

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
	<p><b>A. Hourly Rate per Person</b> Including all wages, labor, travel, taxes, insurance (including Liability Insurance), overhead, licenses, qualifications, equipment, profit and all other mark-ups and costs:</p> <p>1. Electrical Foreman \$ <u>113.40</u> /Hr. x 40 Hrs.</p> <p>2. Electrical Journeyman \$ <u>99.75</u> /Hr. x 40 Hrs.</p> <p><b>B. Material Mark-up</b> Including all insurance, overhead, profit and any other mark-up shall be fifteen (15) percent.</p> <p>1. Materials <u>15%</u></p> <p>Formula:</p> <p>Hypothetical Material Cost per week x % Mark up</p> <p>\$80,000.00/wk X <u>1.15</u> [enter % as decimal]</p>	<p>= \$ <u>4,536<sup>00</sup></u> (A1)</p> <p>= \$ <u>3,990<sup>00</sup></u> (A2)</p> <p>= \$ <u>92,000.00</u> (B1)</p> <p>= \$ <u>100,526<sup>00</sup></u></p>	<p>= \$ <u>4,696<sup>00</sup></u> (C1)</p> <p>= \$ <u>4,150<sup>00</sup></u> (C2)</p> <p>= \$ <u>92,000.00</u> (D1)</p> <p>= \$ <u>100,846<sup>00</sup></u></p>
	<p>Year 1: Total (Sum of A1, A2 and B1)</p> <p>Year 2: Total (Sum of C1, C2 and D1)</p>		
	<p><b>TOTAL (Sum Year 1 plus Year 2)</b></p>	<p>= \$ <u>201,372<sup>00</sup></u></p>	

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

REFERENCE QUESTIONNAIRE

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

NAME OF OWNER COMPLETE ADDRESS AND TELEPHONE NUMBER	PROJECT LOCATION & SPECIFIC TYPE OF WORK PERFORMED BY YOUR ORGANIZATION AND CONTRACT PRICE	CHECK PRIME OR SUB CONT. PR SUB	LIST NAME & TEL. NO. OF PERSON IN CHARGE	APPROX. DATE COMPLTD MO. / YR.	WAS TIME EXTENSION NECESSARY YES / NO ATTACH EXPLANATION	WERE ANY PENALTIES IMPOSED? ATTACH EXPLANATION	WERE LIENS CLAIMS OR STOP NOTICES FILED? ATTACH
BLAKE CHLORESS V.P. COM 3715 NORTHSIDE PKWY ATLANTA, GA. 404 720-1332	SHORT HILLS N.S. NEW WATER PLANT AMERICAN WATER \$ 8,200,000	SUB	ANTHONY D. GIOVANNI 973-535- 5352	12-2012	NO	NO	NO
ALAN KASHIAN METLIFE STADIUM 1- METLIFE DR. E. RUTHERFORD N.S. 201 559-1769	STADIUM SPORTS LIGHTING	SUB	AL ALFONZO	10-2013	NO	NO	NO
	AT&T SuperBowl UPGRADES \$ 4,400,000	PRIME	AL ALFONZO 973 535, 5352	10-2013	NO	NO	NO
TOM JAKOBY HONEYWELL 101 COLUMBIA DR. MORRISTOWN N.S. 908-403-1409	MERCK K-16 H-BLOCK CONTROLS \$ 2,100,000	SUB	A.S. D. GIOVANNI	9-2013	NO	NO	NO



**ELECTRICAL CONTRACTORS**

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

### **REFERENCES**

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

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

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

00000 **BID DOCUMENT SUBMISSION CHECKLIST**

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

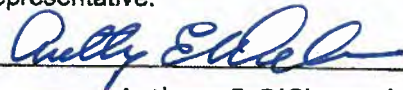
	Item	Contract Section	Initial Each Item Submitted with Bid
1.	Disclosure of Investment Activities in Iran	00100	AED
2.	Signature	00300	AED
3.	Contractor's NJ Dept. of Treasury Business Registration Certificate	00300	AED
4.	References	00300	AED
5.	Bid Bond or Certified Check	00301	AED
6.	Surety Company Certificate	00302	AED
7.	Statement of Ownership	00303	AED
8.	Affirmative Action Compliance	00304	AED
9.	Bid Sheet	00305	AED
10.	Contract Period	00305 Item A.	AED
11.	Submittal of Bid	00305 Item P.	AED
12.	Non-Collusion Affidavit	00306	AED
13.	Supplement to Bid Forms	00400	AED
14.	Certification Questionnaire	00401	AED
15.	Acknowledgment of Receipt of Changes to Bid Documents	00402	AED
16.	Subcontractor's Listing	00403	AED
17.	Public Works Contractor Registration	00404	AED
18.	Insurance Requirements	00727	AED
19.	Hazardous Material (MSDS)	00826	AED
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	AED

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

Name of Bidder: Travis Inc.  
(Company Name)

By Authorized Representative:

Signature:



Print Name and Title: Anthony E. DiGiovanni, Estimator

Date: 10/18/13

The names and residences of all persons and parties interested in the foregoing bid, as principals, are as follows:

In case of a corporation, give names of President, Treasurer and Manager.

A. J. DiGiovanni, President

Robert G. Travis, Owner

Peter M. Barba, Owner

Bidder's New Jersey Business Registration Certificate Number:

1133141

(Also Provided Copy of Certificate)

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.

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 **Initial Project Workforce Report** (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 may 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 must 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 Contractor: Travis Inc.  
Business Name: Travis Inc.  
Mailing Address: 11 Merry Lane  
(Mailing Address must include Street Address)  
East Hanover, NJ 07936  
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 contractor's 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 N.J.S.A. 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 N.J.S.A. 2A:30A-2(a) et seq. shall apply solely for the benefit of PVSC.

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.	<b>YEAR 1</b>	<b>YEAR 2</b>
	<p><b>A. Hourly Rate per Person</b> Including all wages, labor, travel, taxes, insurance (including Liability Insurance), overhead, licenses, qualifications, equipment, profit and all other mark-ups and costs:</p> <p>1. Electrical Foreman \$ _____/Hr. x 40 Hrs.      =\$ _____ (A1)</p> <p>2. Electrical Journeyman \$ _____/Hr. x 40 Hrs.      =\$ _____ (A2)</p> <p><b>B. Material Mark-up</b> Including all insurance, overhead, profit and any other mark-up shall be fifteen (15) percent.</p> <p>1. Materials <u>15</u>%</p> <p>Formula:      =\$ <u>92,000.00</u> (B1)</p> <p>Hypothetical Material Cost per week x % Mark up      =\$ <u>92,000.00</u> (D1)</p> <p>\$80,000.00/wk X <u>1.15</u> [enter % as decimal]</p>		
	<p><b>Year 1: Total (Sum of A1, A2 and B1)</b>      =\$ _____</p> <p><b>Year 2: Total (Sum of C1, C2 and D1)</b>      =\$ _____</p>		
	<b>TOTAL (Sum Year 1 plus Year 2)</b>	\$ _____	

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

**REFERENCE QUESTIONNAIRE**

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

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

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

**Acknowledgment by Bidder:**

Name of Bidder: Travis Inc.  
(Company Name)

By Authorized Representative:

Signature: 

Print Name and Title: Anthony E. DiGiovanni, Estimator

Date: 10/18/13

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

**PASSAIC VALLEY SEWERAGE COMMISSION**  
**CONTRACT NO. A919 - SUBCONTRACTOR LISTING**

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

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

<u>Work to be Performed</u>	<u>Name(s) and Address of Subcontractor(s)**</u>	<u>License Number(s)</u>
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, Estimator

\_\_\_\_\_  
Name and Title of Authorized Representative

  
\_\_\_\_\_  
Signature of Authorized 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.

Certificate Number  
617335

Registration Date: 05/17/2012  
Expiration Date: 05/16/2014



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

**Responsible Representative(s):**

2012  
Travis, Inc.

*Harold J. Wirths*

Harold J. Wirths, Commissioner  
Department of Labor and Workforce Development

NON TRANSFERABLE

This certificate may not be transferred or assigned and may be revoked for cause by the Commissioner of Labor and Workforce Development.

**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 REPLACEMENT  
ELECTRIC FEEDER CABLES FOR A TWO (2) YEAR PERIOD**

1. In accordance with "The Public Works Contractor Registration Act," P.L., 1999, c238 (N.J.S.A 34:11 – 56.48 et seq.) amended by P.L. 2003, C91

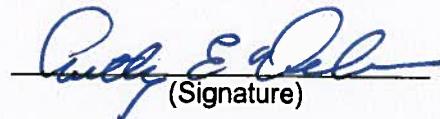
"No contractor shall bid on any contract for public work as defined in section 2 of P.L 1963, c150 (C34:11 – 56.26) unless the contractor is registered pursuant to this act. No contractor shall list a subcontractor in a bid proposal for the contract unless the subcontractor is registered pursuant to 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.

 10-18-13  
(Signature) (Date)

Anthony E. DiGiovanni  
(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 chemical.

#### 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:

1. 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.
3. 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

1. 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

1. Supervisors will inform employees of any special tasks that may arise which would involve possible exposure to hazardous chemicals.
2. 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.
2. 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 (Trichlorotrifluoroethane)

### 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

Carlton Standard Clear PVC Cement  
Carlton Standard Clear PVC Solvent Cement  
Carlton 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

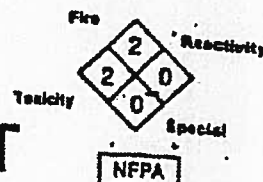
Cadweld Electrical Welding Material  
Cadweld Aluminum Welding Material  
Cadweld One Shot Molds

G. Articles Manufactured

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



#5

**WD-40**

# MATERIAL SAFETY DATA SHEET

## I. PRODUCT IDENTIFICATION

Manufacturer: WD-40 Company	Emergency Telephone: (619) 275-1400
Address: 1061 Cudahy Place (92110)	Chemical Name: Organic Mixture
P.O. Box 80607	
San Diego, California	Trade Name: WD-40 Aerosol
92138-9021	

## II. HAZARDOUS INGREDIENTS

Chemical Name	CAS Number	%	Exposure Limit ACGIH/OSHA
Aliphatic 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/M <sup>3</sup> (TWA)
Corrosion Inhibitor	Proprietary Mixture	< 10	5 mg/M <sup>3</sup> (TWA)
Wetting Agent	Proprietary Mixture	< 5	500 ppm (PEL)
Fragrance	Proprietary Mixture	< 5	NDA

## III. PHYSICAL DATA

Boiling Point:	NA	Evaporation Rate:	Not determined
Vapor Density: (air = 1)	Greater than 1	Vapor Pressure:	50 PSI @ 70°F
Solubility in Water:	Insoluble	Appearance:	Light amber
Specific Gravity (H <sub>2</sub> O = 1)	.710 @ 70°F	Odor:	Characteristic odor
Percent Volatile (volume):	80%		

## IV. FIRE AND EXPLOSION

Flash Point:	NA to aerosol cans
Flammable Limits:	(propellant portion) [Le] 1.8% [Ue] 9.5%
Extinguishing Media:	CO <sub>2</sub> , Dry Chemical
Special Fire Fighting Procedures:	None
Unusual Fire and Explosion Hazards:	Considered "extremely flammable" under Consumer Product Safety 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.

## VI. REACTIVITY DATA

Stability:	Stable <u>X</u>	Unstable _____
Conditions to avoid:	NA	
Incompatibility:	Strong oxidizing materials	
Hazardous decomposition products:	NA	
Hazardous polymerization:	May occur _____	Will not occur <u>X</u>

## VII. SPILL OR LEAK PROCEDURES

### Spill Response Procedures

Spill unlikely from aerosol cans. Leaking cans should be placed in plastic bag or open pail until pressure has dissipated.

### Waste Disposal Method

Empty aerosol cans should not be punctured or incinerated; bury in land fill. Liquid should be incinerated or buried in land fill.

## VIII. SPECIAL HANDLING INFORMATION

Ventilation:	Sufficient to keep solvent vapor less than TLV.
Respiratory Protection:	None required.
Protective Gloves:	None required.
Eye Protection:	None required.
Other Protective Equipment:	None required.

## IX. SPECIAL PRECAUTIONS

Keep from sources of ignition, do not take internally. Avoid excessive inhalation of spray particles. Do not puncture, incinerate or store container above 120°F.

## X. TRANSPORTATION DATA

### Domestic Surface

Description: Consumer Commodity  
Hazard Class: ORM-D  
ID No.: NONE  
Label Required: Consumer Commodity (ORM-D)

### Domestic Air

Description: Consumer Commodity (Flammable Gas-Aerosol products)  
Hazard Class: ORM-D  
ID No.: NONE  
Label Required: Consumer Commodity (ORM-D-AIR)

SIGNATURE: R. Miles

TITLE: Technical Director

REVISION DATE: April 1986

SUPERSEDES: December 1985

NA = Not applicable

NDA = No data available

< = Less than

> = More than

# MATERIAL SAFETY DATA SHEET

PRODUCT NAME 2-26 (Aerosol) #02004, 02005	# MSDS002004
MANUFACTURED BY: CRC CHEMICALS	Phone (215) 674-4300
885 LOUIS DRIVE, WARMINSTER, PA. 18974	

1. INGREDIENTS	CAS #	ACGIH TLV	OSHA PEL	Other Limits	%
Petroleum Distillate	64742-47-8	NA	NA	200ppm	42
1,1,1 Trichloroethane	71-55-6	350			29
*Inhibited paraffinic oil	NA		As mist 5mg/M		25
Carbon Dioxide	124-38-9	5000			4
*The oil and additives are not hazardous according to OSHA standards.					
The carbon dioxide is the propellant for this container. Pressure = 85 psig at 70°F.					

## 2. PHYSICAL DATA (Without Propellant)

Specific Gravity 0.932	Vapor Pressure 6.2 mm	% Volatile 76
Boiling Point 220°F (Initial)	Evaporation Rate NA	
Freezing Point NA	Vapor Density Heavier than air	
Appearance and Odor	Amber liquid, pleasant odor	
Solubility	Negligible in water.	

## 3. FIRE AND EXPLOSION DATA

Flashpoint 170°F	Method COC	Flammable Limits NA
Extinguishing Media	Foam, Fog, Dry Chemical, CO <sub>2</sub>	LEL UEL
Unusual Hazards	Aerosol containers may explode when heated above 130°F.	

## 4. REACTIVITY AND STABILITY

Stability	Stable	
Hazardous decomposition products	Thermal--Hydrogen chloride, chlorine, carbon monoxide	
Materials to avoid	Strong oxidizers and possibly phosgene.	

## 5. PROTECTION INFORMATION

Ventilation	Mechanical ventilation if vapor conc. is above TLV.	
Respiratory	Self-contained breathing apparatus if vapor conc. is above TLV.	
Gloves	Solvent resistant	Eye & Face Safety goggles
Other Protective Equipment	Not needed for aerosols.	

**6. HEALTH HAZARD DATA**Primary Routes of Entry Skin & Inhalation

Signs and Symptoms of Exposure

1. Acute Overexposure Inhalation - Headache, dizziness & nausea - may also have some anesthetic effect. Eyes - burning and irritation. Skin - causes drying and defatting.

2. Chronic Overexposure Dermatitis

Medical Conditions Generally Aggravated by Exposure Breathing conditions

Chemical Listed as Carcinogen or Potential Carcinogen

National Toxicology Program

Yes ☐  
No ☒

IARC Monographs

Yes ☐  
No ☒

OSHA

Yes ☐  
No ☒Emergency and First Aid Procedures (If symptoms persist call a physician)

1. Inhalation Remove to fresh air - apply artificial respiration if necessary.

2. Eyes Flush with large amounts of water.

3. Skin Wash with soap and water.

4. Ingestion Do not induce vomiting - call a physician.

**7. SPILL OR LEAK PROCEDURES**

Precautions to be taken in Handling and Storage

Store in a cool, dry area.

Steps to be taken in case Materials is released or spilled

Ventilate area, absorb with inert material and place in a closed container.

Waste Disposal Partially used or full aerosols are Hazardous Waste if discarded. Dispose of in conformance with Federal, State and Local regulations.

**8. SPECIAL PRECAUTIONS AND USE DIRECTIONS**Aerosols may explode if contents are heated above 130°F.Vapors are heavier than air and will tend to collect in low areas.PREPARED BY: A. P. ReedORIGINAL DATE OR DATE OF REVISION Nov. 1985

# MATERIAL SAFETY DATA SHEET

PRODUCT NAME	Lectra Clean (Aerosol) #2018	#	MSDS002018
MANUFACTURED BY:	CRC CHEMICALS	Phone	(215) 674-4300
885 LOUIS DRIVE, WARMINSTER, PA. 18974			

1. INGREDIENTS	CAS #	ACGIH TLV	OSHA PEL	Other Limits	%
1,1,1 Trichloroethane	71-55-6	350	350		72
Perchloroethylene	127-18-4	50	100		24
Carbon Dioxide	124-38-9	5000			4

## 2. PHYSICAL DATA (Does not include carbon dioxide propellant)

Specific Gravity 1.385 (77°F)	Vapor Pressure 85 mm	% Volatile 100
Boiling Point 165--252°F	Evaporation Rate Rapid	
Freezing Point NA	Vapor Density 4.8 (Air = 1)	
Appearance and Odor Colorless liquid - Irritating odor at high conc.		
Solubility Slight solubility in water - good solvent for many organic materials		

## 3. FIRE AND EXPLOSION DATA

Flashpoint None	Method TCC, TOC, COC	Flammable Limits 212°F
Extinguishing Media Water fog		LEL 7.5 UEL 14.5%
Unusual Hazards Aerosols may explode if their temperature exceeds 130°F		

## 4. REACTIVITY AND STABILITY

Stability Good - Avoid exposures to open flames, arcs and high temp.
Hazardous decomposition products Thermal - Hydrogen chloride, chlorine & some phosphorus
Materials to avoid Avoid storage in aluminum containers or contact with aluminum and zinc powder.

## 5. PROTECTION INFORMATION

Ventilation <sup>Maintain vapor concentration below TLV</sup> - Use mechanical means if necessary	
Respiratory Above TLV use self contained air mask or vapor mask	
Gloves Solvent resistant	Eye & Face Safety glasses
Other Protective Equipment Not normally required for aerosol products.	

**6. HEALTH HAZARD DATA**Primary Routes of Entry Inhalation and skin contact

Signs and Symptoms of Exposure

1. Acute Overexposure Inhalation - headaches, dizziness, anesthesia, unconsciousness. Eyes - causes pain and some irritation. Skin--causes irritation on repeated exposures.
2. Chronic Overexposure Repeated overexposures may cause liver and kidney effects.

Medical Conditions Generally Aggravated by Exposure High levels (8000 ppm +) of vapor may cause cardiac arrhythmias

Chemical Listed as Carcinogen or Potential Carcinogen

National Toxicology Program

Yes ☐  
No ☒

IARC Monographs

Yes ☐  
No ☒

OSHA

Yes ☐  
No ☒Emergency and First Aid Procedures (If symptoms persist, call a physician)

1. Inhalation Remove to fresh air, apply artificial respiration if necessary.
2. Eyes Flush for 15 minutes with large amounts of water.
3. Skin Remove contaminated clothing. Wash exposed skin with soap.
4. Ingestion Do not induce vomiting - Call a physician.

**7. SPILL OR LEAK PROCEDURES**

Precautions to be taken in Handling and Storage

Store in a cool dry area.

Steps to be taken in case Material is released or spilled

Usually not a problem with aerosols - Area should be ventilated and absorbent used to pick up excess material.Waste Disposal Discarded filled cans or partially used cans are Hazardous waste - Dispose of in conformance to Regulations**8. SPECIAL PRECAUTIONS AND USE DIRECTIONS**

Avoid prolonged skin contact or breathing of vapors. Since vapors are heavier than air, aerosols should not be used in confined areas or low spots without adequate ventilation. If vapors are suspected in a low area, do not enter unless special breathing apparatus is used and an observer is present for assistance.

Keep aerosols away from heat.PREPARED BY: A. P. ReedORIGINAL DATE OR DATE OF REVISION Nov. 1985

SECTION 1

(PAGE 1)

City, State, and Zip Code: SYCAMORE, IL  
60178  
Product Class (AEROSOL) CLEANERS  
Trade Name: 40-705 SWITCH & CONTACT CLNR  
Code Identification: 40-705  
Rev. Date: 11/19/85  
Date: 06/13/86  
Lab No.: 32850

[illegible]

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 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: N.A.

(CONTINUED)

Customer No: 06258 Name: AL INDUSTRIES

L. No.: 32850 (PAGE 2)

\*\*\*\*\*  
SECTION IV - FIRE AND EXPLOSION HAZARD DATA  
\*\*\*\*\*

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. OVER-EXPOSURE MAY  
RESULT IN LIGHT-HEADEDNESS, STAGGERING GAIT, GIDDINESS AND POSSIBLE NAUSEA.  
HARMFUL OR FATAL IF SWALLOWED

Chronic: 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.

Routes 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

Incompatibility (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  
\*\*\*\*\*

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.

(CONTINUED)

## 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.

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 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 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:	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 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 (PAGE 2)

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. OVER-EXPOSURE MAY  
RESULT IN LIGHT-HEADEDNESS, STAGGERING GAIT, GIDDINESS AND POSSIBLE NAUSEA.  
HARMFUL OR FATAL IF SWALLOWED

Chronic: 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.

Routes 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

Incompatibility (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

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.

(CONTINUED)



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

SECTION I

(PAGE 1)

Manufacturers Name: IDEAL INDUSTRIES  
Street Address: 1000 PARK AVE

Emergency Phone No: 815/895-5181

City, State, and Zip Code: SYCAMORE, IL 60178  
Product Class (AEROSOL) LUBRICANTS  
Trade Name: 40-635 6 % SILICONE LUBE

Code Identification: 40-635  
Rev. Date: 01/14/86  
Date: 06/13/88  
Lab No.: 43935

SECTION II - HAZARDOUS INGREDIENTS

* INGREDIENT	* PERCENT	* PEL * PPM	* TLV * PPM	* TLV * MG/M3	* LEL	* GAS NUMBER
* HEXANE	* 70	* 500	* 50	* 1800.00	* 1.1	* 00110-54-3
* A ISOBUTANE	* 10	* 1000	* 1000	* 1800.00	* 1.8	* 00075-28-5
* A PROPANE	* 10	* 1000	* 1000	* 1800.00	* 2.3	* 00074-98-6
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* 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 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  
\* PROPELLANTS Percent Volatile By Weight: 94 Weight Per Gallon: N.A.

(CONTINUED)

Customer No: 06258 N : IDEAL INDUSTRIES

Lab No.: 36363 (PAGE 3)

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.

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 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 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 NPCHA-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 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: IL INDUSTRIES Lab. No.: 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.

Unusual 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  
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.  
CONTAINS PETROLEUM DISTILLATES - HARMFUL OR FATAL IF SWALLOWED

Chronic: 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:  
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).

Routes 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

Incompatibility (NONE)

Hazardous Decomposition Products By open flame: CARBON MONOXIDE, CARBON DIOXIDE.  
Hazardous Polymerization: WILL NOT OCCUR

\*\*\*\*\*  
SECTION VII - SPILL OR LEAK PROCEDURES  
\*\*\*\*\*

Steps 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

Disposal method:

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

(CONTINUED)

Customer No: Q6258 NAME: IDEAL INDUSTRIES

Lab No.: 43935 (PAGE 3)

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.

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 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 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: 2\* MODERATE HAZARD  
Flammability: 4 SEVERE HAZARD  
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 SHEET

PRODUCT NAME <b>Electrical Quality Silicone (Aerosol)</b>	# MSDS002094
MANUFACTURED BY: <b>CRC CHEMICALS</b>	#2094
885 LOUIS DRIVE, WARMINSTER, PA. 18974	
Phone (215) 674-4300	

1. INGREDIENTS	CAS #	ACGIH TLV	OSHA PEL	Other Limits	%
Dimethyl polysiloxane	63148-62-9	NA	NA		3
1,1,1 Trichloroethane	71-55-6	350	350		51
Hexane	64742-89-8	NA	500	100	42
*Carbon dioxide	124-38-9	5000			4
*Carbon dioxide functions as propellant for this product. Pressure of aerosol is 85 psia at 70°F.					

## 2. PHYSICAL DATA (Propellant not included)

Specific Gravity 0.9268	Vapor Pressure NA	% Volatile 97
Boiling Point 152°F (Initial)	Evaporation Rate Rapid	
Freezing Point NA	Vapor Density Heavier than air	
Appearance and Odor	Clear water white liquid - solvent odor	
Solubility	Not soluble in water	

## 3. FIRE AND EXPLOSION DATA

Flashpoint <20°F	Method TCC	Flammable Limits NA
Extinguishing Media	Foam, Carbon dioxide, Dry chemicals	LEL UEL
Unusual Hazards	Aerosol cans may explode when heated above 130°F.	

## 4. REACTIVITY AND STABILITY

Stability	Stable
Hazardous decomposition products	Thermal (Carbon monoxide, hydrogen chloride, and phosphoric acid)
Materials to avoid	Strong oxidizers.

## 5. PROTECTION INFORMATION

Ventilation	Required in a confined area to maintain vapor below TLV.
Respiratory	Self contained breathing apparatus
Gloves	Solvent resistant
Eye & Face	Safety Goggles
Other Protective Equipment	Not normally required for aerosol use

**6. HEALTH HAZARD DATA**Primary Routes of Entry Inhalation and Skin

Signs and Symptoms of Exposure

1. Acute Overexposure Inhalation - Headache, dizziness, nausea, anesthesia & unconsciousness, Eyes - may be irritating to eyes, Skin - may be irritating to skin.

2. Chronic Overexposure - Prolonged high levels of the n-hexane may damage nerve tissue - high levels of 1,1,1 trichloroethane may affect liver and kidneys.

Medical Conditions Generally Aggravated by Exposure

Chemical Listed as Carcinogen  
or Potential CarcinogenNational Toxicology  
ProgramYes ☐  
No ☒IARC  
MonographsYes ☐  
No ☒

OSHA

Yes ☐  
No ☒

Emergency and First Aid Procedures (If symptoms persist, call a physician)

1. Inhalation Remove to fresh air - apply artificial respiration if needed.

2. Eyes Flush with large amounts of water.

3. Skin Wash with soap and water - Remove contaminated clothing.

4. Ingestion Do not induce vomiting.

**7. SPILL OR LEAK PROCEDURES**Precautions to be taken in  
Handling and StorageStore in a cool dry area.

Steps to be taken in case

Materials is released or spilled

Remove sources of ignition, ventilate area. Absorb liquid and put in a vapor tight container.

Waste Disposal Partially used and unused aerosols are hazardous waste if discarded. Dispose in conformance with Federal, State & local regulations

**8. SPECIAL PRECAUTIONS AND USE DIRECTIONS**

Aerosols may explode if exposed to temperatures over 130°F.

PREPARED BY: A.B. ReadORIGINAL DATE OR DATE OF REVISION Nov. 1985

# MATERIAL SAFETY DATA SHEET

PRODUCT NAME <b>Zinc-It (Aerosol) # 2081</b>	# MSDS002081
MANUFACTURED BY: <b>CRC CHEMICALS</b>	Phone (215) 674-4300
885 LOUIS DRIVE, WARMINSTER, PA. 18974	

1. INGREDIENTS	CAS #	ACGIH TLV	OSHA PEL	Other Limits	%
Zinc Dust	7440-66-6	NA	NA		27.5
Epoxy Ester Resin	NA	NA			2.5
Xylene	1330-20-7	100	100		7.5
Toluene	108-88-3	100	200		4.0
Methylene Chloride	75-09-2	100	500		32.0
Methyl Ethyl Ketone	78-93-3	200	200		6.5
*Isobutane	75-28-5	NA		800	10
*Propane	74-98-6	NA	1000		10
*The isobutane and propane function as a propellant for this product.					

## 2. PHYSICAL DATA (Without propellant)

Specific Gravity 1.522	Vapor Pressure NA	% Volatile 70
Boiling Point 104°F Initial	Evaporation Rate Dries in 20-30 minutes	
Freezing Point NA	Vapor Density Heavier than air	
Appearance and Odor Gray, viscous liquid - solvent odor		
Solubility Soluble in most organic solvents		

## 3. FIRE AND EXPLOSION DATA

Flashpoint <20°F Method TCC	Flammable Limits NA	
Extinguishing Media CO <sub>2</sub> , Foam, Dry Chemical	LEL	UEL
Unusual Hazards Material reacts with water - Aerosol cans may explode if heated above 130°F.		

## 4. REACTIVITY AND STABILITY

Stability Stable
Hazardous decomposition products Thermal (Hydrogen chloride, chlorine, possible phosgene)
Materials to avoid Water, acids, strong acids

## 5. PROTECTION INFORMATION

Ventilation Mechanical required if sprayed in a confined area.	
Respiratory Self contained breathing apparatus if vapors exceed TLV.	
Gloves Solvent resistant	Eye & Face Safety goggles.
Other Protective Equipment Usually not required for aerosol use.	



**Z.R.C. PRODUCTS COMPANY**

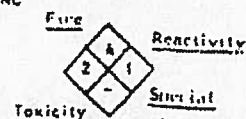
21 NEWPORT AVE., QUINCY, MASS. 02171

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

# MATERIAL SAFETY DATA SHEET

FOR COATINGS, RESINS AND RELATED MATERIALS

HAZARD  
4 = Extreme  
3 = High  
2 = Moderate  
1 = Slight  
0 = Insignificant



## Section I

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

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

TELEPHONE NO. (617) 328-6700

DATE OF PREPARATION: January 1st 1987

PRODUCT CLASS: Esterified epoxy zinc rich metal primer

MANUFACTURER'S CODE IDENTIFICATION: 8281-1000  
Lab. # 30588

TRADE NAME: Z.R.C. Cold Galvanizing Compound (Aerosol)

## Section II - HAZARDOUS INGREDIENTS

INGREDIENT (CAS#)	PERCENT by weight	LEL	TLV (mg/M <sup>3</sup> )	PEL (mg/M <sup>3</sup> )	VAPOR PRESSURE mm @ 20°C
Toluene (CAS# 108-88-3)	15	1.2	TWA 100 (375) STEL 150 (560)	TWA 200 Ceiling 300 Peak 500 (10 minutes)	36.7 (@ 30°C)
Methylene Chloride (CAS# 75-09-2)	20	15.6	TWA 100 (350) STEL 500 (1740)	TWA 500 Ceiling 1000 Peak 2000 ± 5 mins in any 2 hrs	348.9
Zinc (CAS# 7440-66-6)	38.4	na		TWA (Dust) 50 (15) Mppcf	na
Zinc Oxide (CAS# 1314-13-2)	1.6	na	TWA (fume) (5) TWA (dust) (10) STEL (fume) (10)	TWA (Fume) (5)	na
Xylene (CAS# 1330-20-1)	10	1.0	TWA 100 (435) STEL 150 (655)	TWA 100 (435)	6
V.M.S.P. Naphtha (CAS# 8032-32-4)	5	0.9	TWA 300 (1350) STEL 400 (1600)	TWA 300 (1350)	2
Propane (CAS# 74-98-6)	10	2.3	TWA 1000	TWA 1000 (1800)	(123psia @70°F)
Aerosol contents under pressure of 55+5psi			ACGIH Values	OSHA Values	

## Section III - PHYSICAL DATA - FIRE AND EXPLOSION HAZARD DATA

BOILING RANGE -42.1 to 164°C	VAPOR DENSITY 0.8	LIGHTER THAN AIR HEAVIER THAN AIR	EVAPORATION RATE FASTER THAN ETHER SLOWER THAN ETHER
PERCENT VOLATILE BY VOLUME weight 55%	WEIGHT PER 11.2 GALLON N/A	SPECIFIC GRAVITY N/A	VAPOR 50 + 10mm @ 21°C FLASH PRESSURE Below (T.O.C.) POINT 20°F (-7°C)
FLAMMABILITY LIMITS IN AIR UEL 66.4% LEL 0.9%	FLAMMABILITY CLASSIFICATION DOT OSHA	Consumer Commodity - Hazard Class ORM-D-AIR Flammable Class 1A. OSHA Class 29(1910-106a) Label: Extremely Flammable - RSP. CFR-16-1500.3(f) (V)	
AUTO IGNITION TEMPERATURE Not Determined	SOLUBILITY IN WATER Insignificant	REACTIVITY IN WATER	See Section IV

APPEARANCE AND ODOR: Grey liquid with odor typical of aliphatic, aromatic and halogenated hydrocarbon mix.

EXTINGUISHING MEDIA: Approved Class B Fire Extinguisher, foam or dry chemical. DO NOT USE WATER. Combustion in a limited amount of air can generate toxic carbon monoxide. Use full protective equipment and self-contained breathing apparatus for respiratory protection in fighting 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.

UNUSUAL FIRE AND EXPLOSION HAZARDS: 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 explosion 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 oxides 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. Moisture and acid contamination can result in hydrogen gas evolution causing cans to bulge 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 PROCEDURES: 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 prevent water access to wet paint and spray residues. See also Section VII.

## 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 conditions. It can react violently with strong oxidizing agents such as chlorine, oxygen, as well as water, weak and concentrated acids and alkalis. Store in dry areas away from oxidizing agents (chlorine, oxygen), all acids, alkalis and water. Avoid dusting and accumulations of spray residues.

**HAZARDOUS DECOMPOSITION PRODUCTS** Thermal degradation and water and alkali contact may produce hydrogen chloride and hydrogen with additional risks of explosion and fire. May produce fumes of zinc oxides and the oxides of carbon and nitrogen and hydrogen chloride when heated to decomposition. Acid contact will produce hydrogen.

## Section V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE      100 ppm

OSHA PERMISSIBLE EXPOSURE LIMIT      Mixture. (see Section II)

**PRIMARY ROUTE OF ENTRY** Inhalation and skin contact. **MEDICAL CONDITIONS GENERALLY AFFECTED BY EXPOSURE** Respiratory, brain and central nervous system conditions, dermatitis and other skin afflictions. Reports have linked methylene chloride exposure and cardiovascular problems.

### SIGNS AND SYMPTOMS OF OVER-EXPOSURE

Propane is an asphyxiant. Solvents contained in the mixture are central nervous system depressants. Symptoms of over-exposure include drowsiness, dizziness, headache, slurred speech, intoxication with euphoria and/or depression leading to stupor and unconsciousness. Nose and throat irritation may occur from inhalation. Skin contact may cause defatting and dermatitis. Eye contact with the liquid causes tears, burning, irritation, conjunctivitis. Ingestion will cause poisoning and may be fatal; Avoid aspiration if ingested. Do not induce vomiting. Lung contact may cause chemical pneumonitis. 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 oxides of carbon and nitrogen. Excessive inhalation of these fumes may produce symptoms known as "fume fever" and "zinc 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. Methylene chloride 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 Cancer, or 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. Get medical to physician for medical attention.
- 3.) Skin: Wash contact area promptly with soap and water. Promptly remove paint wet clothing. Consult physician if irritation persists.
- 4.) Ingestion: Do not induce vomiting without medical advice. Consult a physician, emergency room or Poison Center immediately. Observe all rules of good hygiene during and after use. Wash thoroughly before smoking or eating.

## Section VI - SPECIAL PROTECTION INFORMATION

**RESPIRATORY PROTECTION** In outdoor or open areas with unrestricted ventilation, use approved high efficiency mechanical respirator to remove particles of overspray during spray application. In areas of restricted ventilation, use high efficiency 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 ventilation in accordance with OSHA regulation 29 CFR Part 1910 (107D) to maintain vapor levels below the TLV (especially during spraying, misting, or heating). Use an approved high efficiency respirator of the full face canister type (for limited 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 emergency conditions). Exhaust levels should be maintained at least 100 fpm.

**PROTECTIVE CLOVES** Neoprene gloves and aprons 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 amounts of material are used a safety shower should be available.

**OTHER PROTECTIVE EQUIPMENT** Ventilation equipment should be explosion-proof, and any tools used in the area should be of the non-sparking type. Wear chemical resistant boots. Remove and wash or discard 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. Areas of use and storage for this material should have a good ventilation and all sources of open flame and high heat should be excluded. Prohibit smoking in these areas. Ensure sufficient ventilation to prevent accumulation of heavy vapors in low lying areas or sumps. Avoid prolonged contact with skin. Do not puncture, drag or slide container. Do not store above 120°F.

**OTHER PRECAUTIONS** Any deformed cans should not be moved, opened or punctured., call (617) 328-5700. Do not take internally. Keep away from children. Empty container may contain extremely flammable residues and explode if heated.

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED** For massive spills, evacuate the area. For all spills eliminate ignition sources. Dike and contain spills 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 liquid as possible for disposal, and use an absorbent to pick up the residue. Avoid discharging paint directly into a sewer or surface waters. Do not flush spills with water. Use non-sparking tools only. Spilled material may be slippery on floors.

**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 explode if heated even when empty. It is recommended that solid waste be landfilled only at 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 furnished without warranty, of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and control of these materials and the safety and health of employees and customers.

THIS PRODUCT IS A MIXTURE, AND MSDS FILES ON THE INDIVIDUAL COMPONENTS ARE USED TO DERIVE THE INFORMATION CONTAINED HEREIN.

# MATERIAL SAFETY DATA SHEET

PRODUCT NAME	CO Contact Cleaner (Bulk) #2077, 2078	# MSDS002077
MANUFACTURED BY:	CRC CHEMICALS	Phone (215) 674-4300
885 LOUIS DRIVE, WARMINSTER, PA. 18974		

## 1. INGREDIENTS

[illegible]

## 2. PHYSICAL DATA

Specific Gravity	1.57	Vapor Pressure	5.5 psia 70°F	% Volatile	100
Boiling Point	117.6°F	Evaporation Rate	0.3 (Carbon tet = 1)		
Freezing Point	-35.7°F	Vapor Density	6.5 (air = 1)		
Appearance and Odor	Colorless liquid				
Solubility	Slight solubility in water - Soluble in many organic liquids				

### 3. FIRE AND EXPLOSION DATA

Flashpoint	None	Method	TCC, TOC	Flammable Limits	None
Extinguishing Media	Not needed			LEL	UEL
Unusual Hazards	Material vaporizes quickly.				

#### 4. REACTIVITY AND STABILITY

Stability	Very stable
Hazardous decomposition products	Halogens, halogen acids, possibility of phosgene
Materials to avoid	Powdered metals such as aluminum, magnesium, calcium, zinc

## 5. PROTECTION INFORMATION

Ventilation		Maintain concentration below TLV.
Respiratory		Self-contained breathing apparatus above TLV.
Gloves	Neoprene	Eyes & Face Safety goggles
Other Protective Equipment		protective clothing only if there is contact

**6. HEALTH HAZARD DATA**

Primary Routes of Entry Inhalation and Skin

Signs and Symptoms of Exposure

1. Acute Overexposure Inhalation - Drowsiness, lightheadedness possible cardiac arrhythmias at high concentration. Skin - defatting action, may cause dermatitis. Eyes - may irritate eyes.
2. Chronic Overexposure May cause skin irritation with repeated skin contact.

Medical Conditions Generally Aggravated by Exposure Impaired cardiovascular function such as cardiac arrhythmias might be sensitized by inhalation.

Chemical Listed as Carcinogen or Potential Carcinogen

National Toxicology Program

Yes ☐ No ☒

IARC Monographs

Yes ☐ No ☒

OSHA

Yes ☐ No ☒

Emergency and First Aid Procedures (If symptoms persist call a physician)

1. Inhalation Remove to fresh air - apply artificial respiration if necessary
2. Eyes Flush with large amounts of water.
3. Skin Wash with water.
4. Ingestion Induce vomiting - call a physician.

**7. SPILL OR LEAK PROCEDURES**

Precautions to be taken in Handling and Storage

Store in a cool dry area.

Steps to be taken in case Material is released or spilled

Due to high volatility material quickly evaporates.

Ventilate area, evacuate personnel until concentration is below TLV or use self-contained breathing apparatus.

Waste Disposal If possible pump into drums for reclamation.

**8. SPECIAL PRECAUTIONS AND USE DIRECTIONS**

Vapors are very heavy and will collect in low areas. Oxygen would be displaced and asphyxiation could result. Good ventilation is a must for low areas and confined spaces.

PREPARED BY: A. B. Reed

ORIGINAL DATE OR DATE OF REVISION Nov. 1985



Division of The A.C. Group, Inc.

575 Mountain Avenue

Murray Hill

New Jersey 07974

Telephone: 201-464-8100

TWX: 710-984-7970

# MATERIAL SAFETY DATA SHEET

Welding Consumables  
and Related Products

Conforms to OSHA 1910.1200

## IDENTIFICATION

PRODUCT NAME: **Propane**

CHEMICAL FAMILY: Aliphatic  
Hydrocarbon

SYNONYMS: Liquified Petroleum Gas  
(LPG) Dimethyl Methane

DOT HAZARD CLASS: Flammable Gas

CAS NUMBER: 74-98-6

DOT I.D. NUMBER: UN 1075

FORMULA:  $C_3H_8$

CHEMTREC: 800-424-9300

## HEALTH HAZARD DATA

### 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. (ACGIH, 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.

### 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.

DATE OF ISSUE 3/1/88

Inhalation: Conscious persons should be assisted to an uncontaminated area and inhale fresh air. Prompt removal from the contaminated area 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.

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#### PHYSICAL DATA

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Boiling Point:  $-43.7^{\circ}\text{F}$  ( $-42.1^{\circ}\text{C}$ )  
Liquid Density @ Boiling Point:  $36.3 \text{ lb/ft}^3$  ( $582 \text{ kg/m}^3$ )  
Vapor Pressure @  $70^{\circ}\text{F}$  ( $21.1^{\circ}\text{C}$ ):  $127 \text{ psia}$  ( $895 \text{ kPa}$ )  
Specific Gravity @  $70^{\circ}\text{F}$ ,  $1 \text{ atm}$  (Air = 1):  $1.56$   
Solubility in Water: Negligible  
Freezing Point:  $-305.8^{\circ}\text{F}$  ( $-187.7^{\circ}\text{C}$ )

Appearance and Odor: Colorless, odorless gas

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#### FIRE/EXPLOSION HAZARDS DATA

---

Flash Point (Method Used):  $-156^{\circ}\text{F}$  ( $-104^{\circ}\text{C}$ ) Closed cup

Auto Ignition Temperature:  $896^{\circ}\text{F}$  ( $480^{\circ}\text{C}$ )

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. Use water spray to cool surrounding containers.

#### Unusual Fire and Explosion Hazards:

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.

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### REACTIVITY DATA

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**Stability:** Stable

**Incompatibility (Materials to Avoid):** Oxidizers

**Hazardous Decomposition Products:** None

**Hazardous Polymerization:** Will not occur

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### SPILL OR LEAK PROCEDURES

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#### STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Evacuate all personnel from affected area. Use 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 CHEMTREC for emergency assistance or your closest Airco location.

#### Waste Disposal Method:

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

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### SPECIAL PROTECTION INFORMATION

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

**Ventilation:** Hood with forced ventilation.

**Local Exhaust:** To prevent accumulation above the LEL.

**Special:**

**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

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### SPECIAL PRECAUTIONS

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#### Special Labeling Information:

**DOT Shipping Name:** Liquified petroleum gas

**DOT Hazard Class:** Flammable gas

**DOT Shipping Label:** Flammable gas

**DOT I.D. No.:** UN 1075

### Special Handling Recommendations:

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:

Protect containers from physical damage. Store in cool, dry, well-ventilated area of non-combustible construction away from heavily trafficked areas and emergency 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 cylinders being stored for excessive periods of time. Post "No Smoking or Open Flames" signs in the storage or use area. There should be no sources of ignition in the storage or use area.

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).

## SECTION V-HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE — Conc. <u>                    </u> Avoid <u>                    </u> <u>Very low order of toxicity</u>	THRESHOLD PERMISSIBLE EX. <u>                    </u> LVE <u>                    </u> OTHER LIMIT <u>                    </u> JRE LIMIT <u>                    </u> <div style="text-align: right;"><u>5mg/m<sup>3</sup> as mist</u></div>
PRIMARY ROUTES OF ENTRY Inhalation <input type="checkbox"/> Skin Contact <input type="checkbox"/> Other (specify) <u>                    </u>	
EMERGENCY AND FIRST AID PROCEDURES <u>SKIN: wash with soap and water. EYES: flush with water until irritation subsides. INGESTIONS: obtain medical assistance.</u>	

## SECTION VI-REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	<u>Strong oxidizers, strong bases, strong acids</u>
INCOMPATIBILITY (materials to avoid) <u>                    </u>			
HAZARDOUS DECOMPOSITION PRODUCTS: <u>CO<sub>2</sub> and carbon monoxide may be formed</u>			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

## SECTION VII-SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED <u>Contain spill with inert material, recover free liquid. Advise EPA if material enters sewer or other watercourse.</u>	
WASTE DISPOSAL METHOD <u>Incinerate or use landfill meeting all local regulations</u>	
CERCLA (Superfund) REPORTABLE QUANTITY (in lbs) <u>                    </u>	
CRA HAZARDOUS WASTE NO. (40 CFR 261.33) <u>                    </u>	
VOLATILE ORGANIC COMPOUND (VOC) (as packaged, minus water) <u>0%</u>	
<input type="checkbox"/> Theoretical <u>                    </u> lbs/gal	<input type="checkbox"/> Analytical <u>                    </u> lbs/gal

## SECTION VIII-SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type) <u>None normally required</u>		
VENTILATION	LOCAL EXHAUST (Specify Rate) <u>60 CFM</u>	SPECIAL
	MECHANICAL (General) (Specify Rate) <u>                    </u>	OTHER
PROTECTIVE GLOVES (specify type) <u>PVC</u>		EYE PROTECTION (specify type) <u>Goggles or safety glasses</u>
OTHER PROTECTIVE EQUIPMENT <u>                    </u>		

## SECTION IX-SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING <u>Keep container closed when not in use. Store away from open flame and intense heat source.</u>									
OTHER PRECAUTIONS <u>Remove oil saturated clothing and wash thoroughly before re-use.</u>									
* This product complies with 29 CFR Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), 29 CFR 1910.1200 Federal Register 48, 53280-53348, 25 November 1983. This product also complies with the State of Michigan Occupational Safety and Health Act of 1974, as amended.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Name (print)</td> <td><u>Anthony LaMarca</u></td> </tr> <tr> <td>Signature</td> <td><u><i>Anthony LaMarca</i></u></td> </tr> <tr> <td>Title</td> <td><u>Vice-President</u></td> </tr> <tr> <td>Date</td> <td><u>September 15th, 1987</u></td> </tr> </table>	Name (print)	<u>Anthony LaMarca</u>	Signature	<u><i>Anthony LaMarca</i></u>	Title	<u>Vice-President</u>	Date	<u>September 15th, 1987</u>
Name (print)	<u>Anthony LaMarca</u>								
Signature	<u><i>Anthony LaMarca</i></u>								
Title	<u>Vice-President</u>								
Date	<u>September 15th, 1987</u>								



## OCCUPATIONAL CONTROL PROCEDURES

Code No. 1537

### Protective Equipment (Type)

Eyes Protective goggles or face shield optional.

Skin Exposed employees should exercise reasonable personal cleanliness; this includes cleansing exposed skin areas several times daily with soap and water and laundering or dry cleaning soiled work clothing at least weekly.

Inhalation None required if exposures are within permissible concentrations; see below.

Ventilation Required: Normal ☒ Other

### Precautionary Label

#### CAUTION: COMBUSTIBLE

Keep away from heat and open flame.

Use with adequate ventilation.

Avoid prolonged breathing of vapor or mist.

Avoid prolonged or repeated contact with skin.

### Permissible Concentrations:

Air 5 mg/m<sup>3</sup> of air for mineral oil mist averaged over an 8 hour daily exposure. Other -

Requirements for Transportation, Handling and Storage Store away from heat and open flame. Placard required only when material is contained in packaging or container that exceeds 110 gallons or in tank car or tank truck.

DOT Proper Shipping Name: Combustible liquid, N.O.S.

DOT Hazard Class (if applicable) Combustible liquid.

## CHEMICAL AND PHYSICAL PROPERTIES

Boiling Point (°F) N.D. Vapor Pressure 10 (mmHg) @ 200°F

Specific Gravity 0.860 (H<sub>2</sub>O = 1) Vapor Density 1.10 (Air = 1) @ 200°F

Appearance and Odor Red liquid

pH of undiluted product N.D. Solubility Insoluble

Percent Volatile by Volume N.D. Evaporation N.D. ( ) = 1

Viscosity N.D. Other -

Hazardous Polymerizations Occur ☒ Do not occur

The Material Reacts Violently With: None of those listed below.

Air Water Heat Strong Oxidizers Others

## FIRE PROTECTION INFORMATION

Ignition Temp. °F N.D. Flash Point F. (Method) 180 PM minimum; closed cup less than 200°F

Flammable Limits % Lower N.D. Upper N.D.

Products Evolved When Subjected to Heat or Combustion Carbon monoxide, carbon dioxide, oxides of nitrogen, oxides of sulfur, aldehydes and ketones.

Recommended Fire Extinguishing Agents and Special Procedures According to the National Fire Protection Assoc. Guide 49, combustible liquid fires may be extinguished by water spray, dry chemical, foam, or carbon dioxide. Use water to keep fire-exposed containers cool. If a leak or spill has not ignited, use water spray to disperse the vapors and to provide protection for men attempting to stop leak. Water spray may be used to flush spills away from exposures.

CONTINUED

**TEXACO INC.**  
**INDUSTRIAL HYGIENE, TOXICOLOGY, AND MATERIAL**  
**SAFETY DATA SHEET**



NOTE: NO REPRESENTATION IS MADE AS TO THE ACCURACY OF THE INFORMATION  
 HEREIN. SEE PAGE 4 FOR CONDITIONS UNDER WHICH DATA ARE FURNISHED.

Trade Name and Synonyms <b>1537 Aircraft Hydraulic Oil 15</b>	
Manufacturer's Name <b>Texaco Inc.</b>	Emergency Telephone No. <b>(914) 831-3400 Ext. 406</b>
Address <b>P.O. Box 509, Beacon, NY 12508</b>	
Chemical Name and/or Family or Description <b>General Electric D6B11A</b>	
THIS PRODUCT IS CLASSIFIED AS: <input checked="" type="checkbox"/> <b>HAZARDOUS BY DEFINITION NO. (8)</b> <input type="checkbox"/> <b>NOT HAZARDOUS:</b> <input type="checkbox"/> <b>ON ATTACHED EXPLANATION SHEET 4</b>	
<b>WARNING STATEMENT:</b> <b>CAUTIC; COMBUSTIBLE</b>	
<b>PHYSIOLOGICAL EFFECTS:</b>	
Effects of Exposure	
Acute:	
Eyes	N.D.; believed to be mildly irritating.
Skin	N.D.; believed to be mildly irritating.
Respiratory System	N.D.; believed to be minimally irritating if not in excess of permissible concentrations; see page 2.
Chronic	N.D.
Sensitization Properties	
Skin: Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input checked="" type="checkbox"/>	Respiratory: Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input checked="" type="checkbox"/>
Median Lethal Dose (LD <sub>50</sub> , LC <sub>50</sub> ) (Species)	Irritation Index, Estimation of Irritation (Species)
Oral <del>N.D.; believed to be &gt; 5 gm/kg (rat)</del>	Skin <del>N.D.; see above</del>
Inhalation <del>N.D.</del>	Eyes <del>N.D.; see above</del>
Dermal <del>N.D.; believed to be &gt; 10 gm/kg (rabbit)</del>	Symptoms of Exposure <del>N.D.; none expected other than possible minimal irritation.</del>
Other <del></del>	
<b>EMERGENCY AND FIRST AID PROCEDURES</b>	
First Aid	
Eyes	As with most foreign materials, should eye contact occur, flush eyes with plenty of water.
Skin	None considered necessary.
Ingestion	None considered necessary.
Inhalation	None considered necessary.
Other Instructions	None.

\*N.D. — Not Determined; \*N.A. — Not Applicable  
 (—Less Than; ) —Greater Than

FORM G-391 3-79

COMPOSITION			Code No
			1537
Components Presenting a Significant Hazard	%	Other Components	%
None.		Mineral oil	75
		Phenolic antioxidant CAS#(128-39-2)	0.3
		Triaryl phosphate	0.5
		Methacrylate copolymer	25
		Red dye CAS#(2653-64-7)	70 pp

#### ENVIRONMENTAL PROTECTION

**Waste Disposal Method** 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 Breakage or Leakage** 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 necessary.

**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).

None 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.

By: R. T. Richards

Title: Manager, Industrial Hygiene and Toxicology

Date: 5/1/80

☐ New

☒ Revised, Supersedes

5/1/79

SECTION V REACTIVITY DATA			
STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	SPARKS AND OPEN FLAMES
INCOMPATIBILITY (Materials to avoid)			
STRONG ACIDS AND OXIDANTS			
HAZARDOUS DECOMPOSITION PRODUCTS UPON COMBUSTION: CO, CO <sub>2</sub> , OXIDES OF SULFUR			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	NONE

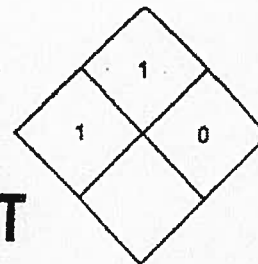
SECTION VI HEALTH HAZARD DATA			
ROUTE(S) OF ENTRY:	INHALATION?	SKIN?	INGESTION?
	X	X	X
HEALTH HAZARDS (ACUTE & CHRONIC): CAUSES IRRITATION: MAY BE SKIN DEFATTER UPON PROLONGED OR REPEATED CONTACT.			
CARCINOGENICITY:	NTP?	IARC MONOGRAPHS?	OSHA REGULATED?
	NOT LISTED	NOT LISTED	NOT LISTED

OIL MIST INHALATION MAY CAUSE DIZZINESS, NAUSEA AND DIFFICULTY BREATHING.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: SENSITIVE DRY SKIN

EMERGENCY AND FIRST AID PROCEDURES: IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MIN., CALL A PHYSICIAN. WASH SKIN WITH SOAP AND WATER. IF SWALLOWED, DO NOT INDUCE VOMITING. GET MEDICAL ATTENTION. REMOVE FLUID SOAKED CLOTHING AND SHOES. LAUNDRER BEFORE REUSE. IF INHALED, REMOVE TO FRESH AIR AND GIVE ARTIFICIAL RESPIRATION IF NECESSARY. GET MEDICAL ATTENTION.

U.S. DEPARTMENT OF LABOR  
WORKPLACE STANDARDS ADMINISTRATION  
Bureau of Labor Standards



2016-6002

# MATERIAL SAFETY DATA SHEET

FORMULA / TRADE SECRET		SECTION I	
MANUFACTURER'S NAME RIDGE TOOL COMPANY		EMERGENCY TELEPHONE NO. 216/323-5581	
ADDRESS (Number, Street, City, State and ZIP Code) 400 CLARK STREET, ELYRIA, OHIO 44035			
IDENTITY RIDGID NUCLEAR THREAD CUTTING OIL		DATE PREPARED 9/28/87	
CHEMICAL FAMILY PETROLEUM HYDROCARBON			

SECTION II HAZARDOUS INGREDIENTS			
HAZARDOUS COMPONENTS:	OSHA PEL	ACGIH TLV.	%
PARAFFINIC MINERAL OIL CAS: 64742-50-3	5mg/M <sup>3</sup>	5mg/M <sup>3</sup>	

SECTION III PHYSICAL DATA			
BOILING POINT (°F.)	480°F.	SPECIFIC GRAVITY (H <sub>2</sub> O=1)	0.87.
VAPOR PRESSURE (mm Hg.)	0.01 @ 20°C.	PERCENT VOLATILE BY VOLUME (%)	0
VAPOR DENSITY (AIR = 1)	1	EVAPORATION RATE (BUTYL = 1)	1
SOLUBILITY IN WATER	NIL.	ACETATE MELTING POINT	-18°C. MAX.
APPEARANCE AND ODOR AMBER LIQUID WITH MILD PETROLEUM ODOR.			

SECTION IV FIRE AND EXPLOSION HAZARD DATA			
FLASH POINT (Method used) 340°F. (PMCC) 385°F. (ASTM D-92)	FLAMMABLE LIMITS NOT DETERMINED	Lel	Uel
EXTINGUISHING MEDIA WATER FOG, DRY CHEMICAL, CO <sub>2</sub> , OR FOAM			
SPECIAL FIRE FIGHTING PROCEDURES WEAR SELF CONTAINED BREATHING APPARATUS. KEEP FIRE EXPOSED CONTAINERS COOL WITH WATER.			
UNUSUAL FIRE AND EXPLOSION HAZARDS			



## SECTION VI. PRECAUTIONS FOR SAFE HANDLING

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

IN CASE OF SPILL, DO NOT USE WATER. SOAK UP WITH SAND, EARTH OR OTHER INERT MATERIAL. PUT IN A SUITABLE CONTAINER. DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

WASTE DISPOSAL METHOD: BURY IN AN APPROVED LANDFILL OR INCINERATE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. AVOID CONTAMINATION OF SEWERS AND WATERWAYS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

AVOID CONTACT WITH EYES, SKIN AND CLOTHING. REMOVE CONTAMINATED CLOTHING, LAUNDRY BEFORE REUSE. WASH THOROUGHLY AFTER HANDLING. AVOID BREATHING MIST OR VAPORS.

OTHER PRECAUTIONS:

SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUE, FOLLOW LABEL WARNINGS EVEN AFTER CONTAINER IS EMPTIED.

## SECTION VIII CONTROL MEASURES

RESPIRATORY PROTECTION (Specify type)

NIOSH APPROVED RESPIRATOR IF EXPOSED TO HOT VAPOR OR MIST

VENTILATION	LOCAL EXHAUST RECOMMENDED	SPECIAL N/A
	MECHANICAL (General) N/A	OTHER

PROTECTIVE GLOVES: NEOPRENE OIL IMPERVIOUS OR OIL REPELLENT BARRIER CREME.	EYE PROTECTION: SAFETY GLASSES OR GOGGLES
--	---

OTHER PROTECTIVE EQUIPMENT: APRONS, OIL REPELLENT BARRIER CREME, OR OTHER AS REQUIRED TO AVOID SKIN CONTACT.

HYGIENIC PRACTICES: 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.

## SECTION V-HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE — <input checked="" type="checkbox"/> Avoid	THRESHOLD LIMIT VALUE <input type="checkbox"/> PERMISSIBLE EXPOSURE LIMIT <input checked="" type="checkbox"/> 5mg/m <sup>3</sup> as mist OTHER LIMIT <input type="checkbox"/>
Avoid breathing oil as mist	
PRIMARY ROUTES OF ENTRY Inhalation <input type="checkbox"/> Skin Contact <input type="checkbox"/> Other (specify)	
EMERGENCY AND FIRST AID PROCEDURES SKIN: wash with soap and water. EYES: flush with water until irritation subsides. INGESTION: obtain medical assistance.	

## SECTION VI-REACTIVITY DATA

STABILITY	UNSTABLE	<input checked="" type="checkbox"/>	CONDITIONS TO AVOID
	STABLE		Strong oxidizers, strong bases
INCOMPATIBILITY (materials to avoid) Carbon monoxide, hydrogen sulfide, chlorine, sulfur			
HAZARDOUS DECOMPOSITION PRODUCTS:			
HAZARDOUS POLYMERIZATION	MAY OCCUR	<input checked="" type="checkbox"/>	CONDITIONS TO AVOID
	WILL NOT OCCUR		

## SECTION VII-SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	
Contain spill with inert material, recover free liquid. Incinerate or dispose in an approved manner.	
WASTE DISPOSAL METHOD Flotation and recovery	
CERCLA (Superfund) REPORTABLE QUANTITY (in lbs)	
CERCLA HAZARDOUS WASTE NO. (40 CFR 261.33)	
VOLATILE ORGANIC COMPOUND (VOC) (as packaged, minus water)	
<input type="checkbox"/> Theoretical _____ lb/gal	<input type="checkbox"/> Analytical _____ lb/gal

## SECTION VIII-SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type)		
VENTILATION	LOCAL EXHAUST (Specify Rate)	None normally required
	MECHANICAL (General) (Specify Rate)	60 CFM
PROTECTIVE GLOVES (specify type)		PVC
OTHER PROTECTIVE EQUIPMENT		EYE PROTECTION (specify type) Goggles or safety glasses

## SECTION IX-SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	
Keep container closed when not in use. Store away from open flame and intense heat source.	
OTHER PRECAUTIONS	
Remove oil saturated clothing and wash thoroughly before re-use.	

This product complies with 29 CFR Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), 29 CFR 1910.1200 Federal Register 48, 53280-53348, 25 November 1983. This product also complies with the State of Michigan Occupational Safety and Health Act of 1974, as amended.

Name (print)	Anthony LaMarca
Signature	<i>Anthony LaMarca</i>
Title	Vice-President
Date	September 15th, 1987

DATE OF ISSUE: February 11, 1

## MATERIAL SAFETY DATA SHEET

## Section 1. Identity of Material

Emergency Phone Number  
303/623-5716 COLLECT

Product Name or Number: CARLON STANDARD CLEAR PVC SOLVENT CEMENT

Synonyms PVC Plastic Pipe Cement

Formula PVC Resin in Solvent Solution

Chemical Family PVC Organosol

Regulated  
Identification

DOT Proper Shipping Name: CEMENT

Shipping ID Number: NA 1133

EPA Hazardous Waste ID Number D-001

## Hazardous Ingredients

%

CAS Number

PVC Resin  
Tetrahydrofuran  
Methyl Ethyl Ketone  
Cyclohexanone  
Fumed Silica

10-14

9002-86-2

26-32

109-99-9

48-54

078-93-3

4-8

108-94-1

1-2

7631-86-9

## Section 2. Hazard Specifications

Known Hazards Under 29 CFR 1910.1200						TLV, PEL and STEL:	
	YES	NO		YES	NO		
Combustible Liquid		X	Skin Hazard	X		THF: TLV-200 ppm, 590 $\mu\text{g}/\text{m}^3$ PEL-200 ppm, 590 $\mu\text{g}/\text{m}^3$ STEL-250 ppm, 735 $\mu\text{g}/\text{m}^3$	
Flammable Material	X		Eye Hazard	X		CYH: TLV-25 ppm, 100 $\mu\text{g}/\text{m}^3$ (skin) PEL-50 ppm, 200 $\mu\text{g}/\text{m}^3$ STEL-100 ppm, 400 $\mu\text{g}/\text{m}^3$	
Pyrophoric Material		X	Toxic Agent	X		MEK: TLV-200 ppm, 590 $\mu\text{g}/\text{m}^3$ PEL-200 ppm, 590 $\mu\text{g}/\text{m}^3$ STEL-300 ppm, 885 $\mu\text{g}/\text{m}^3$	
Explosive Material		X	Highly Toxic Agent		X		
Unstable Material		X	Sensitizer		X	NFPA Hazard Signal	
Water Reactive Mat.		X	Carcinogen		X	Health 1	Flammability 3
Oxidizer		X	Reproductive Toxin	X		Stability 0	Special NONE
Organic Peroxide		X	Blood Toxin		X	DOT Hazard Class	
Corrosive Material		X	Nervous Sys. Toxin	X		Flammable Liquid	
Compressed Gas		X	Lung Toxin	X		EPA Hazard Waste Class	
Irritant	X		Liver Toxin	X		Ignitable Waste	
			Kidney Toxin	X		Toxic Waste	

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 CNS 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: Chronic contact may lead to irritation and dermatitis. Chronic 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	<p>First Aid Measures:</p> <p><u>INHALATION</u> - Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Keep victim quiet and warm. Call a poison control center or physician immediately.</p> <p><u>SKIN</u> - Flush with water, then wash thoroughly with soap &amp; water. Remove contaminated clothing &amp; wash before reuse. Call a poison control center or physician if irritation persists.</p> <p><u>EYES</u> - Flush with water for 15 min. &amp; call a poison control center or physician if an irritation persists.</p> <p><u>INGESTION</u> - 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.</p>
Fire	<p>Special Procedures: <u>For Small Fires:</u> Use dry chemical, CO<sub>2</sub>, water or foam extinguisher.</p> <p><u>For Large Fires:</u> Evacuate area and call Fire Department immediately.</p>
Spills	<p>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 &amp; Federal Reg.</p>

Section 5. Safe Usage Data

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

CARLON STANDARD CLEAR  
PVC SOLVENT CEMENT


Section 6. Physical Hazard Data

Flammability	LFL= 1.8 UFL= 11.8	% Volume % Volume	Flashpoint: Method Used:	5 - 8°F. Tag Closed Cup
Stability	Stable	X	Conditions To Avoid: Heat, sparks and open flame.	
	Unstable		Hazardous Decomp. Pits.: Carbon monoxide/carbon dioxide/hydrogen chloride/smoke.	
Hazardous Polymerization	May Occur		Conditions to Avoid:	
	Will Not Occur	X	NONE	
Incompatibility	Materials To Avoid: Acids, oxidizing materials, alkalis, chlorinated inorganics (Potassium, Calcium, and Sodium Hypochlorite), copper or copper alloys.			

Section 7. Physical and Chemical Properties

Boiling Pt: 151 °F 66 °C	Vapor Density (Air 1) 2.5	Volatile Components 88 ± 2%
Vapor Press: 145 mmHg @ 20° psi	pH N/A	Sp. Gravity: 0.94 ± 0.01
Solubility In H <sub>2</sub> O: Negligible	Will Dissolve In: TETRAHYDROFURAN	Evaporation Rate: (BUAC) 5.5 - 8.0
Appearance: Clear Liquid	Is Material: Paste Powder	
Odor: Ether-like.	Solid (Liquid) Gas	

Section 8. Manufacturer of Supplier Data

Firm Name & Mailing Address:  GATEY CO. P. O. Box 35906 4700 W. 160th Street Cleveland, OH 44135 (216) 267-7100	Name (Print): Paul E. Naton
	Signature: 
	Title: Corporate Chemist
	Date: February 11, 1986
	Emergency Telephone No. (303) 623-5716 (Collect)

DATE OF ISSUE: February 17, 1986

## Section 1. Identity of Material

Emergency Phone Number  
303/623-5716 COLLECT

Product Name or Number: CARLON ALL WEATHER QUICKSET CLEAR PVC SOLVENT CEMENT		
Synonyms: PVC Plastic Pipe Cement		
Formula: PVC Resin in Solvent Solution		Chemical Family PVC Organosol
Regulated Identification	DOT Proper Shipping Name: CEMENT	
	Shipping ID Number NA 1133	EPA Hazardous Waste ID Number D-001
Hazardous Ingredients		CAS Number
PVC Resin		12-17 9002-86-2
Tetrahydrofuran		65-75 109-99-9
Fumed Silica		1-2 7631-86-9
Cyclohexanone		10-16 108-94-1

## Section 2. Hazard Specifications

Known Hazards Under 29 CFR 1910.1200						TLV, PEL and STEL:	
	YES	NO		YES	NO	THF: TLV-200 ppm, 590 ng/m <sup>3</sup> PEL-200 ppm, 590 ng/m <sup>3</sup> STEL-250 ppm, 735 ng/m <sup>3</sup>	
Combustible Liquid		X	Skin Hazard	X		CMH: TLV-25 ppm, 100 ng/m <sup>3</sup> (skin) PEL-50 ppm, 200 ng/m <sup>3</sup> STEL-100 ppm, 400 ng/m <sup>3</sup>	
Flammable Material	X		Eye Hazard	X		MEK: NONE	
Pyrrophoric Material		X	Toxic Agent	X			
Explosive Material		X	Highly Toxic Agent		X		
Unstable Material		X	Sensitizer		X	NFPA Hazard Signal	
Water Reactive Mat.		X	Carcinogen		X	Health 1	Flammability 3
Oxidizer		X	Reproductive Toxin	X		Stability 0	Special NONE
Organic Peroxide		X	Blood Toxin		X	DOT Hazard Class Flammable Liquid	
Corrosive Material		X	Nervous Sys. Toxin	X			
Compressed Gas		X	Lung Toxin	X		EPA Hazard Waste Class	
Irritant	X		Liver Toxin	X		Ignitable Waste	
			Kidney Toxin	X			

**Effects of Exposure:****ENTRY ROUTE:**

u e X Ingest X Skin X Eye X

**Eyes & Skin:** Vapors and direct contact may cause irritation, pain and redness. May possibly be absorbed through the skin.

**Inhalation & Ingestion:** May cause irritation of mucous membranes, nausea, 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. Emergency Response Data**

Exposure	<p><b>First Aid Measures:</b></p> <p><b>INHALATION</b> - Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Keep victim quiet and warm. Call a poison control center or physician immediately.</p> <p><b>SKIN</b> - Flush with water, then wash thoroughly with soap &amp; water. Remove contaminated clothing &amp; wash before reuse. Call a poison control center or physician if irritation persists.</p> <p><b>EYES</b> - Flush with water for 15 min. &amp; call a poison control center or physician if an irritation persists.</p> <p><b>INGESTION</b> - 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.</p>
Fire	<p><b>Special Procedures:</b> <u>For Small Fires:</u> Use dry chemical, CO<sub>2</sub>, water or foam extinguisher.</p> <p><u>For Large Fires:</u> Evacuate area and call Fire Department immediately.</p>
Spills	<p><b>Steps To Be Taken:</b> 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 &amp; Federal Reg.</p>

**Section 5. Safe Usage Data**

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

CARLON ALL WEATHER QUICKSET  
-CLEAR PVC SOLVENT CEMENT

Section 6. Physical Hazard Data

Flammability	LFL= 2 UFL= 12	% Volume % Volume	Flashpoint: Method Used:	5 - 8°F. Tag Closed Cup
Stability	Stable	X	Conditions To Avoid: Heat, sparks and open flame.	
	Unstable		Hazardous Decomp. Pmts.: Carbon monoxide/carbon dioxide/hydrogen chloride/smoke.	
Hazardous Polymerization	May Occur		Conditions to Avoid:	
	Will Not Occur	X	NONE	
Incompatibility	Materials To Avoid: Acids, oxidizing materials, alkalis, chlorinated inorganics (Potassium, Calcium, and Sodium Hypochlorite), copper or copper alloys.			

Section 7. Physical and Chemical Properties

Boiling Pt: 151 °F 66 °C	Vapor Density (Air 1) 2.5	Volatile Components 81 - 85%
Vapor Press: 145 mmHg @ 20° psi	pH N/A	Sp. Gravity: 0.94 ± 0.01
Solubility In H <sub>2</sub> O: Negligible	Will Dissolve In: TETRAHYDROFURAN	Evaporation Rate: (BUAC=1) 5.0 - 8.0
Appearance: Clear Liquid	Is Material: Paste Powder	
Odor: Ether-like Odor.	Solid (Liquid) Gas	

Section 8. Manufacturer of Supplier Data

Firm Name & Mailing Address:  CATEY CO. P. O. Box 35906 4700 W. 160th Street Cleveland, OH 44135 (216) 267-7100	Name (Print): Paul E. Naton
	Signature: <i>Paul E. Naton</i>
	Title: Corporate Chemist
	Date: February 17, 1986
	Emergency Telephone No. (303) 623-5716 (Collect)

DATE OF ISSUE: July 11, 1988

Section 1. Identity of Material

Emergency Phone Number  
303/623-5716 COLLECT

Product Name or 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 Waste ID Number D-001
Hazardous Ingredients		% CAS Number
PVC Resin		10-14 9002-86-2
Tetrahydrofuran		35-45 109-99-9
Methyl Ethyl Ketone		<15 078-93-3
Cyclohexanone		7-15 108-94-1
Acetone		10-30 067-64-1
Fumed Silica		1-2 7631-86-9

Section 2. Hazard Specifications

Known Hazards Under 29 CFR 1910.1200						TLV, PEL and STEL:			
	YES	NO		YES	NO	THF: TLV-200 ppm, 590 mg/m <sup>3</sup> PEL-200 ppm, 590 mg/m <sup>3</sup> STEL-250 ppm, 735 mg/m <sup>3</sup>			
Combustible Liquid		X	Skin Hazard	X		CYH: TLV-25 ppm, 100 mg/m <sup>3</sup> (skin) PEL-50 ppm, 200 mg/m <sup>3</sup> STEL-100 ppm, 400 mg/m <sup>3</sup>			
Flammable Material	X		Eye Hazard	X		MEK: TLV-200 ppm, 590 mg/m <sup>3</sup> PEL-200 ppm, 590 mg/m <sup>3</sup> STEL-300 ppm, 885 mg/m <sup>3</sup>			
Pyrophoric Material		X	Toxic Agent	X		NFPA Hazard Signal			
Explosive Material		X	Highly Toxic Agent		X				
Unstable Material		X	Sensitizer		X	Health	1	Flammability	3
Water Reactive Mat.		X	Carcinogen		X	Stability	0	Special	NONE
Oxidizer		X	Reproductive Toxin	X		DOT Hazard Class Flammable Liquid			
Organic Peroxide		X	Blood Toxin		X				
Corrosive Material		X	Nervous Sys. Toxin	X		EPA Hazard Waste Class Ignitable Waste Toxic Waste			
Compressed Gas		X	Lung Toxin	X					
Irritant	X		Liver Toxin	X					
			Kidney Toxin	X					

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 CNS 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: Chronic contact may lead to irritation and dermatitis. Chronic exposure to vapors of high concentration may cause dermatitis. May possibly be absorbed through the skin.

Eye: Vapors or direct contact may cause irritation.

Section 4. Emergency Response Data

Exposure	<p>First Aid Measures:</p> <p><u>INHALATION</u> - Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Keep victim quiet and warm. Call a poison control center or physician immediately.</p> <p><u>SKIN</u> - Flush with water, then wash thoroughly with soap &amp; water. Remove contaminated clothing &amp; wash before reuse. Call a poison control center or physician if irritation persists.</p> <p><u>EYES</u> - Flush with water for 15 min. &amp; call a poison control center or physician if an irritation persists.</p> <p><u>INGESTION</u> - 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.</p>
Fire	<p>Special Procedures: <u>For Small Fires:</u> Use dry chemical, CO<sub>2</sub>, water or foam extinguisher.</p> <p><u>For Large Fires:</u> Evacuate area and call Fire Department immediately.</p>
Spills	<p>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 &amp; Federal Reg.</p>

Section 5. Safe Usage Data

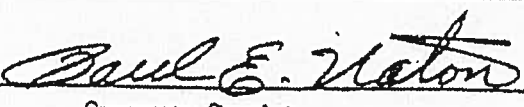
Protective Equipment Types	Eyes: Safety Glasses with Side Shields
	Respiratory: NIOSH-Approved canister respirator in absence of adequate ventilation.
	Gloves: Rubber Gloves.
	Other: Eye wash and safety shower should be available.
Ventilation	<p>General Mechanical: Exhaust ventilation capable of maintaining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

Flammability	LFL= 1.8 UFL= 11.8		% Volume % Volume	Flashpoint: ( ) Methi J	0 - 5°F. Tag Closed Cup	°C
Stability	Stable	X	Conditions To Avoid: Heat, sparks and open flame.			
	Unstable		Hazardous Decomp. Pits.: Carbon monoxide/carbon dioxide/hydrogen chloride/smoke.			
Hazardous Polymerization	May Occur		Conditions to Avoid:			
	Will Not Occur	X	NONE			
Incompatibility	Materials To Avoid: Acids, oxidizing materials, alkalis, chlorinated inorganics (Potassium, Calcium, and Sodium Hypochlorite), copper or copper alloys.					

#### Section 7. Physical and Chemical Properties

Boiling Pt:	151 °F	66 °C	Vapor Density (Air 1)	2.5	Volatile Components	88 ± 2%
Vapor Press:	145 mmHg @ 20°	psi	pH	N/A	Sp. Gravity:	0.94 ± 0.01
Solubility In H <sub>2</sub> O:	Negligible		Will Dissolve In:	TETRAHYDROFURAN		Evaporation Rate: ( B U A C ) 5.5 - 8.0
Appearance:	Clear Liquid					Is Material: Paste Powder
Odor:	Ether-like.					Solid (Liquid) Gas

#### Section 8. Manufacturer or Supplier Data

Firm Name & Mailing Address:  OATEY CO. P. O. Box 35906 4700 W. 160th Street. Cleveland, OH 44135 (216) 267-7100	Name (Print):	Paul E. Naton
	Signature:	
	Title:	Corporate Chemist
	Date:	July 11, 1988
	Emergency Telephone No.	(303) 623-5716 (Collect)

# MATERIAL SAFETY DATA SHEET

MC X-01046

MSDS NUMBER

IP 9486

## PRODUCT IDENTIFICATION

TRADE NAME <b>DUXSEAL</b>		GENERIC NAME <b>Sealing putty</b>	
MANUFACTURER'S NAME <b>Manville Building Materials Corporation</b>		CAS NUMBER	
ADDRESS (STREET) <b>P. O. Box 5108</b>		PHONE NUMBER <b>(303) 978-3120</b>	
CITY <b>Denver</b>	STATE <b>Colorado</b>	ZIP <b>80217</b>	CHEMICAL STRUCTURE

## I. PRODUCT INGREDIENTS

MATERIAL	CAS NUMBER	%	TLV
Chrysolite asbestos fiber (encapsulated)	1332-21-4	50	
Liquid chlorinated paraffin	63449-39-8	45	
Vegetable oil	None	5	

## II. PHYSICAL DATA

BOILING POINT <b>N/A</b>	SPECIFIC GRAVITY <b>1.2</b>
SOLUBILITY IN WATER <b>Nil</b>	PERCENT VOLATILE
APPEARANCE AND ODOR <b>Brown putty - slight oleic odor</b>	

## III. FIRE AND EXPLOSION DATA

FLASH POINT <b>&gt; 400°F</b>	FLAMMABLE LIMITS	LEL	UEL
EXTINGUISHING MEDIA <b>N/A</b>			
SPECIAL FIREFIGHTING PROCEDURES			
UNUSUAL FIRE OR EXPLOSION HAZARDS			

## IV. HEALTH HAZARD INFORMATION

HAZARD BY ROUTES OF EXPOSURE (Indicate chronic or acute)

INHALATION <b>N/A</b>
INGESTION <b>Transient irritant to the gastrointestinal tract.</b>
EYE <b>N/A</b>
SKIN CONTACT <b>None</b>
SKIN ABSORPTION <b>None</b>
SIGNS AND SYMPTOMS ASSOCIATED WITH EXPOSURE OVER TLV <b>Ingestion: possible mild irritation or nausea.</b>

V • HEALTH HAZARD INFORMATION (Continued)

FIRST AID

INHALATION

1/A

INGESTION

Allow material to be naturally eliminated.

SKIN CONTACT

1/A

EYE CONTACT

1/A

SKIN ABSORPTION

1/A

VI • CONDITIONS FOR SAFE USE (When over TLV)

RESPIRATORY PROTECTION

Not required.

EYE PROTECTION

Not normally required.

PROTECTIVE GLOVES

OTHER PROTECTIVE CLOTHING/EQUIPMENT

VENTILATION REQUIREMENTS

Not necessary at temperatures below 400°F.

VII • REACTIVITY DATA

IS MATERIAL STABLE?

Yes

WILL HAZARDOUS POLYMERIZATION OCCUR?

No

COMPATIBILITY

CONDITIONS TO AVOID

Temperatures exceeding 400°F

HAZARDOUS DECOMPOSITION PRODUCTS

hydrogen chloride

VIII • SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS SPILLED OR RELEASED

Sweep up any waste discard in a closed container.

WASTE DISPOSAL METHOD

Comply with all applicable local state and federal regulations.

LABELING REQUIRED?

No

DOT REGULATED?

DOT NUMBER

RCRA REGULATED?

No

RCRA NUMBER

IX • SPECIAL PRECAUTIONS

SPECIAL PRECAUTIONS FOR HANDLING AND STORAGE

Avoid storage at elevated temperatures.

OTHER PRECAUTIONS

PREPARED BY

Kenneth A. Roberts

DATE

5/11/83

TITLE

Mgr., Environmental Services

While the information and recommendations set forth herein are believed to be accurate as of the date hereof, THE MANUFACTURER MAKES NO WARRANTY WITH RESPECT THERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON.

MATERIAL SAFETY DATA SHEET  
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1

## MANUFACTURED BY:

GENERAL ELECTRIC CO.  
SILICONE PRODUCTS DIV  
WATERFORD, NY 12188

## EMERGENCY TELEPHONE:

(518) 237-3330 (24 HRS)

## SUPPLIED BY:

GENERAL ELECTRIC CO.  
SILICONE PRODUCTS DIV  
WATERFORD, NY 12188REVISED: 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 \*\*\*

PRODUCT COMPOSITION	APPROX. ACGIH		OSHA		CAS REG	
	WGT. %	TLV	PEL	UNITS	NO.	
A. HAZARDOUS						
TRADE SECRET COMPONENT	1-5	NE	NE	NA		
METHYLTRIMETHOXYSILANE	1-5	10REC	--	PPM		1185-55-3*
B. NON-HAZARDOUS						

## FORMULATION INFORMATION:

THIS SPACE RESERVED FOR SPECIAL USE.

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## \*\*\* III PHYSICAL DATA \*\*\*

## \*\*PRODUCT INFORMATION

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

## \*\*\* IV FIRE AND EXPLOSION 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  
SENSITIVITY TO STATIC DISCHARGE:  
SENSITIVITY TO STATIC DISCHARGE IS NOT EXPECTED.  
EXTINGUISHING MEDIA:  
ALL STANDARD FIREFIGHTING MEDIA  
SPECIAL FIREFIGHTING PROCEDURES:  
NONE KNOWN.

## \*\*\* V REACTIVITY DATA \*\*\*

STABILITY: HAZARDOUS:  
X STABLE UNSTABLE POLYMERIZATION WILL NOT OCCUR  
HAZARDOUS DECOMPOSITION/COMBUSTION PRODUCTS:  
CARBON MONOXIDE.  
CARBON DIOXIDE.  
SILICON DIOXIDE.  
METHANOL.  
AMMONIA.  
INCOMPATIBILITY (MATERIALS TO AVOID):  
NONE KNOWN.  
CONDITIONS TO AVOID:  
VAPOR AND/OR LIQUID REACT WITH WATER TO FORM AMMONIA.

## \*\*\* VI HEALTH HAZARD DATA \*\*\*

ACUTE SIGNS/EFFECTS OF OVEREXPOSURE:  
INGESTION:  
NONE KNOWN  
ON CONTACT:  
UNCURED PRODUCT CONTACT MAY IRRITATE THE SKIN.

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3

## INHALATION:

CAUSES MODERATE RESPIRATORY 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.

## 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:

ACUTE ORAL LD50:

## TRADE SECRET COMPONENT

1000 (RAT)

MG/KG

ACUTE DERMAL LD50:

5400 (RAT)

MG/KG

ACUTE INHALATION LC50:

&gt;200 MG/L

OTHER: NONE.

## AMES TEST:

UNKNOWN

## TOXICITY:

ACUTE ORAL LD50:

## METHYLTRIMETHOXYLANE

12,500 (RAT)

MG/KG

ACUTE DERMAL LD50:

NONE FOUND

MG/KG

ACUTE INHALATION LC50:

NONE FOUND

OTHER: NONE.

## AMES TEST:

UNKNOWN

## PRINCIPALS ROUTES OF EXPOSURE:

ORAL.

DERMAL - SKIN.

EYES.

INHALATION.

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4

THIS PRODUCT OR ONE OF ITS INGREDIENTS PRESENT 0.1% OR MORE  
IS NOT LISTED AS A CARCINOGEN OR SUSPECTED CARCINOGEN BY  
NTP, IARC, OR OSHA  
PRODUCTS/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.

OTHER PROTECTIVE EQUIPMENT:

NONE KNOWN.

VENTILATION:

USE ONLY IN WELL VENTILATED AREA.

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

ACTION 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 SLIP-  
PING HAZARD.

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

DISPOSAL 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 \*\*\*

PRECAUTIONS 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 FINGER-  
TIPS, 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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5

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 (ECF) NA  
RAR (IATA) NA

NFPA/HMIS CLASSIFICATION      FLAMMABILITY      0 , REACTIVITY      0 , 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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6

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

.....

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1

## MANUFACTURED BY:

GENERAL ELECTRIC CO.  
SILICONE PRODUCTS DIV  
WATERFORD, NY 12188

## EMERGENCY TELEPHONE:

(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 \*\*\*

PRODUCT COMPOSITION	APPROX. WGT. %	ACGIH TLV	OSHA PEL	UNITS	CAS REG NO.
A. HAZARDOUS					
TRADE SECRET COMPONENT	1-5	25	25	PPM	
METHYLTRIMETHOXYSILANE	1-5	10	10	PPM	1185-55-3*
B. NON-HAZARDOUS					

## FORMULATION INFORMATION:

THIS SPACE RESERVED FOR SPECIAL USE.

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2

## \*\*\* III PHYSICAL DATA \*\*\*

## \*\*PRODUCT INFORMATION

BOILING POINT : NA (F) NA (C) % VOLATILE BY VOLUME:<4  
VAPOR PRESSURE(20 C): NA MM HG EVAPORATION RATE :<1  
VAPOR 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  
ODOR : AMMONIA ACID/ALKALINITY :UNKNOWN MEG/G  
COLOR : WHITE PH :NA  
ODOR THRESHOLD : 46.8 (PPM)  
SOLUBILITY IN WATER(20C): INSOLUBLE  
SOLUBILITY IN ORGANIC SOLVENT: PARTIALLY IN TOLUENE  
(STATE SOLVENT)

## \*\*\* IV FIRE AND EXPLOSION 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  
SENSITIVITY TO STATIC DISCHARGE:  
SENSITIVITY TO STATIC DISCHARGE IS NOT EXPECTED.  
EXTINGUISHING MEDIA:  
ALL STANDARD FIREFIGHTING MEDIA  
SPECIAL FIREFIGHTING PROCEDURES:  
NONE KNOWN.

## \*\*\* V REACTIVITY DATA \*\*\*

STABILITY: HAZARDOUS:  
X STABLE UNSTABLE POLYMERIZATION WILL NOT OCCUR  
HAZARDOUS DECOMPOSITION/COMBUSTION PRODUCTS:  
CARBON MONOXIDE.  
CARBON DIOXIDE.  
SILICON DIOXIDE.  
METHANOL.  
AMMONIA.  
INCOMPATIBILITY (MATERIALS TO AVOID):  
NONE KNOWN.  
CONDITIONS TO AVOID:  
VAPOR AND/OR LIQUID REACT WITH WATER TO FORM AMMONIA.

## \*\*\* VI HEALTH HAZARD DATA \*\*\*

ADVERSE SIGNS/EFFECTS OF OVEREXPOSURE:  
SYMPTOM:  
NONE KNOWN  
SKIN CONTACT:  
UNCURED PRODUCT CONTACT MAY IRRITATE THE SKIN.

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3

## INHALATION:

CAUSES MODERATE RESPIRATORY 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:

ACUTE ORAL LD50:

## TRADE SECRET COMPONENT

1000 (RAT)

MG/KG

ACUTE DERMAL LD50:

5400 (RBT)

MG/KG

ACUTE INHALATION LC50:

&gt;200 MG/L

OTHER:

NONE.

## AMES TEST:

UNKNOWN

## TOXICITY:

## METHYLTRIMETHOXYLANE

ACUTE ORAL LD50:

12,500 (RAT)

MG/KG

ACUTE DERMAL LD50:

NONE FOUND

MG/KG

ACUTE INHALATION LC50:

NONE FOUND

OTHER:

NONE.

## AMES TEST:

UNKNOWN

## PRINCIPALS ROUTES OF EXPOSURE:

ORAL.

DERMAL - SKIN.

EYES.

INHALATION.

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THIS 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 \*\*\*

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.

OTHER PROTECTIVE EQUIPMENT:

NONE KNOWN.

VENTILATION:

USE ONLY IN WELL VENTILATED AREA.

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

ACTION 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 SLIP-  
PING HAZARD.

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

DISPOSAL METHOD:

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

\*\*\* IX SPECIAL PRECAUTIONS \*\*\*

PRECAUTIONS 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 FINGER-  
TIPS, 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.

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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: NA  
PLACARDS:  
NONE  
EXPORT:  
NA

EPA HAZARD WASTE: NA  
SARA HAZARD CLASS:  
TO BE DETERMINED  
WEMIS 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 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.....

.....  
C = CEILING LIMIT NEGL = NEGLIGIBLE  
EST= ESTIMATED NF = NONE FOUND

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6

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

.....

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

Form Approved  
OMB No. 44-11187

# MATERIAL SAFETY DATA SHEET

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

## SECTION I

MANUFACTURER'S NAME <b>Crouse-Hinds Company</b>		EMERGENCY TELEPHONE NO. <b>315/477-7000</b>
ADDRESS (Number, Street, City, State, and ZIP Code) <b>P. O. Box 4999, Syracuse, NY 13221</b>		
CHEMICAL NAME AND SYNONYMS		TRADE NAME AND SYNONYMS <b>Chico A Sealing Compound</b>
CHEMICAL FAMILY <b>Inorganic</b>	FORMULA <b>Mixture of calcium aluminate cement and calcined gypsum</b>	

## SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Unit)	ALLOYS AND METALLIC COATINGS	%	TLV (Unit)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Unit)
See Formula					

## SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H <sub>2</sub> O=1)	
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____ = 1)	
SOLUBILITY IN WATER	N/A		
APPEARANCE AND ODOR Similar to Portland Cement, wet and dry			

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	N/A	FLAMMABLE LIMITS	LM	UM
EXTINGUISHING MEDIA	N/A			
SPECIAL FIRE FIGHTING PROCEDURES	N/A			
UNUSUAL FIRE AND EXPLOSION HAZARDS				
None				

SECTION V - HEALTH HAZARD DATA	
THRESHOLD LIMIT VALUE	
EFFECTS OF OVEREXPOSURE	N/A
EMERGENCY AND FIRST AID PROCEDURES	If powder gets into eyes, flush with water.

SECTION VI - REACTIVITY DATA			
STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	N/A
INCOMPATIBILITY (Materials to avoid)		N/A	
HAZARDOUS DECOMPOSITION PRODUCTS		N/A	
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	N/A

SECTION VII - SPILL OR LEAK PROCEDURES	
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	
Normal clean up, sweep up bulk powder before using water.	
WASTE DISPOSAL METHOD	
Solid waste disposal	

SECTION VIII - SPECIAL PROTECTION INFORMATION			
RESPIRATORY PROTECTION (Specify type)		N/A	
VENTILATION	LOCAL EXHAUST	Not Required	SPECIAL N/A
	MECHANICAL (General)	N/A	OTHER N/A
PROTECTIVE GLOVES		EYE PROTECTION Not Required	
OTHER PROTECTIVE EQUIPMENT			

SECTION IX - SPECIAL PRECAUTIONS	
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	
Keep dry, keep cover of container closed when not being used to prevent pickup of moisture.	
OTHER PRECAUTIONS	
See instructions supplied with product.	

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

Form No. 100  
OMB No. 4010-106

# MATERIAL SAFETY DATA SHEET

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

## SECTION I

MANUFACTURER'S NAME <b>Crouse-Hinds Company</b>		EMERGENCY TELEPHONE NO. <b>315/477-7000</b>
ADDRESS (Number, Street, City, State and ZIP Code) <b>P. O. Box 4999, Syracuse, NY 13221</b>		
CHEMICAL NAME AND SYNONYMS <b>Ceramic</b>		TRADE NAME AND SYNONYMS <b>Chico X Sealing Fiber</b>
FORMULA <b>Alumina - Silica Composition</b>		

## SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)
See Formula					

## SECTION III - PHYSICAL DATA

BOILING POINT (°F)	Unknown	SPECIFIC GRAVITY (H <sub>2</sub> O=1)	
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____/hr.)	
SOLUBILITY IN WATER	None		
APPEARANCE AND ODOR No odor; fluffy fibers, similar to cotton			

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (MINIMUM VHSI)	None	FLAMMABLE LIMITS	_____%	_____%
EXTINGUISHING MEDIA	N/A			
SPECIAL FIRE FIGHTING PROCEDURES	N/A			
UNUSUAL FIRE AND EXPLOSION HAZARDS None				

SECTION V - HEALTH HAZARD DATA	
THRESHOLD LIMIT VALUE	N/A
EFFECTS OF OVEREXPOSURE	Possibility of slight irritation to eyes, nose, & throat of those allergic to fibers.
EMERGENCY AND FIRST AID PROCEDURES	Flush with water.

SECTION VI - REACTIVITY DATA			
STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
INCOMPATIBILITY (Materials to avoid)		N/A	
HAZARDOUS DECOMPOSITION PRODUCTS			
None			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES	
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	
N/A	
WASTE DISPOSAL METHOD	
Solid Waste Disposal	

SECTION VIII - SPECIAL PROTECTION INFORMATION		
RESPIRATORY PROTECTION <i>Special</i> None required for normal use.		
VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL (General)	OTHER
PROTECTIVE GLOVES Recommended if allergic to small fibers		EYE PROTECTION
		None
OTHER PROTECTIVE EQUIPMENT		

SECTION IX - SPECIAL PRECAUTIONS	
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	N/A
OTHER PRECAUTIONS	N/A

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MATERIAL SAFETY  
DATA SHEET

**3M**

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 80-0080-0786-8 80-0080-0786-8  
80-6102-5526-9 80-6102-5526-9 98-0400-0714-2 98-0400-0714-2  
98-0400-0715-9 98-0400-0715-9 98-0400-0716-7 98-0400-0716-7

ISSUED: FEBRUARY 22, 1989

SUPERSEDES: FEBRUARY 20, 1989

DOCUMENT: 10-9910-0

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

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- OSHA: 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

BOILING POINT:..... N/D  
VAPOR PRESSURE:..... N/D  
VAPOR DENSITY:..... N/D  
EVAPORATION RATE:..... N/D  
SOLUBILITY IN WATER:..... NIL  
SP. GRAVITY:..... 1.26  
PERCENT VOLATILE:..... 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:..... 50F  
FLAMMABLE LIMITS - LEL:..... 1.81%  
FLAMMABLE LIMITS - UEL:..... 11.5%  
AUTOIGNITION TEMPERATURE: ... N/D  
EXTINGUISHING MEDIA:  
CARBON DIOXIDE, FOAM OR DRY CHEMICAL  
SPECIAL FIRE FIGHTING PROCEDURES:  
NONE  
UNUSUAL FIRE AND EXPLOSION HAZARDS:  
NONE

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

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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.: D001 (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:**

NONE

**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

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MATERIAL SAFETY  
DATA SHEET

**3M**

MSDS: 3M BRAND FIRE BARRIER GP-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	EXPOSURE		LIMITS	
	VALUE	UNIT	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	TWA	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	TWA	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	TWA	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, nausea, 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.

**IDEAL INDUSTRIES, INC.**

## MATERIAL SAFETY DATA SHEET

### GENERAL INFORMATION

PRODUCT NAME OR NUMBER (as it appears on label) YELLOW 77 <sup>18</sup> Wire Pulling Lubricant		CATALOG NUMBER All "31" Series
MANUFACTURER'S NAME Ideal Industries, Inc.		EMERGENCY TELEPHONE NO. (815) 895-5181
ADDRESS (Number, Street, City, State and Zip Code) Becker Place, Sycamore, Ill. 60178		
HAZARDOUS MATERIAL DESCRIPTION, PROPER SHIPPING NAME, HAZARD CLASS, HAZARD ID NO. (49 CFR 172.101) None		
CHEMICAL DESCRIPTION Water-Wax Emulsion	FORMULA Proprietary	

### SECTION I - INGREDIENTS

CAS REGISTRY NO.	%W	CHEMICAL NAME(S) *	Listed as a Carcinogen in NTP, IARC or OSHA 1910(z) (specify)
Proprietary	<5	Paraffin Wax	No
8009-03-8	<3	Petrolatum	No
64742-53-6	<3	Naphthenic 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	<1	Sodium Benzoate	No
6358-31-2	<0.1	Yellow Pigment	No
7732-11-5	< 87	Water	No

### SECTION II - PHYSICAL DATA

BOILING POINT 212 °F ____ °C	SPECIFIC GRAVITY (H <sub>2</sub> O = 1) 0.98	PERCENT VOLATILE BY VOLUME (%) < 15
SOLUBILITY IN WATER Moderate	pH = 7.0 to 8.5	PERCENT SOLID BY WEIGHT (%) < 20.0
APPEARANCE AND ODOR Yellow paste, slight perfume odor	IS MATERIAL: GAS <u>PASTE</u> LIQUID SOLID POWDER GEL	

### SECTION III - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT ____ °F ____ °C	method used None C.O.C.	FLAMMABLE LIMITS N.A.	LEL None	UEL None
EXTINGUISHING MEDIA Dry chemical; CO <sub>2</sub> ; Foam; Water Fog				
SPECIAL FIRE FIGHTING PROCEDURES Self-contained respiratory protection should be provided for fire fighters. Keep fire-exposed containers cool with water.				
UNUSUAL FIRE AND EXPLOSION HAZARDS None				

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

\*A: Oil is a severely hydrotreated oil with a polymorphonuclear aromatic content at less than 0.1% and meets OSHA 29 C.R.F. 1910.1200.

## SECTION IV - HEALTH HAZARD INFORMATION

EFFECTS OF OVEREXPOSURE - Conditions to Avoid	
Mild skin irritation may result with prolonged contact.	
THRESHOLD LIMIT VALUE	None established.
PRIMARY ROUTES OF ENTRY	Inhalation <input type="checkbox"/> Skin Contact <input checked="" type="checkbox"/> Other (specify)
EMERGENCY AND FIRST AID PROCEDURES	
SKIN CONTACT:	Flush area with copious amounts of water.
EYE CONTACT:	Flush area with copious amounts of water.
INGESTION:	Induce vomiting. Consult physician or local poison control center.

## SECTION V - REACTIVITY DATA

STABILITY	UNSTABLE	CONDITIONS TO AVOID
	STABLE	
	X	None
INCOMPATIBILITY (materials to avoid)		
Avoid strong oxidizers.		
HAZARDOUS DECOMPOSITION PRODUCTS:		
Excessive heat may cause the release of carbon dioxide or carbon monoxide.		
HAZARDOUS POLYMERIZATION	MAY OCCUR	CONDITIONS TO AVOID
	WILL NOT OCCUR	
	X	Avoid prolonged storage at temperatures above 120°F.

## SECTION VI - SPILL AND LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	
Wipe up, shovel, or vacuum spilled material. Use absorbent media if required. Clean up spills immediately as they can be dangerous and slippery.	
WASTE DISPOSAL METHOD	
Dispose of as solid landfill in accordance with local, state and federal regulations.	
CERCLA (Superfund) REPORTABLE QUANTITY (in lbs)	
None required.	
RCRA HAZARDOUS WASTE NO. (40 CFR 261.33)	
None required.	
VOLATILE ORGANIC COMPOUND (VOC) (as packaged, minus water)	
N.A.	
<input type="checkbox"/> Theoretical _____ lb/gal	<input type="checkbox"/> Analytical _____ lb/gal
N.A.	N.A.

## SECTION VII - PERSONAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type)		
Normally none required.		
VENTILATION	LOCAL EXHAUST (Specify Rate)	SPECIAL
	None required.	None
	MECHANICAL (General) (Specify Rate)	OTHER
	Recommended in closed areas.	None
PROTECTIVE GLOVES (specify type)		EYE PROTECTION (specify type)
Neoprene		Safety glasses or splash goggles.
OTHER PROTECTIVE EQUIPMENT		
Eye fountain in work area is recommended.		


## SECTION VIII - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	
Store at temperatures between 40° and 120°F.	
OTHER PRECAUTIONS	
Keep material away from children and pets.	

## SECTION IX - ADDITIONAL INFORMATION

If material is used in extreme heat (120°F), prolonged and repeated exposure could pose a risk of pulmonary disease. Exposure below mist TLV (5 mg/m³) appears to be without significant health risk.	
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## THIS MATERIAL SAFETY DATA SHEET PREPARED BY:

Name	Ronald K. Petersen	SIGNATURE
Title	Product Development Chemist	

**IDEAL INDUSTRIES, INC.**

## MATERIAL SAFETY DATA SHEET

### GENERAL INFORMATION

PRODUCT NAME OR NUMBER (as it appears on label) Aqua-Gel® (Gel and Liquid) Wire Pulling Lubricant		CATALOG NUMBER All "31" Series
MANUFACTURER'S NAME Ideal Industries, Inc.		EMERGENCY TELEPHONE NO. (815) 895-5181
ADDRESS (Number, Street, City, State and Zip Code) Becker Place, Sycamore, Ill. 60178		
HAZARDOUS MATERIAL DESCRIPTION, PROPER SHIPPING NAME, HAZARD CLASS, HAZARD ID NO. (49 CFR 172.101) None		
CHEMICAL DESCRIPTION Water-Based Mixture	FORMULA Proprietary	

### SECTION I - INGREDIENTS

CAS REGISTRY NO.	%W	CHEMICAL NAME(S)	Listed as a Carcinogen in NTP, IARC or OSHA 1910(z) (specify)
67-56-1	< 9	Methanol (methyl alcohol)	No
7732-11-5	< 90	Water	No
Proprietary	< 5.5	Aqueous Acrylic Emulsion	No
25322-68-3	< 1	Polyether	No
1310-73-2	< 1	Sodium Hydroxide (10-50%)	No
129-17-9	< 0.01	Blue Pigment	No

### SECTION II - PHYSICAL DATA

BOILING POINT 212 °F ____ °C	SPECIFIC GRAVITY (H <sub>2</sub> O = 1) 0.98	PERCENT VOLATILE BY VOLUME (%) < 10
SOLUBILITY IN WATER Complete	pH = 7.0 to 8.1	PERCENT SOLID BY WEIGHT (%) ~10.0
APPEARANCE AND ODOR Light blue gel, mild odor		IS MATERIAL: LIQUID SOLID GAS PASTE POWDER <u>GEL</u>

### SECTION III - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT ____ °F ____ °C None	method used C.O.C.	FLAMMABLE LIMITS	LFL None	UEL None
EXTINGUISHING MEDIA Dry chemical; CO <sub>2</sub> ; Foam; Water Fog				
SPECIAL FIRE FIGHTING PROCEDURES Self-contained respiratory protection should be provided for fire fighters. Keep fire-exposed containers cool with water.				
UNUSUAL FIRE AND EXPLOSION HAZARDS Heavy methanol vapors can travel to source of ignition and flash back.				

Aqua-Gel<sup>®</sup> (Gel and or wire Pulling Lubricant

#### SECTION IV - HEALTH HAZARD INFORMATION

EFFECTS OF OVEREXPOSURE - Conditions to Avoid	
Mild skin irritation could occur. Dizziness, nausea, headaches are signs of exposure to methanol fumes. Sodium Hydroxide fumes can be corrosive to mucous membranes.	
THRESHOLD LIMIT VALUE	Methanol fume: 200 ppm; Sodium Hydroxide 2 mg/m <sup>3</sup>
PRIMARY ROUTES OF ENTRY: Inhalation <input checked="" type="checkbox"/> Skin Contact <input checked="" type="checkbox"/> Other (specify)	
EMERGENCY AND FIRST AID PROCEDURES	
SKIN CONTACT:	Flush with water for 15 minutes. Inhalation: remove to fresh air.
EYE CONTACT:	Flush with water for 15 minutes.
INGESTION:	Administer water or milk. Consult physician or local poison control center.

#### SECTION V - REACTIVITY DATA

STABILITY	UNSTABLE	CONDITIONS TO AVOID
	STABLE	Do not expose material to temperatures exceeding 125°F.
INCOMPATIBILITY (materials to avoid)		Avoid strong oxidizers.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon dioxide and carbon monoxide.		
HAZARDOUS POLYMERIZATION	MAY OCCUR	CONDITIONS TO AVOID:
	WILL NOT OCCUR	None

#### SECTION VI - SPILL AND LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	
Wipe up, shovel, or vacuum spilled material. Use absorbent media if required. Clean up spills immediately as they can be dangerous and slippery.	
WASTE DISPOSAL METHOD	
Dispose of as solid landfill in accordance with local, state and federal regulations.	
CERCLA (Superfund) REPORTABLE QUANTITY (in lbs)	
None required.	
RCRA HAZARDOUS WASTE NO. (40 CFR 261.33)	
None required.	
VOLATILE ORGANIC COMPOUND (VOC) (as packaged, minus water)	
N.A.	
<input type="checkbox"/> Theoretical _____ lb/gal	<input type="checkbox"/> Analytical _____ lb/gal
N.A.	N.A.

#### SECTION VII - PERSONAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type)	
If TLV exceeded, use NIOSH respirator.	
VENTILATION	LOCAL EXHAUST (Specify Rate)
	MAY BE NECESSARY TO MAINTAIN TLV
MECHANICAL (General) (Specify Rate)	SPECIAL
	None
PROTECTIVE GLOVES (specify type)	OTHER
	None
Neoprene	
EYE PROTECTION (specify type)	
Safety glasses or splash goggles.	
OTHER PROTECTIVE EQUIPMENT	
Eye fountain in work area is recommended.	

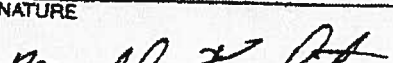
#### SECTION VIII - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	
Store at temperatures between 25° and 125°F.	
OTHER PRECAUTIONS	
Keep material away from children and pets.	

#### SECTION IX - ADDITIONAL INFORMATION

Methanol is considered hazardous because of flash point and toxicological data under Federal Hazards Communications Standard 29 CFR (1910.1200). Sodium Hydroxide is hazardous because of its corrosive and toxic characteristics.	
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#### THIS MATERIAL SAFETY DATA SHEET PREPARED BY:

Name	Ronald K. Petersen	SIGNATURE
Title	Product Development Chemist	

American  
**Polywater**

Corporation

11222 60th Street North  
P.O. Box 53  
Stillwater, Minnesota 55082  
Telephone: 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 (H<sub>2</sub>O = 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

pH: 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 LD<sub>50</sub> (rat) greater than 20 g/kg. Material contains 1.3% (wt.) polyacrylamide and carboxyvinyl polymers with oral LD<sub>50</sub> (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 vapor.

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 arise, contact physician.

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

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 continues, seek medical attention.

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.

## SECTION VII. PRECAUTIONS FOR HANDLING AND USE

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.

DOT 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,  
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



IDENTITY (As Used on Label and List)  
CADWELD ELECTRICAL WELDING MATERIAL

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate this.

### Section I

Manufacturer's Name  
ERICO PRODUCTS INC.  
Address (Number, Street, City, State, and ZIP Code)  
34600 SOLOH ROAD  
SOLOH, OHIO 44139

Emergency Telephone Number  
216-248-0100  
Telephone Number for Information  
216-248-0100  
Date Prepared  
10/28/86  
Signature of Preparer (optional)

### Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))		OSHA PEL		ACGIH TLV		Other Limits Recommended	% (optional)
COPPER OXIDE	CAS #1317-39-1	1.0 DUST	0.1 FUME	1.0 DUST	0.2 FUME		
							CALL VALUES
ALUMINUM/COPPER	CAS #12608-74-1	--		10 FUME			REFER TO 8 HR.
CALCIUM FLUORIDE	CAS #12542-23-5	2.5 AS FLUORIDE		2.5 AS FLUORIDE			TIME-WEIGHTED
CALCIUM/SILICON	CAS #37236-74-1	Ca 5 Si 5	CAO	2 CAO			AVERAGE
							CONCENTRATIONS
TIN	CAS #7440-31-5	2 AS TIN OXIDE	0.1 FUME	2 AS TIN OXIDE	0.2 FUME		AND UNITS ARE
							mg/m <sup>3</sup> .)
ALUMINUM/YTTRIUM	CAS #39458-13-4	Y 0.05	AS Y2O3 RESPIRABLE DUST FUME	0.1 FUME			
COPPER	CAS #7440-50-8	1.0 DUST	0.1 FUME	1.0 DUST	0.2 FUME		

### Section III — Physical/Chemical Characteristics

Boiling Point	N/A	Specific Gravity (H <sub>2</sub> O = 1)	5.5
Vapor Pressure (mm Hg.)	N/A	Melting Point	@ 2000°F
Vapor Density (AIR = 1)	N/A	Evaporation Rate (Butyl Acetate = 1)	N/A
Solubility in Water INSOLUBLE			

Appearance and Odor  
GRAY-BLACK, GRANULAR PARTICLES, ODORLESS

### Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	(INDIRECT HEATING)	Flammable Limits	LEL	UEL
SELF-IGNITES ABOVE 1750°F			N/A	N/A
Extinguishing Media DRY SAND OR FLOODING WITH LARGE AMOUNTS OF WATER				
Special Fire Fighting Procedures SEE ATTACHED WM/4- 1/86				

Unusual Fire and Explosion Hazards SELF-PROPAGATING, HIGH TEMPERATURE REACTION WILL OCCUR IF HEATED ABOVE IGNITION (FLASH POINT) TEMPERATURE, GENERATING HOTTER METAL, SLAG, AND DENSE, DUSTY SMOKE. VOLATILE, COMBUSTIBLE DECOMPOSITION PRODUCTS PRODUCED FROM PLASTIC PACKAGING

## Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	TEMPERATURES ABOVE IGNITION

Incompatibility (Materials to Avoid) **POSSIBILITY OF VIOLENT REACTION IF MOISTURE PRESENT IN MOLDS OR BASE MATERIALS BEING WELDED AT TIME OF USE. TYPICAL OF PROBLEMS ASSOCIATED WITH MOLTEN METALS.**

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	NONE

## Section VI — Health Hazard Data

Route(s) of Entry: **PRIMARY ROUTE OF ENTRY - INHALATION** **Slon?** **Ingestion?**

Health Hazards (Acute and Chronic) **BURNS FROM CONTACT WITH REACTION OR REACTION PRODUCTS, OR FROM HOT EQUIPMENT. DUST AND FUMES ARE IRRITANT TO EYES AND UPPER RESPIRATORY TRACT. INHALATION OF HIGH CONCENTRATIONS OF FRESHLY FORMED OXIDE FUMES AND DUSTS IN THE RESPIRABLE PARTICLE SIZE RANGE CAN CAUSE INFLUENZA-LIKE ILLNESS TERMED METAL FUME FEVER.**

Carcinogenicity: **NTP?** **IARC Monographs?** **OSHA Regulated?** **NO**

Signs and Symptoms of Exposure **(SEE HEALTH HAZARDS)**

Medical Conditions Generally Aggravated by Exposure

Emergency and First Aid Procedures **STANDARD TREATMENT FOR BURNS IN EVENT OF CONTACT WITH MOLTEN METAL, SLAG, OR HOT EQUIPMENT. FOR INHALATION OF DUST, FUME, REMOVE FROM EXPOSURE, PROVIDE FRESH AIR, FLUSH EYES WITH WATER, CONSULT PHYSICIAN.**

## Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled **ALL UNUSED, SPILLED MATERIALS MAY BE SWEEP UP FOR DISPOSAL, IN ACCORDANCE WITH METHODS OUTLINED BELOW, AND FEDERAL, STATE, AND LOCAL REGULATIONS.**

Waste Disposal Method **1) BURIAL IN GROUND, AFTER SUBMERGING IN MIXTURE OF SAND AND WATER (CONTACT FACTORY). 2) DISPOSAL BY REACTION OF CONTROLLED QUANTITIES UNDER CONTROLLED CONDITIONS (CONTACT FACTORY)**

Precautions to Be Taken in Handling and Storing **MATERIAL SHOULD BE KEPT DRY AND STORED IN "NO SMOKING OR OPEN FLAME" AREA. RESTRICTION TO AUTHORIZED PERSONNEL IS RECOMMENDED; (SEE ATTACHED WH/4-86)**

Other Precautions **FOR ADDITIONAL INFORMATION, SEE AMERICAN NATIONAL STANDARD, SAFETY IN WELDING AND CUTTING, Z49.1, AND INSTRUCTIONS PROVIDED WITH MOLDS.**

## Section VIII — Control Measures

Respiratory Protection (Specify Type) **NORMAL USE PRECLUDES USE OF SPECIAL PROTECTION AS MATERIAL IS GENERALLY USED OUT OF DOORS, IN SMALL QUANTITIES, AND IS OF SHORT DURATION.**

Ventilation	Local Exhaust <b>MAY BE NECESSARY IF USED IN CONFINED SPACE.</b>	Special <b>USE OF NIOSH APPROVED RESPIRATOR FOR DUSTS AND METAL FUMES IN LIEU OF LOCAL EXHAUST.</b>
	Mechanical (General)	Other

Protective Gloves **RECOMMENDED FOR HANDLING HOT EQUIPMENT**

Other Protective Clothing or Equipment

Eye Protection **SAFETY GLASSES RECOMMENDED AND CAUTION TO USER TO AVOID DIRECT EYE CONTACT WITH "FLASH" OF LIGHT FROM REACTION.**

Work/Hygiene Practices

**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

IDENTITY (As Used on Label and List)  
CADWELD ALUMINUM WELDING MATERIAL

Note: Blank spaces are not permitted if any item is not applicable or no information is available, the space must be marked to indicate that.

### Section I

Manufacturer's Name ERICO PRODUCTS INC.	Emergency Telephone Number 216-248-0100
Address (Number, Street, City, State, and ZIP Code) 34600 SOLON ROAD	Telephone Number for Information 216-248-0100
SOLON, OHIO 44139	Date Prepared 11/3/86
	Signature of Preparer (optional)

### Section II — Hazardous Ingredients/Identify Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (approx)
TIN OXIDE (SnO <sub>2</sub> ) CAS #18282-10-5	N/A	5 (AS SN)		
ALUMINUM CAS #7429-90-5	N/A	5, 10 (FUME)		
COPPER OXIDE CAS #1317-39-1	1.0 (DUST) 0.1 (FUME)	1.0 (DUST) 0.2 (FUME)		
CALCIUM FLUORIDE CAS #12542-25-5	2.5 (AS FLUORIDE)	2.5 (AS FLUORIDE)		

ALL VALUES REFER TO TIME-WEIGHTED AVERAGE CONCENTRATIONS, AND UNITS ARE mg/M<sup>3</sup>.

### Section III — Physical/Chemical Characteristics

Boiling Point	N/A	Specific Gravity (H <sub>2</sub> O = 1)	5
Vapor Pressure (mm Hg.)	N/A	Melting Point	# 250 °C
Vapor Density (AIR = 1)	N/A	Evaporation Rate (Butyl Acetate = 1)	N/A
Solubility in Water	INSOLUBLE		
Appearance and Odor	SILVERY-WHITE POWDER; ODORLESS		

### Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used) SELF IGNITES ABOVE 1650 °F (INDIRECT HEATING)	Flammable Limits	LEL N/A	UEL N/A
Extinguishing Media	NONE		

Special Fire Fighting Procedures: HALOGENATED EXTINGUISHING AGENTS OR WATER SHOULD NOT BE USED. LET F EXTINGUISH ITSELF. (SEE UNUSUAL FIRE & EXPLOSION HAZARDS) USE SELF-CONTAINED BREATHING APPARATUS, IN PRESSURE-DEMAND MODE.

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 VERY RAPIDLY AKIN TO AN EXPLOSION.

(Reproduce locally)

## Section V — Reactivity Data

Stability	Unstable	X	Conditions to Avoid
	Stable		

TEMPERATURES ABOVE IGNITION.

Incompatibility (Materials to Avoid) WILL REACT WITH MOISTURE, MINERAL ACIDS, HALOGENATED COMPOUNDS, AND HARSH ALKALIS. MATERIALS CAPABLE OF CAUSING SPARKS OR ACCUMULATING STRONG STATIC CHARGES, SHOULD NOT BE USED.

NONE

Hazardous Polymerization	May Occur	X	Conditions to Avoid
	Will Not Occur		

## Section VI — Health Hazard Data

Route(s) of Entry: Inhalation? Skin? Ingestion?  
 PRIMARY ROUTE OF ENTRY - INHALATION  
 Health Hazards (Acute and Chronic) BURNS FROM CONTACT WITH REACTION OR REACTION PRODUCTS. DIRECT EYE CONTACT WITH "FLASH" OF LIGHT FROM REACTION, CAN RESULT IN TEMPORARY BLINDNESS. DUST AND FUMES ARE IRRITANT TO EYES AND UPPER RESPIRATORY TRACT.

Carcinogenicity: NTP? IARC Monographs? OSHA Regulated? NO

Signs and Symptoms of Exposure (SEE HEALTH HAZARDS)

Medical Conditions Generally Aggravated by Exposure

Emergency and First Aid Procedures STANDARD TREATMENT FOR BURNS. FOR INHALATION OF DUST, FUME, REMOVE FROM EXPOSURE, PROVIDE FRESH AIR, FLUSH EYES WITH WATER, CONSULT PHYSICIAN.

## Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled ALL UNUSED SPILLED MATERIALS MAY BE SWEEPED UP FOR DISPOSAL USING SOFT, DRY SPONGE OR SOFT NATURAL FIBER BRUSH, AND NON-SPARKING CONDUCTIVE SCOOP. AVOID ACTIONS THAT WOULD CREATE DUST-LADEN CLOUD OR CAUSE MATERIAL TO DISPERSE IN AIR.

Waste Disposal Method FOR DISPOSAL OF THIS MATERIAL AS WASTE, MIX WITH INERT INGREDIENT (SAND) IN 1:1 RATIO AND DISPOSE OF IN ACCORDANCE WITH METHODS OUTLINED BELOW, AND FEDERAL, STATE, AND LOCAL REGULATIONS. DISPOSAL MAY ALSO BE BY REACTION OF CONTROLLED QUANTITIES. (CONTACT FACTORY)

Precautions to Be Taken in Handling and Storing MATERIALS MUST BE KEPT DRY AND STORED ONLY IN DESIGNATED MFG. OR STORAGE AREA, RESTRICTED TO ACCESS BY AUTHORIZED PERSONNEL. MFG. PERSONNEL HANDLING MATERIAL MUST BE WEARING STATIC GROUNDING DEVICES AND PROPER PROTECTIVE CLOTHING. ABSOLUTELY NO SMOKING OR OPEN FLAME SHALL BE PERMITTED FOR PERSONNEL HANDLING MATERIAL.

## Section VIII — Control Measures

Respiratory Protection (Specify Type)

WHERE TLY IS EXCEEDED, USE NIOSH APPROVED PARTICULATE RESPIRATOR.

Ventilation	Local Exhaust	USE ONLY WHEN TLY IS EXCEEDED.	Special
	Mechanical (General)	MUST BE SPECIFICALLY APPROVED FOR USE WITH REACTIVE, COMBUSTIBLE DUST.	

Protective Gloves

MANDATORY (SEE OTHER PROTECTIVE)

Eye Protection

SAFETY GLASSES

Other Protective Clothing or Equipment SYNTHETIC FABRICS CAPABLE OF ACCUMULATING STATIC CHARGE SHOULD NOT BE WORN. STATIC GROUNDING DEVICES MUST BE WORN AT ALL TIMES BY PERSONNEL ENTERING MFG. AREA FOR ANY PURPOSE.

Work/Hygiene Practices

# MATERIAL SAFETY DATA SHEET

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

## SECTION I

MANUFACTURER'S NAME <b>ERICO PRODUCTS INC.</b>		EMERGENCY TELEPHONE NO. <b>216-248-0100</b>
ADDRESS (Number, Street, City, State, and ZIP Code) <b>34600 SOLON ROAD SOLON, OHIO 44139</b>		
CHEMICAL NAME AND SYNONYMS <b>PORCELAIN CERAMIC</b>		TRADE NAME AND SYNONYMS <b>CADWELD ONE SHOT MOLDS</b>
CHEMICAL FAMILY <b>SEMI-VITREOUS ALUMINOSILICATE</b>	FORMULA <b>N/A</b>	

## SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)

## SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	> 3000	SPECIFIC GRAVITY (H <sub>2</sub> O=1)	2.2
VAPOR PRESSURE (mm Hg) AT 70°F	NEG	PERCENT VOLATILE BY VOLUME (%)	NEG
VAPOR DENSITY (AIR=1) AT 70°F	NEG	EVAPORATION RATE (_____ %)	N/A
SOLUBILITY IN WATER	INS.		
APPEARANCE AND ODOR			

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	NOT COMBUSTIBLE	FLAMMABLE LIMITS	N/A	Lel	Uel
EXTINGUISHING MEDIA	N/A				
SPECIAL FIRE FIGHTING PROCEDURES	N/A				
UNUSUAL FIRE AND EXPLOSION HAZARDS					
USE OF WET COMPONENTS COULD RESULT IN STEAM SPALLATION, COMPONENTS SHOULD BE PROTECTED FROM ACCIDENTAL CONTACT WITH WATER.					

## SECTION V - HEALTH HAZARD DAT.

THRESHOLD LIMIT VALUE	0.5 mg/m <sup>3</sup> (BASED ON SEPARATION INTO PRIMARY INGREDIENTS BY PULVERIZING)
EFFECTS OF OVEREXPOSURE	
IN THE UNUSUAL EVENT THAT COMPONENTS WERE CRUSHED IN TRANSPORT OR USE, INHALATION - THE	
PULVERIZED MATERIAL COULD CAUSE UPPER RESPIRATORY IRRITATION, EYES - DUST EXPOSURE ON	
<del>XXXXXXXXXXXXXXXXXXXXX</del>	
COULD CAUSE TEMPORARY DISCOMFORT AND IRRITATION, SKIN - DUST EXPOSURE ON HANDLING COULD CAUSE	
IRRITATION AND MINOR DERMITIS. FIRST AID: INHALATION - REMOVE TO FRESH AIR; EYES - IRRIGATE	
IMMEDIATELY; SKIN - WASH WITH SOAP AND WATER.	

## SECTION VI - REACTIVITY DATA

SECTION VI - REACTIVITY DATA			
STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
INCOMPATIBILITY (Materials to avoid)			
HAZARDOUS DECOMPOSITION PRODUCTS			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

## SECTION VII - SPILL OR LEAK PROCEDURES

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 DUST.	
WASTE DISPOSAL METHOD	BURY IN APPROVED LANDFILL.

**SECTION VIII - SPECIAL PROTECTION INFORMATION**

SECTION VIII - SPECIAL PROTECTION INFORMATION		
RESPIRATORY PROTECTION <i>(Specify type)</i> USE DUST MASK IN HANDLING ACCIDENTALLY PULVERIZED MATERIAL		
VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL <i>(General)</i>	OTHER
PROTECTIVE GLOVES USE GLOVES IF DERMITITIS DEVELOPS		EYE PROTECTION USE OF SAFETY GLASSES RECOMMENDED
OTHER PROTECTIVE EQUIPMENT		

## SECTION IX - SPECIAL PRECAUTIONS

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

## STORAGE & SAFETY CONSIDERATIONS

WM/4-1/86

### CADWELD EXOTHERMIC MATERIALS

#### A) STORAGE CONDITIONS

Storage of CADWELD 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.

NOTE: 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:

1. 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.

# MATERIAL SAFETY DATA SHEET

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.

## MATERIAL SAFETY DATA SHEET

### 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 other manufacturers.

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:

None Known

#### FIRE AND EXPOSITION 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.

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

## MATERIAL SAFETY DATA SHEET

### 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 PROCEDURES:

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 glasses 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, API 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 ELEMENTS AND METALLIC COATINGS	% WEIGHT	EXPOSURE LIMITS	
		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 fume
Alloying Elements:			
Carbon (7440-44-0)	.06-.13 .14-.18 .18-.23	None established	None established
Manganese (7439-96-5)	.30-.60 .70-1.15	(c) 5 mg/M3	(c) 5 mg/M3-dust 1 mg/M3 fume
Phosphorus (7723-14-0)	.015-.035 .040 max	None for inorganic phosphates	None for inorganic phosphates
Sulfur (7704-34-9)	.040 max .050 max	13 mg/M3 as SO <sub>2</sub>	5 mg/M3 as SO <sub>2</sub>
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

\*Galvanized pipe only.

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.

## WHEATLAND TUBE COMPANY

### III. PHYSICAL 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

Steel 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 OVEREXPOSURE:

#### MAJOR EXPOSURE HAZARD inhalation

Chronic inhalation of high concentration of iron oxide fumes 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:

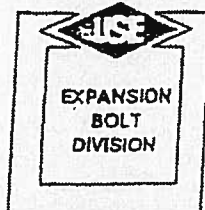
Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Avoid breathing metal fumes and/or dusts.

### 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.**



Affiliate of  
Shamsh Industries

Manufacturer of  
Expansion Anchors &  
Specialty Fasteners

Custom Stamping

## 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

	<u>CAS Number</u>	<u>%</u>	<u>OSHA 8-hr TWA</u>	<u>ACGIH 8-hr TWA</u>
Carbon	1333-86-4	.02-.15	3.5 mg/m <sup>3</sup> as Carbon Black	3.5 mg/m <sup>3</sup> as Carbon Black
Iron	1309-37-1	Balance	10 mg/m <sup>3</sup> as oxide fume	5 mg/m <sup>3</sup> as oxide fume
Lead	7439-92-1	2.0% Max	.15 mg/m <sup>3</sup>	.15 mg/m <sup>3</sup>
Phosphorus	7732-14-0	0.15 Max	None for inorganics	None for inorganics
Silicon	7740-21-3	1.0 Max	None	Total—10 mg/m <sup>3</sup> Respirable—5 mg/m <sup>3</sup>
Zinc (Plating)	7440-66-6	N/A	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup> (fume)

### III. PHYSICAL DATA — Base Metal

Melting Point (F): 2750  
Vapor Pressure: NA  
% Volatile by Volume: NA  
Solubility in Water: Insoluble  
Appearance and Odor: Metallic gray with no odor  
Vapor Density: NA  
Evaporation Rate: NA

### 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

#### Effects of Overexposure:

##### Iron

Chronic inhalation of high concentrations of iron oxide fumes 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 fumes 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 fume 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.

**Incompatibility:** (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

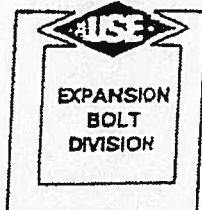
**Steps to be Taken in Case Material is Released or Spilled:** No special precautions are necessary for spills of bulk material. If large quantities of dust are spilled, remove by vacuuming or wet sweeping to prevent heavy concentrations of airborne dust. Follow federal, state, and local regulations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



Affiliate of  
Shamoh Industries  
Manufacturer of  
Expansion Anchors &  
Specialty Fasteners

Custom Stamping

## MATERIAL SAFETY DATA SHEET #2

### I. MATERIAL IDENTIFICATION

Manufacturer's Name: USE Diamond, Inc.  
Material Name: Zinc Diecast Anchors  
Common Names: Forway; Keystone; Sup-R-Hag  
Taper-Bolt Nut; Zap-it Body

April 17, 1986

### II. HAZARDOUS INGREDIENTS

	CAS Number	%	OSHA 8-hr TWA	ACGIH 8-hr TWA
Zinc	7440-66-6	96	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup> (fume)
Aluminum	7429-90-5	Bal.	10 mg/m <sup>3</sup>	None Established

### III. PHYSICAL DATA — Base Metal

Melting Point (F): 788  
Vapor Pressure: 1095 F — 10mm  
% Volatile by Volume: NA  
Solubility in Water: Insoluble  
Appearance and Odor: Metallic gray with no odor  
Vapor Density: NA  
Evaporation Rate: NA

### IV. FIRE AND EXPLOSION HAZARD DATA — Base Metal

Flash Point: NA  
Flammable Limits: LEL = NA  
Extinguishing Media: See Below  
Method Used: NA  
UEL = NA

**Special Fire Fighting Procedures:** Solid, massive form is not combustible. Fire and explosion hazards are moderate when material is in the form of dust 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:

#### 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 bluish tint to the skin. The 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 fumes 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 fume 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, sources of ignition.

**Other Precautions:** See all other sections of the MSDS.

**RAYOVAC****RAYOVAC**

601 Rayovac Drive, Madison, WI 53711-0960

Approved: TJA  
Date: 3/86**MATERIAL SAFETY DATA SHEET****SECTION I**

PRODUCT NAME: Alkaline Batteries

Size: All sizes of  
Alkaline-Manganese  
Cells and Batteries

FOR INFORMATION ON HEALTH HAZARDS CALL: (608) 275-4824

FOR OTHER INFORMATION CALL: (608) 275-4824

**SECTION II HAZARDOUS INGREDIENTS OF MIXTURES**

PRINCIPAL HAZARDOUS COMPONENT (S)	%	TLV (Units)
Carbon	< 5.0	3.0 mg/M <sup>3</sup>
Manganese Dioxide	< 5.0	5.0 mg/M <sup>3</sup>
Mercury	< 5.0	0.05 mg/M <sup>3</sup>
Potassium Hydroxide	2.0-8.0	Ceiling Limit 2.0 mg/M <sup>3</sup>

**SECTION III PHYSICAL DATA**

BOILING POINT (°F)	NA	SPECIFIC GRAVITY (H <sub>2</sub> O=1)	NA
VAPOR PRESSURE (mm Hg)	NA	PERCENT VOLATILE BY VOLUME (%)	NA
VAPOR DENSITY (AIR=1)	NA	EVAPORATION RATE (=1)	NA
SOLUBILITY IN WATER	NA		
APPEARANCE AND ODOR	Various Colors, No Odor		

**SECTION IV FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT (Method used) (Open Cup)	NA	FLAMMABLE LIMITS	LeI NA	UeI NA
EXTINGUISHING MEDIA	In bulk storage areas, use CO <sub>2</sub> , foam for dry powder; water may cause electrical shorts.			
SPECIAL FIRE FIGHTING PROCEDURES	Wear self-contained breathing apparatus (SCBA) to prevent inhalation of decomposition products.			
UNUSUAL FIRE AND EXPLOSION HAZARDS	Cells may rupture when exposed to excessive heat.			

THRESHOLD LIMIT VALUE None established.

EFFECTS OF OVEREXPOSURE None under normal condition.

#### EMERGENCY AND FIRST AID PROCEDURES

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

#### SECTION VI REACTIVITY DATA

STABILITY	UNSTABLE	NA	CONDITIONS TO AVOID Excessive heat, electrical short.
	STABLE	NA	
INCOMPATIBILITY (Materials to Avoid) NA			
HAZARDOUS DECOMPOSITION PRODUCTS NA			
HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID	
May Occur (Will) Not Occur		NA	
X			

#### 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 METHOD

Dispose according to appropriate local, state and federal regulations.

#### SECTION VIII SPECIAL PROTECTION INFORMATION

##### RESPIRATORY PROTECTION (Specify Type)

NA

VENTILATION	LOCAL EXHAUST	NA	SPECIAL	NA
	MECHANICAL	NA	OTHER	NA
PROTECTIVE GLOVES		NA	EYE PROTECTION	NA
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 Boulevard  
Sun Valley, CA 91352  
Phone (818) 768-6060

# MATERIAL SAFETY DATA SHEET

NAME AND PRODUCT						
MANUFACTURER'S NAME <b>LONGYEAR COMPANY</b>				CONTACT <b>Steve Garrison</b>		
ADDRESS (STREET, CITY, STATE AND ZIP CODE) <b>9983 GLENOAKS BLVD., SUN VALLEY, CA. 91352</b>				EMERGENCY TELEPHONE NO <b>818-768-6060</b>		
TRADE NAME, COMMON NAME OR SPECIFICATION <b>Diamond impregnated metal bonded segments, blades, corebits, and grinding heads</b>				APPROVED BY <b>E. Gregory</b> DATE <b>12/31/87</b>		
CHEMICAL FAMILY OR PRODUCT TYPE						
COMPOSITION						
CHEMICAL AND COMMON NAME	PERCENT	REG. (Y/N)	CAS #	OSHA PERMISSIVE EXPOSURE LIMIT mg/m <sup>3</sup>	ACGIH TLV mg/m <sup>3</sup>	CARCINOGEN (Y/N)
Cobalt	0-97	Y	7440-48-4	0.1	0.1	N
Copper	0-95	Y	7440-50-8	1.0	1.0	N
Tin	0-40	Y	7440-31-5	NAIF	NAIF	N
Zinc	0-20	Y	7440-66-6	NAIF	NAIF	N
Nickel	0-95	Y	7440-02-0	1.0	1.0	Y
Iron	0-95	Y	7439-89-6	N	15.0	N
Molybdenum	0-30	Y	7439-98-7	15.0	10.0	N
Manganese	0-5	Y	7439-96-5	5.0	5.0	N
Tungsten Carbide	0-90	Y	12070-12-1	5.0	5.0	N
Tungsten	0-95	Y	7440-33-7	5.0	5.0	N
Silicon	0-2	Y	7440-21-3	15.0	10.0	N
Boron	0-3	Y	7440-42-8	15.00	10.0	N
Carbon	1-15	Y	7440-44-0	3.5	3.5	N
Chromium	0-20	Y	7440-47-3	1.0	0.5	Y
Titanium	0-5	Y	7440-32-6	NAIF	NAIF	N
Phosphorous	0-2	Y	7723-14-0	.1	.1	N

ANSI = American National Standards Institute.  
N/A = Not Applicable.  
NAIF = No Applicable Information Found.  
NIOSH = National Institute for Safety and Health.  
PEL = Permissible Exposure Limit.  
TLV = Threshold Limit Values.

LONGYEAR MAKES NO WARRANTY WITH RESPECT TO THE ACCURACY OF THE INFORMATION OR THE SUITABILITY OF THE RECOMMENDATIONS, AND ASSUMES NO LIABILITY TO ANY USER THEREOF.

## CORROSIVITY AND REACTIVITY DATA

STABILITY UNSTABLE ☒ STABLE ☐

POLYMERIZATION NA

WILL NOT OCCUR ☒

INCOMPATIBILITY (MATERIALS TO AVOID)

NAIF

COMPOSITION PRODUCTS

NAIF

CONDITIONS TO BE AVOIDED

NAIF

## STORAGE, HANDLING AND USE PROCEDURES

## NORMAL STORAGE AND HANDLING

Handle with adequate ventilation for nuisance dust. See OSHA 29 CFR 1910.94 (Ventilation) and 29 CFR 1910.1000 (Air Contaminants). (See ANSI Standard B7.1 (Section 2.))

## NORMAL USE

Handle with adequate ventilation for nuisance dust. See OSHA 29 CFR 1910.94 (Ventilation) and 29 CFR 1910.1000 (Air Contaminants).

## STEPS TO BE TAKEN IN CASE OF LEAKS OR SPILLS

Solid metal. N/A

## WASTE DISPOSAL METHOD

Dispose of in accordance with appropriate Federal, State and local laws.

## PERSONAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE) Use an appropriate NIOSH approved respirator if airborne dust concentrations exceed the appropriate PEL or TLV. All appropriate requirements set forth in 29 CFR 1910.134 should be met.

## VENTILATION

## LOCAL

Recommended.

MECHANICAL  
(GENERAL)

Recommended.

## OTHER

NAIF.

## PROTECTIVE GLOVES

Recommended.

## EYE PROTECTION

Recommended.

OTHER EQUIPMENT See OSHA 29 CFR 1910.215 (Hearing Protection). Use other protective equipment if applicable.

MEASURES TO BE TAKEN DURING REPAIR AND MAINTENANCE OF CONTAMINATED EQUIPMENT THAT HAS BEEN IN CONTACT WITH THIS MATERIAL

NAIF

## SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN 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 hereof. However, the user should consult with the manufacturer for the most current information.

MSDS002081

**6. HEALTH HAZARD DATA**Primary Routes of Entry - Inhalation and Skin

Signs and Symptoms of Exposure

1. Acute Overexposure Inhalation - Headaches, dizziness, nausea and anesthesia.  
Eyes - Will cause eye irritation. Skin - Will cause drying and irritation  
of skin.

2. Chronic Overexposure May cause contact dermatitis - Could have effect on  
liver and kidney.

Medical Conditions Generally Aggravated by Exposure Breathing difficultiesChemical Listed as Carcinogen  
or Potential CarcinogenNational Toxicology  
ProgramYes ☐  
No ☒IARC  
MonographsYes ☐  
No ☒

OSHA

Yes ☐  
No ☒

Emergency and First Aid Procedures (If symptoms persist, call a doctor)

Inhalation Remove to fresh air - apply artificial respiration if necessary.

2. Eyes Flush with water for at least 15 minutes.

3. Skin Wash with soap and water - Use skin cream.

4. Ingestion Do not induce vomiting - Call a physician.

**7. SPILL OR LEAK PROCEDURES**Precautions to be taken in  
Handling and StorageStore in a cool dry place.

Steps to be taken in case

Material is released or spilled

Not normally a problem with aerosols - Ventilate and  
absorb liquid - Remove sources of ignition.

Waste Disposal Partially used or filled aerosols are Hazardous Waste if  
discarded - Dispose of in conformance to Federal, State & Local regulations.

**8. SPECIAL PRECAUTIONS AND USE DIRECTIONS**

Aerosol containers may explode if exposed to temperatures in excess  
of 130°F. Due to the high density of the metallic zinc, the aerosol  
must be thoroughly agitated before use.