

MATERIAL SAFETY DATA SHEET

PRODUCT IDENTITY: TOLUENE

SECTION 1 - Preparation/Product Information

Supplied By: Niagara Protective Coatings
7071 Oakwood Ave.
Niagara Falls, Ontario L2E 6S5

Emergency Telephone No: (613) 996-6666
Date Prepared: July 1, 2015
Product Use: Organic Solvent

TDG Classification: 3 UN Number: 1219 Packing Group: II

WHMIS CLASSIFICATION: HEALTH 2, FLAMMABILITY 2, REACTIVITY 0.

Section 2 - Hazardous Ingredients/Identity Information

HAZARDOUS COMPONENTS: CHEMICAL IDENTITY	WT RANGE %	CAS#	LD50 AND LC50 ROUTE & SPECIES
Toluene	100%	108-88-3	Dermal LD50 (Rabbit) 14100 uL/kg Inhalation LC50 (Mouse) 400 ppm/24H Inhalation LC50 (Rat) 49 gm/m3/4H Inhalation LD50 (Female Rat) 19mg/1/4H Oral LD 50 (Rat) 636 mg/kg

*

SECTION 3 - Physical/Chemical Characteristics

*

Boiling Point: 110-111°C Specific Gravity: 0.871

Freezing Point: -95°C ph: n/av

Solubility In Water: Negligible VOCs: 7.26 lbs./gal

Odour: Aromatic Octanol/Water Partition Coefficient:
0.05

Autoignition Temperature (deg C): >500°C

Extinguishing Media: Dry Chemical, Carbon Dioxide, Alcohol Foam, Water Fog

Sensitivity Mechanical Impact: No Sensitivity Static Discharge: Yes

Hazardous Combustion Products: Toxic fumes. Smoke. Carbon Monoxide and Carbon Dioxide are produced upon combustion.

Special Procedures: Vapors form a flammable/explosive mixture with air between upper and lower flammable limits. Do not enter confined fire space without adequate protective clothing and an approved positive pressure self-contained breathing apparatus. Evacuate hazard area. Use water to cool fire exposed containers. Containers may explode in heat or fire. Vapors may concentrate in confined areas. Containers exposed to intense heat from fires should be cooled with water to prevent vapor pressure build up which could result in container rupture. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Fight fire from maximum distance. Always stay away from ends of containers due to explosive potential. Flammable.

SECTION 5 - Reactivity Data

Chemical Stability: Yes Hazardous Polymerization: Will Not Occur

Incompatibility (Materials to Avoid): Avoid contact with strong oxidizing agents and acids. Avoid natural, butyl and neoprene rubbers. Avoid prolonged contact with nitrile rubber and PVC (Toluene)

Conditions of Reactivity/Instability: Avoid excessive heat, open flames and all ignition sources.

Hazardous Decomposition or Byproducts: Material does not decompose at ambient temperatures.

SECTION 6 – Toxicological Properties

*

Carcinogenicity of Material:

IARC - Carcinogens - Group 3

ACGIH - Carcinogens - A4 Not classified as a Human Carcinogen.

Reproductive Toxicity/Teratogenicity/Embryotoxicity/Mutagenicity:

Toluene is fetotoxic in rats and mice at maternally toxic levels. Significant fetal effects in rats included increased skeletal anomalies (fused sternbrae and extra ribs) in animals exposed by inhalation to 1500 mg/m³ toluene for 24 hours/day and retarded skeletal development in animals exposed to 1000 mg/m³ for 8 hours/day. In mice, mean fetal weight was significantly reduced, and the percentage of weight retarded fetuses was significantly increased at the 500 mg/m³ exposure level. Fetotoxic effects in rats occurred at 1500 and 3000 ppm and included decreased litter and mean fetal body weights and decreased sternbrae ossification. Significant fetal effects at 2000 ppm included reduced pup weight, high fetal mortality and embryonic growth retardation. Effects seen in fetuses from pregnant rats administered toluene by gavage included reduced body weight and organ weight producing a generalized growth retardation. In mice exposed to 200 ppm toluene, the incidence of fetuses with dilated renal pelves was significantly increased, suggesting desynchronization of maturation with respect to development and growth.

SECTION 7 – Exposure Controls/Personal Protection

Note: The following information, while appropriate for this product is general in nature. The selection of personal protective equipment will vary depending on the conditions of use.

Gloves/Type: Impervious gloves (Viton, Nitrile) should be worn at all times when handling this product.

Respiratory/Type: If exposure exceeds occupational exposure limits, use an appropriate NIOSH-approved respirator. Use a NIOSH-approved chemical cartridge respirator with organic vapour cartridges or use a NIOSH-approved supplied air-respirator. For high airbourne concentrations, use a NIOSH-approved supplied-air respirator either self-contained or airline breathing apparatus, operated in positive pressure mode.

Eye/Type: Chemical safety goggles should be worn.

Footwear: N.AV

Clothing/Type: Impervious clothing (apron, coveralls) should also be worn in confined workspaces or where the risk of skin exposure is much higher.

Engineering Controls: Mechanical ventilation is recommended for all indoor situations to control fugitive emissions. Electrical and mechanical equipment should be explosion-proof. Concentrations in air should be

maintained below the recommended threshold limit value if unprotected personnel are involved. Make-up air should always be supplied to balance air exhausted (either generally or locally). Local ventilation recommended where mechanical ventilation is ineffective in controlling airborne concentrations below the recommended occupational exposure limit. For personnel entry into confined spaces (I.E. bulk storage tanks) a proper confined space entry procedure must be followed including ventilation and testing of tank atmosphere.

SECTION 8 - FIRST AID MEASURES

EYES: Flush thoroughly with water for at least 15 minutes while holding eyelids open. Obtain medical attention immediately after first aid has been initiated and completed.

SKIN: Flush affected skin with gently flowing lukewarm water for at least 20 minutes. Remove contaminated clothing while rinsing. Wash contaminated skin with mild soap and water for 15 minutes. If irritation occurs and persists, obtain medical attention.

INHALATION: Remove victim from further exposure and restore breathing, if required. Obtain medical attention.

INGESTION: Do Not Induce vomiting. Do not give anything by mouth to an unconscious or convulsing person. Guard against aspiration into lungs by having the individual turn on their left side. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquids into the lungs. Obtain medical attention immediately.

Notes to Physician: If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before vomiting, gastric lavage with a cuffed endotracheal tube should be considered. Metabolism of Isopropanol forms acetone, which may be detected in the urine and expired air. In contrast to diabetic acidosis, acidosis will occur in the absence of hyperglycemia. Hemodialysis should be considered in severe acute intoxications.

SECTION 9 - Precautions for Safe Handling and Use

Waste Disposal Method: Waste management priorities (depending on volumes and concentration of waste) are: 1. Recycle (reprocess), 2. Energy recovery (cement kilns, thermal power generation), 3. Incineration, 4. Disposal at a licensed waste disposal facility. Do not attempt to combust waste on-site. Incinerate at a licensed waste disposal site with approval of environmental

authority.

Spill and Leak Procedure: Issue warning "Flammable". Eliminate all sources of ignition. Isolate hazard area and restrict access. Try to work up wind of spill. Avoid direct contact with material. Saturated clothing should be immediately removed to avoid flammability hazard. Wear appropriate breathing apparatus (if applicable) and protective clothing. Stop leak only if safe to do so. Dike and contain land spills. Contain water spills by booming. Use water fog to knock down vapors; contain run-off. For large spills remove by mechanical means and place in containers. Absorb residue or small spills with absorbent material and remove to non-leaking containers for disposal. Recommended materials: Sand or earth. Flush area with water to remove trace residue. Dispose of recovered material as noted under disposal considerations. Notify appropriate environmental agency. (IES)

Handling Procedures and Equipment: Flammable. Do not cut, drill, grind, weld or perform similar operations on or near containers. Vapors may accumulate and travel to distant ignition sources and flashback. Empty containers may contain hazardous product residues. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. Hot surfaces may be sufficient to ignite even in the absence of sparks or flames. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors are gone. Do not pressurize drum containers to empty them. Avoid breathing vapors and prolonged or repeated contact with skin. Launder contaminated clothing prior to reuse. Use good personal hygiene. Air dry contaminated clothing in a well ventilated area before laundering. Avoid frequent opening and closing of containers and repeated exposure to air as explosive peroxides may be formed.

Storage Needs: Store in a cool, dry, well ventilated area, away from heat and ignition sources. Use explosion proof ventilation to prevent vapor accumulation. Can attack aluminum at elevated temperature.

THE INFORMATION CONTAINED IN THIS FORM IS BASED ON DATA FROM SOURCES CONSIDERED TO BE RELIABLE BUT NIAGARA PROTECTIVE COATINGS DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS THEREOF. THE INFORMATION IS PROVIDED AS A SERVICE TO PERSONS PURCHASING OR USING THE MATERIAL TO WHICH IT REFERS AND NIAGARA PROTECTIVE COATINGS EXPRESSLY DISCLAIMS ALL LIABILITY FOR LOSS OR DAMAGE, INCLUDING CONSEQUENTIAL LOSS, OR FOR INJURY TO PERSONS (INCLUDING DEATH) ARISING DIRECTLY OR INDIRECTLY FROM RELIANCE UPON THE INFORMATION OR USE OF THE MATERIAL.