000°F
COPPER colon III — Physical/Choxing Point cox Pressure (min Hg.) cox Density (AIR = 1) fubility in Water TRSOLUE pearance and Cox RAY-BLACK, GRANULAR	CAS F CAS F emical C	739458-1 77440-50 heracteri	13-4 0-8 istics N//	0. V 0.	0 1 Spec	OYLDE FUNE AS V205 RESPIRABI DUST FUNI DUST: FUNE fic Gravity (Hz	0.2 E 0.1 E 1.0 0.2	OXIDE FUKE AS V20 FUKE DUST	Ø	100	5,5 # 2000°F
ALUMINUM/YAHADIUM COPPER cotion III — Physical/Ch xung Pore: por Pressure (mm hg.) por Density (AIR = 1) Tubility in Water INSOLUE Dearance and Cox RAY-BLACK, GRANULAR ction IV — Fire and Exp	CAS F CAS F emical C	739458-1 77440-50 heracteri	13-4 0-8 istics N//	0. V 0.	0 1 Spec	OYLDE FUNE AS V205 RESPIRABI DUST FUNI DUST: FUNE fic Gravity (Hz	0.2 E 0.1 E 1.0 0.2	OXIDE FUKE AS V20 FUKE DUST) 5	mg/K°	5,5 @ 2000°F R/A
ALUMINUM/YAHADIUM COPPER cotion III — Physical/Choxung Point por Pressure (min Hg.) por Density (AIR = 1) ubility in Water INSOLUE Dearance and Cox RAY-BLACK , GRANULAR ction IV — Fire and Exp sh Point (Method Used)	CAS /	739458-1 77440-50 heracteri	15-4 D-8 istics N/A N/A DORLES	0. V 0. 1. 0.	0 1 Spec	OYLDE FUNE AS V205 RESPIRABI DUST FUNI DUST: FUNE fic Gravity (Hz	0.2 E 0.1 E 1.0 0.2	OXIDE FUKE AS V20 FUKE DUST	Ø	mg/K°	5,5 # 2000°F
ALUMINUM/YAHADIUM COPPER cotion III — Physical/Choxung Point pox Pressure (min Hg.) pox Density (AIR = 1) Induling in Water INSOLUE Dearance and Cox RAY-BLACK, GRANULAR ction IV — Fire and Exp sh Point (Method Used) ELF-IGNITES ABOYE 1	CAS /	739458-177440-50 theracteri	DORLES BLA ECT	0. V 0. 1. 0.	0 1 Spec	OYLDE FUNE AS V205 RESPIRABI DUST FUNI DUST: FUNE The Gravity (Hz TO PORT. CYRLON Rate (Acstate = 1)	0.2 E 0.1 E 1.0 0.2	OXIDE FUKE AS V20 FUKE DUST) 5	mg/K°	5,5 @ 2000°F R/A
ALUMINUM/YAHADIUM COPPER cotion III — Physical/Choxung Point por Pressure (min Hg.) por Density (AIR = 1) Induliny in Water INSOLUE Dearance and Cox RAY-BLACK, GRANULAR ction IV — Fire and Exp sh Point (Method Used) ELF-IGNITES ABOYE 1 nquashing Media	CAS P	739458-177440-50 theracteri	15-4 D-8 istics N// N// DORLES BEB ECT NG)	0. V 0. 1. 0.	05 0 1 Spec Metul	OYLDE FUNE AS V205 RESPIRABI DUST FUNI DUSTS FUNE AND PORT CONTROL ACRESIS = 1)	0.2 E 0.1 E 1.0 0.2	OXIDE FUKE AS V20 FUKE DUST	LEL	mg/K°	5.5 @ 2000°F R/A
ALUMINUM/YAHADIUM COPPER cotion III — Physical/Choxung Point pox Pressure (min Hg.) pox Density (AIR = 1) Induling in Water INSOLUE Dearance and Cox RAY-BLACK, GRANULAR ction IV — Fire and Exp sh Point (Method Used) ELF-IGNITES ABOYE 1	CAS P	739458-177440-50 theracteri	15-4 D-8 istics N// N// DORLES BEB ECT NG)	0. V 0. 1. 0.	05 0 1 Spec Metul	OYLDE FUNE AS V205 RESPIRABI DUST FUNI DUSTS FUNE AND PORT CONTROL ACRESIS = 1)	0.2 E 0.1 E 1.0 0.2	OXIDE FUKE AS V20 FUKE DUST	LEL	mg/K°	5.5 @ 2000°F R/A

UNUSER! FIRE AND EXPOSED HAZARDS SELF-PROPAGATING, HIGH TEMPERATURE REACTION WILL OCCUR IF HEATED ABOVE IGNITION (FLASH POINT) TEMPERATURE, GENERATING HOLTEN METAL, SLAG, AND DENSE.

DUSTY SMOKE. VOLATILE, COMBUSTIBLE DECOMPOSITION PRODUCTS PRODUCED FROM PLASTIC PACKAGING.

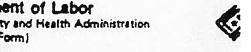
Stability	V — Reactivity (Conditions to Avoid
			TEMPERATURES ABOVE IGHITION
	Stable	x	AND THE PROPERTY OF THE PROPER
Incompatib	ility (Materials to Avo	NO POSS	IRTUITY OF VIOLENT DOLOTTON TO MACO
HAZINOUS [TERIALS BEING Documposition or Bypo	VELDED	IBILITY OF VIOLENT REACTION IF MOISTURE PRESENT IN MOLDS AT TIME OF USE. TYPICAL OF PROBLEMS ASSOCIATED WITH MOLT
Hazardous	The state of the s	NONE	E METALS.
Polymerization	May Occur	Co	onditions to Avoid
	Will Not Docum		
Section V	- Health Hazar	X	
Rounds) of E		halation?	
	PRIMARY R	OUTE OF F	ENTRY - INHALATION Inpesson?
Herry Hazard	IS (ACCUTE MAD COVERNC)	BURNS	FROM CONTLCT MITH DELOTION OF FELLE
INHALATIC	ON OF HIGH COL	1 0 00 0000	AND THAT TO FIES AND UPPER RESPIRATORY TOLOR
RESPIRABL	E PARTICLE S	IZE RAHGE	ARE IRRITARY TO FYES AND UPPER RESPIRATORY TRACT. IONS OF FRESHLY FORMED OXIDE FUMES AND DUSTS IN THE F CAN CAUSE INFLUENZA-LIKE ILLNESS TERMED METAL FUME FEYER
			SAN SANSE TAPEDENZA-LIKE TECHESS TERNED METAL FUME FEVE
Carcinopeniony	. NIT	P7	URC Monographs? OSHA Rec (mac)
	• <u>• • • • • • • • • • • • • • • • • • </u>		WHC Monographs? OSHA Regulated?
			NV
signs and Symp	plans of Exposure		
		(SEE H	HEALTH HAZAROS)
and the same			
Aedical Conditio	ns		
dedical Conditions	ns reted by Exposure		
Aedical Conditionies Apprair	ns Atted by Exposure		
enerally Apprai	reted by Exposure		
enerally Apprair	First Aid Procedures	STANDARD	TREATMENT FOR BURNS IN EVENT OF CONTACT WITH MOLTEN
energy Appraira	First Aid Procedures	STANDARD IPHENT. H EYES WI	TREATMENT FOR BURNS IN EVENT OF CONTACT WITH MOLTEN FOR INHALATION OF DUST, FUME, REMOVE FROM EXPOSURE,
nershy Aggran	First Aid Procedures G. OR HOT EQU ESH XIR, FLUS	H EYES WI	ITH WATER, CONSULT PHYSICIAN.
morpency and I ETAL, SLA ROVIDE FRI	First Ad Procedures G. OR HOT EQU ESH XIR, FLUS	H EYES WI	THE WATER, CONSULT PHYSICIAN.
mergency and I ETAL. SLA ROVIDE FRI ection VII —	First Ad Procedures G. OR HOT EQU ESH XIR, FLUS Precautions for	Sale Hand	THE WATER, CONSULT PHYSICIAN.
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Material Safety Data Sheet May be used to comply with OSHA's Hazard Communication Standard. 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor

Occupational Safety and Health Administration (Non-Mandatory Form)

Form Approved OMB No. 1218-0072



CADVELD ALUNINUN				2 - 1 - 1 - 2 ·	
Section i					
Manufacturer's Name ERICO PRODUCTS IN	c	Emergency Tele	48-0100		
Address (Number, Street, City, S			ber for information	1 113	
34600 SOLON ROAD			48-0100		
SOLON, OHIO 4413		Date Prepared 11/3/	86		
	•	Signature of Pre			
Section II — Hazardous i	ngredients/identity information	n			
	Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	₩ (6
TIN OXIDE (SNO2)	CAS #18282-10-5	K/A	5 (AS SH)		2011/6
ALUMINUM	CAS #7429-90-5	K/A	5, 10 (FUH	Ε}	III IS
COPPER OXIDE	CAS #1317-39-1	1.0 (DUST)	1.0 (DUST)	<u> </u>	
		0.1 (FUNE)	0.2 (FUNE)		A A A
CALCIUM FLUORIDE	CAS #12542-23-5	2.5 (AS FLUORID	E) 2.5 (AS		
ALL VALUES REFER TO	TIME-WEIGHTED AVERAGE				
	TIME-WEIGHTED AVERAGE				
iection III — Physical/Cher	TIME-WEIGHTED AVERAGE				
ection III — Physical/Cher	TIME-WEIGHTED AVERAGE		NS, AND UNITS		
ection III — Physical/Cheroling Pont	TIME-WEIGHTED AVERAGE	CONCENTRATIO	NS, AND UNITS		5
ection III — Physical/Cheroking Point por Pressure (mm Hg.)	TIME-WEIGHTED AVERAGE	CONCENTRATIO	NS, AND UNITS		
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iection III — Physical/Cheroling Pont spor Pressure (mm Hg.) spor Density (AIR = 1)	TIME-WEIGHTED AVERAGE mical Characteristics N/A N/A N/A	Specific Gravity (H	RS. AND UNITS		# 250°
Section III — Physical/Cheroling Pont apor Pressure (mm Hg.) apor Density (AIR = 1) blubility in Water IKSOLUBLE spearance and Odox	TIME-WEIGHTED AVERAGE mical Characteristics K/A N/A N/A	Specific Gravity (H	RS. AND UNITS		# 250°
Section III — Physical/Cheroling Pont apor Pressure (mm Hg.) apor Density (AIR = 1) Studing in Water I KSOL UBLE	TIME-WEIGHTED AVERAGE mical Characteristics K/A N/A N/A	Specific Gravity (H	RS. AND UNITS		# 250°
Section III — Physical/Cheroling Point appr Pressure (mm Hg.) appr Density (AIR = 1) blubility in Water INSOLUBLE operance and Octor SILVERY-WHITE POWDER section IV — Fire and Explo	TIME-WEIGHTED AVERAGE mical Characteristics N/A N/A N/A N/A 1 ODORLESS	Specific Gravity (H	RS. AND UNITS		5 # 250* K/A
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Unusual Fire and Explosion Hazards MATERIAL DUST MAY BE IGNITED BY STATIC DISCHARGE AND BURNS AT

EXTREMELY HIGH TEMPERATURE, IN BULK FORM, IT IS IGNITEABLE WITH DIFFICULTY (SEE FLASH POINT), HOWEVER, ONCE SUSPENDED IN DUST-LADEN AIR CLOUD, IT IS READILY IGNITED AND REA

YERY RAPIDLY AKIN TO AN EXPLOSION. (Reproduce locally)

Stability	Unstable		Conditions to Arcid
	Stable		TEMPERATURES ABOVE IGNITION.
· 山岳 集成 與 與		X	
Incompatibility	(Materials to Avoid	h WI	LL REACT WITH MOISTURE, MINERAL ACIDS, HALOGENATED COMPOUNTS CAPABLE OF CAUSTING SPARKS OF LEGISLES.
Hazardous Decr	ALKALIS HA	TERIA	THE STRONG OF TH
	ompositor or Byprod		CHARGES, SHOULD HOT BE USED.
Hazardous Polymerization	May Occur	25 14 15 1	Conditions to Avoid
	Will Not Docur		
		X	
	- Health Hazard	Data	
Rouse(s) of Entry:	Inha	union?	Skn?
CHEMINI PULTANIC /A	TE OF ENTRY	TO G C Ph A P of	HALATION INDESION
CONTACT VIT	TH "FLASH" OF	FLIGH	S FROM CONTACT WITH REACTION OR REACTION PRODUCTS. DIRECT HT FROM REACTION, CAN RESULT IN TEMPORARY BLINDNESS. DUST
FUNES ARE I	RRITANT TO E	YES A	AND UPPER RESPIRATORY TRACT.
		<u> </u>	TANOT,
Carcinogenicity:	Letter		
	ИТР?		IARC Monographs? OSHA Regulated?
			КО
Signs and Symptom	ns of Exposure		
	(SEE F	HEALTH HAZARDS)
Medical Conditions			
Generally Aggravated	d by Exposure		
merconver and E-			
THE PARTY OF THE	Aid Procedures ST	TANDAL	RD TREATMENT FOR CHIMIN
EMOVE FROM E	AND Procedures ST EXPOSURE, PRO	TANDA	RD TREATMENT FOR BURNS. FOR INHALATION OF DUST, FUNE.
EMOVE FROM E	Aid Procedures \$1 EXPOSURE, PRO	TANDA	RD TREATMENT FOR BURNS. FOR INHALATION OF DUST. FUNE, FRESH AIR, FLUSH EYES WITH WATER, CONSULT PHYSICIAN.
ection VII — Pr	recautions for S	ofa U	Indian and It
ection VII — Pr	recautions for S	afe Ha	andling and Use
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Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

		SEC	TION I		4
MANUFACTURER'S HAME			EMERGENCY TELEPHO	ONE NO	
ERICO PRODUCTS IN.			216-248-0100		
ADDRESS (Number, Street, City, State, and ZIP 34500 SOLON ROAD SC	Code)	OHILO 441	39		
CHEMICAL NAME AND SYNDHYMS PORCELAIN CERMIC			TRADE NAME AND SYNONYMS CADMELD ONE SHOT NOLDS		
CHEMICAL FAMILY SEMI-VITREOUS ALUMINOSILICA	TE		FORMULA K/A		
SECTIO	NII -	HAZA	RDOUS INGREDIENTS		
PAINTS, PRESERVATIVES, & SOLVENTS	2	TLV (Units)	ALLOYS AND METALLIC COATINGS	x	TLV
MOMENTS			BASE METAL		
CATALYST			ALLOYS		
ÆHICLE			METALLIC COATINGS		11.00
OLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
DDITIVES			OTHERS		
THERS					
	T.O.				
	TION	III - PH	IYSICAL DATA		
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ILING POINT (*F.) FOR PRESSURE'(non Hall AT 70°F	> 3	000 EG	SPECIFIC GRAVITY (H ₇ 0=1) PERCENT, VOLATILE BY VOLUME (n)	2.	
IUNG POINT (*F.) FOR PRESSURE'(nin HJ.) AT 70°F FOR DENSITY (AIR=1) AT 70°F	> 3 N	000 EG EG	SPECIFIC GRAVITY (H ₂ O=1) PERCENT, VOLATILE	-	G
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		JECTION V - HEALTH HAZARD DATA	
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		OCCUPANTAL AND	
		SECTION VI - REACTIVITY DATA	
STABILITY	UNSTABLE	CONDITIONS TO AVOID	

	UNSTABLE	UNSTABLE CONDITIONS TO AVOID		
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INCOMPAT LEIL	ITY Materials to are	rid)		
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SECTION VII - SPILL OR LEAK PROCEDURES STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED CLEAN UP SPILLED COMPONENTS TO AVOID POSSIBLE BREAKAGE AND POTENTIAL GENERATION OF RESPIRABLE COST. WASTE DISPOSAL METHOD
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	SECTION VIII - SPECIA	AL PROTECT	ION INFORMATION	
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VENTILATION	LOCAL EXHAUST	I POLITERAZED HA	II ERLAL	
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PROTECTIVE GLO	VES			
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OTHER PROTECTI	VE EQUIPMENT	USE OF S	AFETY GUSSES RECOMENDED	
	- C EGOLMEIA			

SECTION IX .	SPECIAL PRECAUTIONS
PRECAUTIONS TO BE TAKEN IN HANDLING AND STOP	RING
STORE IN A DRY PLACE.	
OTHER PRECAUTIONS	

PAGE (2)
FORMATION WAS PREPARED, IN PART, USING THE 120
WORKING MANUAL FOR OCCUPATIONAL SAFETY AND HEALTH, THE REFRRCTORIES DISTITUTE (1979) WITH SUBSEQUENT REVISIONS.
USE OF THIS INFORMATION MUST BE DETERMINED BY THE USER TO BE IN COMPLIANCE WITH ALL FEDERAL, STATE, AND

(9)

STORAGE & SAFETY CONSIDERATIONS

CADNELD EXOTHERNIC MATERIALS.

A) STORAGE CONDITIONS

Storage of CADMELD Exothermic Materials should be in a clean, dry, NO SMOKING area and should be restricted to access by authorized personnel only.

Storage conditions should be such that the CADWELD Exothermic Materials are not subjected to rough handling or physical damage, nor excessive or prolonged vibration. All boxes or containers of material should be stored in accordance with the container (carton) or label marking "This Side Up".

These materials must be stored under shelter to protect the boxes from the elements and raised to protect them from dampness or surface water.

The CADWELD Exothermic Material or packing materials which have been exposed accidentally or deliberately to moisture should not be used.

A personal safety hazard exists when moisture or gas producing contaminants come into contact with the products of an exothermic reaction. See the safety information on the instruction sheet packaged with molds.

The storage or shelf life of any CADWELD Exothermic Material can be considered as "indefinite" as long as these conditions of storage are followed.

Before using the CADWELD Exothermic Process, personnel should:

Be trained by an ERICO representative.

2. Read and understand the instruction sheet packaged with the mold, and observe all general and safety instructions.

B) FIRE CONTAINMENT

NOTE: CADWELD copper and iron base welding/joining materials are exothermic mixtures which, when reacted, produce hot molten materials with temperatures in excess of 2000°C (4000°F) and a localized release of smoke.

The materials are not explosive; ignition temperatures are in excess of 450°C (850°F) for starting material, and 950°C (1750°F) for copper or iron base materials. These materials are not shock sensitive, nor subject to spontaneous ignition.

Should the packing materials, (i.e., corrugated board containers, pressed cardboard boxes, polyethylene tubes, caps and/or packets (bags) containing CADWELD Exothermic Materials) be accidentally ignited, the immediate and direct application of large quantities of water will effectively retard the spread of the fire and control it.

As the burning of the packaging materials could lead to ignition of the exothermic material, direct application of water in a heavy stream of continuous showers is recommended. Water application should be at a reasonable distance. Use of hand water buckets or hand storage pumps is not recommended.

Ignition of large quantities of exothermic material may result in extremely large volumes of dense, dusty smoke and personnel should be aware that this can occur and be familiar with emergency exit paths before attempting to control the fire.

SERVICE WIRE COMPANY, INC. 300 Davis Road Culloden, W.Va. 25510

Date Issued: 7/27/88

A. IDENTIFICATION AND EMERGENCY INFORMATION

PRODUCT NAME:

Copper or Aluminum Electrical Wire and Cable.

Bare Copper

Bare Aluminum

MC Cable

MV-90

Insulated Rubber

(XHHW, RWH, RHH, USE, OR XLP)

Type TC

Aerial

Polyline

PVC Coated

Tinned Copper

Copperweld Messenger

Alumweld Messenger

Galvanized Messenger

SIC CODE:

3357 (Drawing and Insulating Wire)

3496 (Misc. Fabricated Wire Products)

CHEMICAL NAME:

These products are not chemicals but are "Articles" as defined by OSHA in the Federal Register 29 section 1910.1200(c) and therefore section 1910.1200 does not apply as per 1910.1200(b)(5)(iv) which states this section does not apply to "Articles".

"1910/1200(c) Definitions. "Articles" means a manufactured item: (i)which is formed to a specific shape or design during manufacture: (ii) which has an end use function(s) dependent in whole or in part upon its shape or design during use; and (iii) which does not release, or otherwise result in exposure to, a hazardous chemical under normal conditions."

CAS NUMBER:

Products are "Articles" and CAS number is not applicable.

B. COMPONENTS AND HAZARD INFORMATION:

COMPONENTS: (May contain all or part of the following) Copper Wire Aluminum Wire Tinned Copper Wire Cuweld Messenger Wire Alweld Messenger Wire Galvanized Messenger Wire Nylon Fillers (Dupont type 102) Union Carbide 6522 Polyethylene Union Carbide 5630 Polyethylene Teknor Apex 4855 PVC Union Carbide 6425 Polyethylene Wilson FiberFil Color Concentrates Teknor Apex Color Concentrates Mylar Film stainless Steel Copper Strap Aluminum Strap Alum. 5052 Alloy Strip Alum. 3003 Alloy Strip Galvanized (Zinc coated) Steel Strip Gem Gravure Inks Matthews Inks Please note that many conductors in our fabricated products may be furnished by

Components above could represent hazards if used in their raw form in other processes. MSDS for each of these can be supplied upon request to our customers and end users.

EXPOSURE LIMITS FOR TOTAL PRODUCTS:

other manufacturers.

None Known

FIRE AND EXPOSION DATA:

Will not support flame without external constant head sources.

Use water, dry chemical, foam, or CO2 to extinguish flame.

HAZARDOUS REACTIVITY:

Avoid exposure to flame or extreme heat.

Imcomplete combustion may produce dust, fumes, Carbon Monoxide or other toxic gases. If exposed to fire wear a self-contained breathing apparatus.

C. PRIMARY ROUTES OF ENTRY
AND EMERGENCY & FIRST AID PROCEDURES
EYE CONTACT:

Not a likely source of exposure with normal use purposes. Cutting, splicing, and termination of wire during installation could result in small solid particles that could lodge in the eye. Flush or irrigate eye. If irritation develops call a physician.

SKIN CONTACT:

Not a likely source of exposure with normal use purposes. Not a skin irritant.

INHALATION:

Not a likely source of exposure with normal use purposes. Not volatile.

INGESTION:

Not a likely source of exposure with normal use purposes. Low toxicity.

CHRONIC EFFECTS OF EXPOSURE:

None Known

D. DISPOSAL PROCDURES:

Pick up pieces caused by termination, splicing, and cutting to prevent slippage.

Dispose waste or scrap with methods that conform to Federal, State, and Local regulations.

E. PROTECTION:

Safety glases and gloves recommended for good industrial safety practices. No known special protection required.

STATE:

Our insulated products contain trace amounts of arsenic and lead introduced in the raw compounds (also containing only trace amounts). The state of California has found arsenic to cause cancer and lead to cause birth defects or other reproductive harm.

WHEATLAND TUBE COMPANY

MATERIAL SAFETY DATA SHEET

original issue date: 11/01/85

MSDS #268 revision date: 06/01/88 #1.

EMERGENCY TELEPHONE NUMBER (412) 342-6851

CONTACT: J. A. Gruber

I. IDENTIFICATION

PRODUCT NAME: CBW Pipe-Carbon Steel ASTM SPEC A53, A501, A589, A618, API 5A, ÁPI 5L, UL 6, UL 797

COMMON NAME(S): Standard Pipe, Fence Pipe, Plumbing Pipe, Water Pipe, Line Pipe, Extra Heavy Pipe, R&D, Rigid Conduit, EMT, Couplings & Coupling Stock.

CAS NO. 65997-19-5

MANUFACTURER: Wheatland Tube Company Council Ave. Wheatland, PA 16161

II. INGREDIENTS AND RECOMMENDED OCCUPATIONAL EXPOSURE LIMITS

Note: steel products under normal conditions do not present an inhalation, ingestion or contact health hazard (see section VI).

BASE METAL, ALLOYING	1	EXPOSURE LIMITS			
ELEMENTS AND METALLIC COATINGS	% WEIGHT	OSHA PEL	ACGIH TLV		
Base Metal: Iron (1309-37-1 as iron- oxide fume)	98-99	10 mg/M3 for iron oxide fume	5 mg/M3 for iron oxide		
Alloying Elements:			fume		
Carbon (7440-44-0)	.0613 .1418 .1823	None established	None established		
Manganese (7439-96-5)	.3060 .70-1.15	(c) 5 mg/M3	(c) 5 mg/M3-dust 1 mg/M3 fume		
Phosphorus (7723-14-0)	.015035 .040 max	None for inorganic phosphates	None for inorganic phosphates		
Sulfur (7704-34-9)	.040 max .050 mex	13 mg/M3 as SO ₂	5 mg/M3 as SO ₂		
Metallic Coating*: Zinc (1314-13-2 as zinc oxide)	.070-6.0	5 mg/M3	10mg/M3-total ZnO dust 5mg/M3 respirable ZnO dust & fume		

(c) denotes "ceiling limit" which is not to be exceeded at any time

NOTE: All commercial metals contain small amounts of various elements in addition to those specified. These small quantities, frequently referred to as "trace" or "residual" elements, generally originate in the raw materials used.

^{*}Galvanized pipe only.

WHEATLAND TUBE COMPANY

III. PHYSIAL DATA

MELTING POINT Base Metal: 2750 F Metallic Coating: 800-900 F

APPEARANCE and ODOR: Metallic Gray No Odor

IV. FIRE AND EXPLOSION HAZARD DATA

Sleel products in the solid state present no fire or explosion hazard.

V. REACTIVITY DATA

Stable under normal conditions of use, storage and transport. Will react with strong acid to liberate hydrogen. At temperatures above the melting point of the coating, galvanized pipe may liberate zinc fumes.

VI. HEALTH HAZARD DATA

NOTE: Steel products under normal conditions do not present an inhalation, ingestion, or contact health hazard. However, operations, such as, burning, welding, sawing, brazing, grinding, and possibly machining, etc., which results in elevating the temperature of the product to or above its melting point or results in the generation of airborne particulates, may present health hazards.

EFFECTS OF OVERXPOSURE:

MAJOR EXPOSURE HAZARD inhalation

Chronic inhalation of high concentration of iron oxide tumes or dusts may lead to a benign pneumoconiosis (siderosis). Inhalation of high concentrations of ferric oxide may possibly enhance the risk of lung cancer development in workers exposed to pulmonary carcinogens.

The inhalation of high concentrations of freshly formed oxide fumes and dusts of Manganese, Copper, Lead and/or Zinc in the respirable particle size range can cause an influenza-like illness termed metal fume fever. Typical symptoms last 12 to 48 hours and are characterized by metallic taste in the mouth, dryness and irritation of the throat, followed by weakness, muscle pain, fever and chills.

EMERGENCY AND FIRST AID PROCEDURES:

For overexposure to airborne fumes and particulates, remove exposed person to fresh air. If breathing is difficult or has stopped, administer artificial respiration or oxygen as indicated. Seek medical attention promptly.

Treat metal fume fever by bed rest, and administer a pain and fever reducing medication.

VII. SPILL OR LEAK PROCEDURES.

NOT APPLICABLE TO STEEL IN THE SOLID STATE

VIII. SPECIAL PROTECTION INFORMATION.

RESPIRATORY:

NIOSH/MSHA-approved dust and fume respirators should be used to avoid excessive inhalation of particulates. Appropriate respirator selection depends on the magnitude of exposure.

WHEATLAND TUBE COMPANY

SKIN:

Protective gloves should be worn as required for welding, burning or handling operations.

EYE:

Use safety glasses or goggles as required for welding, burning, sawing, brazing, grinding or machining operations.

VENTILATION:

Local exhaust ventilation should be provided when welding, burning, sawing, brazing, grinding or machining to prevent excessive dust or fume exposure.

OTHER PROTECTIVE EQUIPMENT:

Depending upon the conditions of use and specific work situations, additional protective equipment and/or clothing may be required to control exposures.

IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Avoid breathing metal fumes and/or dusts.

OTHER COMMENTS:

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with chronic respiratory disorders (i.e.: asthma, chronic bronchitis, emphysema, etc.) may be adversely affected by any fume or airborne particulate matter exposure.

This information is taken from sources or based upon data believed to be reliable; however, Wheatland Tube Company makes no warranty as to the absolute correctness or sufficiency of any of the foregoing or that additional or other measures may not be required under particular conditions.

U.S.E. Diamond, Inc.



Allitute of Snameh industries

Manufacturer of Expansion Anchors & Specially Fasteners

Custom Stemping

MATERIAL SAFETY DATA SHEET #1

I. MATERIAL IDENTIFICATION

Manufacturer's Name:

USE Diamond, Inc.

April 17, 1986

Material Name:

Zinc Plated Steel Anchors

Common Names:

Sup-R-Stud; Sup-R-Sleeve; Sup-R-Drop; Sup-R-Drill; Sup-R-Holly;

Sup-R-Toggle; Wire Rope Thimbles; Wire Rope Clips;

Sup-R-Clamps; Hooks; Hoops; Sup-R-Rings; Taper Bolt Body;

Zapit Nail; Tapit Nail; Hammer Drive Nail

II. HAZARDOUS INGREDIENTS

	CAS Number	<u>%</u>	OSHA 8-hr TWA	ACGIH 8-hr TWA
Carbon	1333-86-4	.0215	3.5 mg/m³ as Carbon Black	3.5 mg/m³ as Carbon Black
Iron	1309-37-1	Balance	10 mg/m³ as oxide fume	5 mg/m³ as oxide fume
Lead Phosphorus	7439-92-1 7732-14-0	2.0% Max 0.15 Max	.15 mg/m³ None for inorganics	.15 mg/m³ None for Inorganics
Silicon	7740-21-3	1.0 Max	None	Total—10 mg/m³ Respirable—5 mg/m³
Zinc (Plating)	7440-66-6	N/A	5 mg/m³	5 mg/m³(lume)

III. PHYSICAL DATA - Base Metal

Melting Point (F): 2750 Vapor Pressure: NA

% Volatile by Volume: NA

Vapor Density: NA Evaporation Rate: NA

Solubility in Water: Insoluble

Appearance and Odor: Metallic gray with no odor

IV. FIRE AND EXPLOSION HAZARD DATA - Base Metal

There is no known problem from the handling of the product and use as specified in literature. Welding, flame cutting or application of excessive heat can be hazardous.

Permissible Exposure Limits and Threshold Limit Values: See Section II

Route (s) of Entry:

Inhalation:

Yes

Skin:

Yes

Ingestion:

Yes

fects of Overexposure:

Chronic inhalation of high concentrations of iron oxide tumes or dusts may lead to a benign pneumoconiosis (siderosis.) Inhalation of high concentrations of ferric oxide may possibly enhance the risk of lung cancer developing in workers exposed to pulmonary carcinogens.

Zinc

Zinc is relatively low in toxicity but inhalation of fumes may cause "metal fume fever." Onset of symptoms may be delayed 4-12 hours and include irritation of the nose, mouth and throat, cough, stomach pain, headache, nausea, vomiting, metallic taste, chills, fever, pains in the muscles and joints, thirst, bronchitis or pneumonia and a bluish tint to the skin. These symptoms go away in 24-48 hours and are reported to leave no effect.

Emergency and First Aid Procedures:

Eye Contact: Flush well with running water to remove particulate. Get medical attention.

Skin Contact: Vacuum off excess dust. Wash well with soap and water. Avoid blowing particulate into the atmosphere.

Inhalation: For overexposure to airborne tumes and particulates, remove person to fresh air. If breathing is difficult or has stopped, administer artificial respiration or oxygen as indicated. Seek medical attention promptly.

Treat metal tume fever with bed rest, and administer a pain and fever reducing medication,

Ingestion: Seek medical attention if large quantities of material have been ingested.

V. REACTIVITY DATA

Stability: Stable

Conditions to Avoid: Stable under normal conditions of transport and storage. Will react with strong acid to liberate hydrogen. At temperatures above the melting point, may liberate fumes containing oxides of iron and alloying metals. Molten metal may react violently with water.

acompatibility: (Materials to avoid): Acids, bases, and oxidizers.

Hazardous Decomposition or Byproducts: Metal fumes

Hazardous Polymerization: Will Not Occur

VI. PRECAUTIONS FOR SAFE HANDLING OR USE

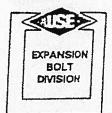
Steps to be Taken in Case Material is Released or Spilled: No special precautions are necessary for spills of bulk material. If large quantities of dust are spilled, remove by vacuuming or wet sweeping to prevent heavy concentrations of airborne dust. Follow federal, state, and local regulations concerning the disposal of waste.

Waste Disposal Method: Dispose of in accordance with federal, state, and local regulations. Cleanup personnel should wear respirators and protective clothing.

Precautions to be Taken in Handling and Storing: Store material away from incompatible materials and keep dust free, sources of ignition.

Other Precautions: See all other sections of the MSDS.

U.S.E. Diamond, inc.



Afficients of Shamah industries

Manulacturer of Expension Arichors & Specially Passeners

Custom Stamping

MATERIAL SAFETY DATA SHEET #2

I. MATERIAL IDENTIFICATION

Manufacturer's Name:

USE Diamond, Inc.

April 17, 1986

Material Name:

Zinc Diecast Anchors

Common Names:

Forway, Keystone, Sup-R-Hag Taper-Bolt Nut; Zap-it Body

II. HAZARDOUS INGREDIENTS

	CAS Number	%	OSHA 8-hr TWA	ACGIH 8-hr TWA
Zinc	7440-66-6	96	5 mg/m³	5 mg/m³(lume)
Aluminum	7429-90-5	Bal.	10 mg/m³	None Established

III. PHYSICAL DATA - Base Metal

Melting Point (F): 788

Vapor Pressure: 1095 F - 10mm

Vapor Density: NA Evaporation Rate: NA

% Volatile by Volume: NA Solubility in Water: Insoluble

Appearance and Odor: Metallic gray with no odor

IV. FIRE AND EXPLOSION HAZARD DATA - Base Metal

Flash Point: NA .

Flammable Limits: LEL = NA

Method Used: NA

UEL = NA

Extinguishing Media: See Below

Special Fire Fighting Procedures: Solid, massive form is not combustible. Fire and explosion hazards are moderate when material is in the form of dus and exposed to heat, flames, chemical reaction, or contact with powerful oxidizers. Use special mixtures of dry chemical or sand. Fire fighters should wear self-contained breathing apparatus and protective clothing.

V. HEALTH HAZARD DATA - Base Metal

There is no known health hazard from the handling and normal use. Welding, flame cutting or application of excessive heat can be hazardous.

Permissible Exposure Limits and Threshold Limit Values: See Section II.

Route(s) of Entry:

Inhalation: Yes
Skin: Yes
Ingestion: Yes

Effects of Overexposure:

Zino

Zinc is relatively low in toxicity but inhalation of fumes may cause "metal fume fever." Onset of symptoms may be delayed 4-12 hours and include irritation of the nose, mouth and throat, cough, stomach pain, headache, nausea, vomiting, metallic taste, chills, fever, pains in the muscles and joints, thirst, bronchitis or pneumonia and bluish tint to the skin. The symptoms go away in 24-48 hours and are reported to leave no effect.

mergency and First Aid Procedures:

Eye Contact: Flush well with running water to remove particulate. Get medical attention.

Skin Contact: Vacuum off excess dust. Wash well with soap and water. Avoid blowing particulate into the atmosphere. Inhalation: For overexposure to airborne tumes and particulates, remove person to fresh air. If breathing is difficult or

has stopped, administer artificial respiration or oxygen as indicated. Seek medical attention promptly.

Treat metal tume fever with bed rest, and administer a pain and fever reducing medication.

Ingestion: Seek medical attention if large quantities of material have been ingested.

VI. REACTIVITY DATA

Stability: Stable

Conditions to Avoid: Stable under normal conditions of transport and storage. Will react with strong acid to liberate hydrogen. At temperatures above the melting point, may liberate fumes containing oxides of zinc and aluminum. Molten metal may react violently with water.

Incompatibility (Materials to avoid): Acids, bases, and oxidizers.

Hazardous Decomposition or Byproducts: Metal fumes

Hazardous Polymerization: Will Not Occur

VII. PRECAUTIONS FOR SAFE HANDLING OR USE

Steps to Be Taken in Case Material is Released or Spilled: No special precautions are necessary for spills of bulk material. If large quantities of dust are spilled, remove by vacuuming or wet sweeping to prevent heavy concentrations of airborne dust. Follow federal, state, and local regulations concerning the disposal of waste.

Waste Disposal Method: Dispose of in accordance with federal, state, and local regulations. Cleanup personnel should wear respirators and protective clothing.

precautions to be Taken in Handling and Storing: Store material away from incompatible materials and keep dust free, burces of ignition.

Other Precautions: See all other sections of the MSDS.

RAYOVAC





601 Rayovac Drive, Madison, WI 53711-0960

Approved: TJA

Date: 3/86

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: Alkalin	SECTI ne Batteries	ON I		Size:	All sizes Alkaline-Ma	nganeca
				<u> </u>	Cells and l	Batteries
FOR INFORMATION ON HEAL	TH HAZARDS C	MLL: (6	08) 275	-4824		
FOR OTHER INFORMATION C	ALL:	(6	08) 275.	-4824		
SECTION II H	AZARDOUS ING	SED (ENTS)	OF MIX	TURES		
PRINCIPAL HAZARDOUS COM	PONENT. (S)			2	TLY (U	nits)
Carbon				< 5.0	3.0 mq/M ³	
Manganese Dioxide				< 5.0	5.0 mg/M ³	
Mercury	•			< 5.0	0.05 mg/M ³	
Potassiumi Hydroxide			2	.0-8.0	Cailing Limit 2.0 mg/M ³	
SECT 1	DM [[] PHYSI	CAL DATA	And the second			
BOILING POINT (°F)	NA		SPECI	FIC GRAY	(1=0 ₅ H)	NA
PAPOR PRESSURE (mm Hg)	NA		PERCENT VOLATILE 8Y YOLUME (1)		KA	
YAPOR DENSITY (AIR=1)	NA		EYAPORATION RATE		NA	
SOLUBILITY IN WATER	NA					
APPEARANCE - AND ODOR	Various Col No Odor					
SECTION	IY FIRE AND	EXPLOSIO	N HAZA	RD DATA		
FLASH POINT (Method used	NA (FLAMMA	BLE LII	HITS	Le1 NA	NA NA
The state of the s	n bulk stora ater may cau	ge area:	s, use	CD2, for	m for dry p	owder;

SPECIAL FIRE FIGHTING PROCEDURES

Wear self-contained breathing apparatus (SCBA) to prevent inhalation of decomposition products.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Calls may rupture when exposed to excessive heat.

THRESHOLD LIMIT VALUE

None established.

EFFECTS OF OVEREXPOSUN'

None under normal condition.

EMERGENCY AND FIRST AID PROCEDURES

In case of ingestion, contact the National Capitol Poison Center, Washington DC, (202) 625-3333 - CALL COLLECT

SECTION VI REACTIVITY DATA

UNSTABLE NA CONDITIONS TO AVOID YTLLIBATE STARI E NA

Excessive heat, electrical short.

INCOMPATIBILITY

(Materials to Avoid) NA

HAZARDOUS DECOMPOSITION PRODUCTS

KA

HAZARDOUS POLYMERIZATION CONDITIONS TO AVOID

May Occur [Will Hot Occur

NA.

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Batteries are a dry solid and can be handled easily with shovels or similar. equipment. When accumulating large quantities of undischarged batteries for disposal, pack in a non-conductive insulating material.

WASTE DISPOSAL HETHOD

Dispose according to appropriate local, state and federal regulations.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify Type)

KA

YEATILATION	LOCAL EXHAUST	NA	SPÉCIAL	NA ·
	MECHAN ICAL	· NA	OTHER	NA
PROTECTIVE G	LOYES	HΔ	EYE PROTECTION	tra

NA

ETE PROTECTION

NA

" . To . " . To . " . "

OTHER PROTECTIVE EQUIPMENT

NA

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Do not store unpackaged cells together so contacts can touch. This situation will result in cell shorting and heat build-up.

OTHER PRECAUTIONS

Do not recharge this type of battery.

9983 Glenoaks Bouleva. Sun Valley, CA 91352 Phone (818) 768-6060

MATERIAL SAFETY DATA SHEET-

NAME AND PRODUCT		
LONGYEAR COMPANY	Steve Garrison	
9983 GLENOAKS BLVD., SUN VALLEY, CA. 91352	818-768-6060	
TRADE NAME, COMMON NAME OR SPECIFICATION Diamond impregnated metal bonded Segments, blades, corebits, and grinding heads HEMICAL FAMILY OR PRODUCT TYPE	APPROVED BY E. Gregory DATE 12/31/87	
COMPOSITION	3570370.	

CHEMICAL AND COMMON NAME	PERCENT	REG:	CAS	OSHA PER- MISSIVE EXPOS- URE LIMIT morms	ACGIH TLV	CARCIN OGEN
Cobalt	0-97	Y	7440-48-4	0.1	0.1	(YIN)
Copper	0-95	Y	7440-50-8	1.0		N
Jin	0-40	Y	7440-31-5	NAIF	1.0	N
Zinc	0-20	Ý	7440-66-6	NAIF	NAIF	N
Nickel	0-95	Ÿ.	7440-02-0	1.0	NAIF	N
Iron	0-95	Ÿ	7439-89-6		1.0	Y
Molybdenum	0-30	Ÿ	7439-98-7	N	15.0	N
Manganese	0-5	Ÿ	7439-96-5	15.0	10.0	N
ungsten Carbide	0-90	V		5.0	5.0	N
ungsten	0-95		12070-12-1	5.0	5.0	N
Silicon	0-33		7440-33-7	5.0	5.0	N
Boron.	The second secon	Y	7440-21-3	15.0	10.0	. N
Carbon	0-3	Y	7440-42-8	15.00	10.0	N
hromium	1-15	Y	7440-44-0	3.5	3.5	N
<u>itanium</u>	0-20	Y	7440-47-3	1.0	0.5	Y
hosphorous	0-5		7440-32-6	NAIF	NAIF	N ·
nosphorous	0-2	Y	7723-14-0		1	N

	Threshold Limit Values.	=	TLV	
Affecty and Health	Permissible Exposure Limit.	*	DEF.	
	National Institute for Safety and Health.	=	HSOIN	
	No Applicable Information Found	=	MAIF	
icable,	Not Applicable,	=	A/N	
	American National Standards Institute.	==	ISNA	: \(\)

(BENCH 812)		CORROSIVITY AND REACTIVITY DATA
STABILITY	UNSTABLE () STABLE []	POLYMERIZATION MA ". WILL NOT OCCUR IX
INCOMPATIE	BILITY (MATERIALS TO AVOID)	· NAIF
wener	TION PRODUCTS	
54.03.0		NAIF
CONDITIONS	FO BE AVOIDED	
		. NAIF
		STORAGE, HANDLING AND USE PROCEDURES
1910.94 (Section	(LEUCTTOTION) WIN TA	th adequate ventilation for nuisance dust. See OSHA 29 CFR CFR 1910.1000 (Air Contaminants). (See ANSI Standard B7.1
Handle w and 29 C	ith adequate ventila FR 1910.1000 (Air Co	tion for nuisance dust. See OSHA 29 CFR 1910.94 (Ventilationtaminants).
STEPS TO BE TAP	KEN IN CASE OF LEAKS OR SPILLS	
W	m Jerstra.	Solid metal. N/A
VASTE DISPOSAL	METHOD	
Dispose o	of in accordance with	appropriate Federal, State and local laws.
		PERSONAL PROTECTION INFORMATION
SPIRATORY PRO	TECTION (SPECIFY TYPE) USE OF	appropriate NIOSH approved respirator is
CHOCKLON C	CACCIO CACCEO GIE GODI	UDITALE FOI III II V AII SDAYANNISTA MAGUING
OI WI III &	-2 CIN 1210.134 SHULL	u de mer.
NTILATION	LOCAL Recommend	ed.
	IGENERAL) Recommend	ed .
	OTHER NAIF.	
TECTIVE GLOVE	VECOMMENDE	
PROTECTION	Recommende	ed.
ent if app	See USHA 29 CFR 191	0.215 (Hearing Protection). Use other protective equip-
SURES TO BE TA		CÉ OF CONTAMINATED EQUIPMENT THAT HAS BEEN IN CONTACT WITH THIS MATERIAL
		SOUTH THIS MATERIAL
		NAIF
		SPECIAL PRECAUTIONS
LUTIONS TO BET	AKEN IN HANDLING AND STORAGE	NAIF
PRECAUTIONS		
		NAIF
		FOR COMPANY USE

The information and recommendations set forth herein are taken from sources believed to be accurate as of the date

MSDS002081

6. HEALTH HAZARD DATA	with the said	-				
Brimery Routes of Fathers						No.
Primary Routes of Entry - Inhalas Signs and Symptoms of Exposure	tion and Skin					- 174/F
1. Acute Overexposure Inhalati	on - Headache	dizz	iness, na	usea and	anest	hesta
EAST - HITT CHRIST ONE	rritation, SI	in - W	ill cause	drving	and in	-16-41
						- ALDES
2. Chronic Overexposure Hay Cap	se contact der	mititue	- Could	have of	fact or	
LLYSE and Kloney.					LBCL OF	1
Medical Conditions Generally Aggrava	ted by Exposure Br	eathing	difficul	Hinn		
		NE SILVING	- WALL-RUUS	THE !		
Chemical Listed & Carolinopen or Potential Carolingen	National Texicologi Program		LARC	YesQ	Ó8HA	14 D
	· 10*	Have	Monographs	_16 £14.		No Gy
Emergency and First Ald Procedures	it summbers					
	(If symptoms p	eraist	, call a	doctor)		
Eyes Tires with the	air - apply a	rtific:	al respi	ration i	f nece	sary
THE WALLET IS	or at least 15	minute				¥
Wash with soap and	water - Use s	kin cre	en.			
Up not induce ve	miting - Call	a phys	ician.			
7. SPILL OR LEAK PROCEDUR	E8				Aller Janes Control	
ending and Storee Store in a	cool dry place	ū.				-
•						
torials in relessed or spilled NOT NOTMA	lly a problem	er Carlo a				Factor 1941
heorb liquid - Remove so	urces of ignit	WIER A	SEDSOTS -	Ventila	te and	
TISMOVE BO	TRUES OF 1001	lon.				
sate Disposal Partially med						111111111111111111111111111111111111111
	or filled ser	osols a	re Hazar	doug Nas	te if	
iscarded - Dispose of in	conformance t	o Feder	Al. State	& Loca	1 regu	latio
- DOWN LINE WAS HIST	A COE DIVECTIO	NB				
erosol containers may exp	lode if expos	ed to t	emperatu	es in e	xcess	
130 fr. Due to the high	density of the	he meta	llic zinc	the a	erosol	
est he thoroughly agitate	d before use.					