Right to Know Hazardous Substance Fact Sheet

Emergency Responders Quick Reference

Common Name: **2,4 DINITROTOLUENE**

Synonyms: 2,4-DNT; 2,4-Dinitrotoluol
CAS No: 121-14-2
Molecular Formula: $C_6H_3CH_3(NO_2)_2$
RTK Substance No: 0783
Description: Orange-yellow, crystalline solid often shipped in a molten state

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
3 - Health **1 - Fire** **3 - Reactivity** **DOT#:** UN 2038 **ERG Guide #:** 152 **Hazard Class:** 6.1 (Poison)	**2,4-Dinitrotoluene** is REACTIVE and a DANGEROUS EXPLOSION HAZARD. **2,4-Dinitrotoluene** may burn, but does not readily ignite. Use dry chemical, CO_2, water spray, alcohol-resistant foam or other foam as extinguishing agents. POISONOUS GASES ARE PRODUCED IN FIRE, including *Nitrogen Oxides*. CONTAINERS MAY EXPLODE IN FIRE. Use water spray to keep fire-exposed containers cool.	**2,4-Dinitrotoluene** becomes explosive when exposed to PRESSURE and HIGH TEMPERATURES. **2,4-Dinitrotoluene** reacts with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE); STRONG BASES (such as SODIUM HYDROXIDE and POTASSIUM HYDROXIDE); TIN; ZINC; and REDUCING AGENTS (such as LITHIUM, SODIUM, ALUMINUM and their HYDRIDES) to cause fires and/or explosions.

SPILL/LEAKS

Isolation Distance:

Spill: 25 meters (75 feet) for solid
50 meters (150 feet) for molten

Cover *liquid* spill with dry sand, earth, or a similar material and place into sealed containers for disposal.

Moisten spilled *solid* material first and place into sealed containers for disposal.

PHYSICAL PROPERTIES

Odor Threshold:	Slight odor
Flash Point:	404°F (207°C)
LEL:	1.4%
Vapor Density:	6.27 (air = 1)
Vapor Pressure:	1 mm Hg at 68°F (20°C)
Specific Gravity:	1.3 (water = 1)
Water Solubility:	Insoluble
Boiling Point:	572°F (300°C)
Melting Point:	153° to 158°F (67° to 70°C)
Molecular Weight:	182.13

EXPOSURE LIMITS

OSHA: 1.5 mg/m^3, 8-hr TWA
NIOSH: 1.5 mg/m^3, 10-hr TWA
ACGIH: 0.2 mg/m^3, 8-hr TWA
IDLH: 50 mg/m^3

(All of the above are for *Dinitrotoluene*)

The Protective Action Criteria values are:
PAC-1 = 7.5 mg/m^3 PAC-2 = 50 mg/m^3
PAC-3 = 50 mg/m^3

PROTECTIVE EQUIPMENT

Gloves: Butyl (>8-hr breakthrough for **2,4-Dinitrotoluene** in 30% to 70% solution)

Coveralls: Tyvek® (*solid* **2,4-Dinitrotoluene**); Tychem® BR, CSM and TK; Trellchem® HPS and VPS (>8-hr breakthrough for *Nitro compounds*, *unsubstituted*)

Respirator: SCBA

HEALTH EFFECTS

Eyes: Irritation and burns

Skin: Irritation and burns (skin absorbable)

Inhalation: Nose and throat irritation with coughing and wheezing
Headache, fatigue and blue color to the skin and lips (methemoglobinemia)

Chronic: Cancer (skin, mammary) in animals

FIRST AID AND DECONTAMINATION

Remove the person from exposure.

Flush eyes with large amounts of water for at least 15 minutes. Remove contact lenses if worn. Seek medical attention immediately.

Quickly remove contaminated clothing and wash contaminated skin with large amounts of soap and water. Seek medical attention.

Begin artificial respiration if breathing has stopped and CPR if necessary.

Transfer promptly to a medical facility.