

Material Safety Data Sheet

Section 1. Product Identification and Use

Product Name - Trade Name **999-062 D-DUR HARDENER**

Supplier - Manufacturer **Chemcraft International Inc.,**
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CANUTEC (613) 996-6666

Code 999-062
Synonym D-DUR HARDENER
Chemical Name Not applicable.
Chemical Family Synthetic polymer in organic solvent. (Paint.)
Chemical Formula Not applicable.
Material Uses Coatings: Surface coatings and finishes.
Product Identification Number (PIN) 1263 PAINT

Section 2. Hazardous Ingredients

Exposure limits

Name	CAS #	% by Weight	LC ₅₀ /LD ₅₀	TLV/PEL
n-Butyl acetate	123-86-4	50 - 70	ORAL (LD50): Acute: 14130 mg/kg [Rat]. 7100 mg/kg [Mouse]. DERMAL (LD50): Acute: 5000 mg/kg [Rabbit]. 8770 mg/kg [Guinea pig].	OSHA (United States). TWA: 150 ppm STEL: 200 ppm ACGIH (United States, 2000). TWA: 150 ppm STEL: 200 ppm NIOSH TWA: 150 ppm STEL: 200 ppm TWA: 0.5 mg/m ³ STEL: 1 mg/m ³
Trade Secret 999-062-3		30 - 50	ORAL (LD50): Acute: >10000 mg/kg [Rat]. DERMAL (LD50): Acute: >5000 mg/kg [Rabbit].	
Polymeric isocyanate		5 - 15	Not available.	
Xylenes	1330-20-7	1 - 5	ORAL (LD50): Acute: 4300 mg/kg [Rat].	ACGIH (United States, 1992). TWA: 100 ppm STEL: 150 ppm TWA: 434 mg/m ³ STEL: 651 mg/m ³
Ethylbenzene	100-41-4	1 - 5	ORAL (LD50): Acute: 3500 mg/kg [Rat]. DERMAL (LD50): Acute: 5000 mg/kg [Rabbit].	ACGIH (United States). TWA: 100 ppm STEL: 125 ppm NIOSH STEL: 125 ppm
Hexamethylene diisocyanate	822-06-0	0.1 - 0.5	ORAL (LD50): Acute: 350 mg/kg [Mouse]. 768 mg/kg [Rat]. DERMAL (LD50): Acute: 617 mg/kg [Rabbit].	ACGIH (United States). TWA: 0.005 ppm

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Trace impurities and additional material names not listed above may appear in other sections of this MSDS. These materials may be listed for toxicological concerns, local compliance, or other reasons.

Section 3. Physical Data

Physical State and Appearance	Liquid.	Odor	Not available.	Taste	Not available.
Color	Not available.				
Molecular Weight	Not applicable.				
pH (1% soln/water)	Not applicable.				
Boiling Point	The lowest known value is 126.5°C (259.7°F) (Acetic Acid, Butyl Ester). Weighted average: 164.17°C (327.5°F)				
Melting Point	May start to solidify at -77.9°C (-108.2°F) based on data for: Acetic Acid, Butyl Ester. Weighted average: -78.33°C (-109°F)				
Critical Temperature	Not available.				
Specific Gravity	Weighted average: 0.98 (Water = 1)				
Vapor Pressure	The highest known value is 0.9 kPa (7.1 mm Hg) (at 20°C) (Benzene, ethyl-). Weighted average: 0.12 kPa (0.9 mm Hg) (at 20°C)				
Vapor Density	The highest known value is 4 (Air = 1) (Acetic Acid, Butyl Ester). Weighted average: 3.97 (Air = 1)				
Volatility	Not available.				
Odor Threshold	The lowest known value is 0.04 ppm (Acetic Acid, Butyl Ester) Weighted average: 0.11 ppm				
Water/Oil Dist. Coeff.	The product is much more soluble in octanol.				
Ionicity (in Water)	Not available.				
Dispersion Properties	Not dispersible in cold water, hot water. See solubility in methanol, diethyl ether, n-octanol, acetone.				
Solubility	Easily soluble in methanol, diethyl ether, acetone. Soluble in n-octanol. Insoluble in cold water, hot water.				

Section 4. Fire and Explosion Hazard

The Product is:	Flammable.
Fire Hazards in Presence of Various Substances	Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Fire Fighting Media and Instructions	SMALL FIRE: Use dry chemical powder. LARGE FIRE: Use water spray or fog. Cool containers with water jet in order to prevent pressure build-up, auto-ignition or explosion.
Special Remarks on Fire Hazards	Vapor may travel considerable distance to source of ignition and flash back. (Acetic Acid, Butyl Ester)
Flash Points	The lowest known value is Closed cup: 24°C (75.2°F). (Tagliabue.). Open cup: 37.8°C (100°F). (Cleveland). (Benzene, dimethyl-)
Flammable Limits	The greatest known range is Lower: 1.1% Upper: 7% (Benzene, dimethyl-)
Auto-Ignition Temperature	The lowest known value is 407°C (764.6°F) (Acetic Acid, Butyl Ester).
Products of Combustion	These products are carbon oxides (CO, CO ₂), nitrogen oxides (NO, NO ₂ etc.).
Explosion Hazards in Presence of Various Substances	Highly explosive in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Special Remarks on Explosion Hazards	Not available.

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Section 5. Reactivity Data

Stability	The product is stable.
Decomposition products	Not available.
Conditions of Instability	High heat and moisture. (Hexane, 1,6-diisocyanato-)
Incompatibility with various substances	Highly reactive or incompatible with the following materials: oxidizing materials. Reactive or incompatible with the following materials: reducing materials, organic materials, metals, acids and alkalis.
Corrosivity	Not available.
Special Remarks on Reactivity	Not available.
Special Remarks on Corrosivity	Not available.

Section 6. Toxicological Properties

Routes of Entry	Dermal contact. Eye contact. Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 3500 mg/kg [Rat]. (Benzene, ethyl-). Acute dermal toxicity (LD50): 5000 mg/kg [Rabbit]. (Acetic Acid, Butyl Ester). Acute toxicity of the gas (LC50): 18500 mg/m ³ 1 hour/hours [Rat]. (Hexane, 1,6-diisocyanato-, homopolymer).
Effects of Acute Exposure	Very hazardous in case of inhalation. Hazardous in case of ingestion. Slightly hazardous in case of skin contact (permeator).
Chronic Effects on Humans	CARCINOGENIC EFFECTS: Classified A2 (Suspected for humans.) by ACGIH, 2A (Probable for human.) by IARC [Hexane, 1,6-diisocyanato-]. Classified None. by OSHA [Hexane, 1,6-diisocyanato-]. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to blood, lungs, the nervous system. Repeated or prolonged exposure to the substance can produce target organs damage.
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	Medical supervision of all employees who handle or come in contact with isocyanates is recommended. These should include preemployment and periodic medical examinations with pulmonary function test (FEV, FVC as a minimum). Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases or recurrent skin aczema or sensitization should be excluded from working with isocyanates. Once a person is diagnosed as sensitized to an isocyanate, no further exposure can be permitted. (Polymeric Isocyanate)
Special Remarks on Other Toxic Effects on Humans	Material is irritating to mucous membranes and upper respiratory tract. (Acetic Acid, Butyl Ester)
Exposure Limits	Not available.

Section 7. Preventive Measures

Personal Protection	Safety glasses. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Vapor respirator. Boots. Gloves. Self-contained breathing apparatus (SCBA) should be used to avoid inhalation of the product. Suggested protective clothing might not be adequate. Consult a specialist before handling this product.
Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are close to the workstation location.
Small Spill	Absorb with an inert material and transfer the spilled material and absorbent to an appropriate waste disposal container.

Large Spill	Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with dry earth, sand or other non-combustible material. Do not allow water to enter container. Do not touch spilled material. Prevent entry into sewers, basements or confined areas. Dike if necessary. Call for assistance on disposal.	
Waste Disposal	Waste must be disposed of in accordance with federal, state and local environmental control regulations.	
Precautions	Keep locked up. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, reducing agents, acids, alkalis, moisture.	
Storage	Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).	
TDG Classification	3	
PIN	1263 PAINT	PG: II
Special Provisions for Transport	-	
Federal and State Regulations	<p>WARNING: This product contains chemical/chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.: Benzene, 1,3-diisocyanatomethyl-</p> <p>WARNING: This product contains chemical/chemicals known to the state of California to cause cancer.: Benzene, 1,3-diisocyanatomethyl-</p> <p>Illinois toxic substances disclosure to employee act: Benzene, ethyl-</p> <p>New York release reporting list: Acetic Acid, Butyl Ester</p> <p>New York acutely hazardous substances: Benzene, ethyl-</p> <p>Rhode Island RTK hazardous substances: Benzene, ethyl-</p> <p>Pennsylvania RTK: Acetic Acid, Butyl Ester; Benzene, ethyl-; Benzene, dimethyl-</p> <p>Florida: Acetic Acid, Butyl Ester; Benzene, ethyl-</p> <p>Minnesota: Acetic Acid, Butyl Ester; Benzene, ethyl-</p> <p>Massachusetts RTK: Acetic Acid, Butyl Ester; Benzene, ethyl-</p> <p>New Jersey: Acetic Acid, Butyl Ester; Benzene, ethyl-; Hexane, 1,6-diisocyanato-</p> <p>TSCA 8(b) inventory: Acetic Acid, Butyl Ester; Benzene, ethyl-; Benzene, dimethyl-</p> <p>TSCA 5(e) substance consent order: Acetic Acid, Butyl Ester</p> <p>TSCA 8(d) H and S data reporting: Benzene, ethyl-</p> <p>TSCA 12(b) annual export notification: Acetic Acid, Butyl Ester</p> <p>SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Acetic Acid, Butyl Ester; Benzene, ethyl-: Fire hazard, Immediate (acute) health hazard; Benzene, dimethyl-: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard</p> <p>CERCLA: Hazardous substances.: Acetic Acid, Butyl Ester; Benzene, ethyl-: 1000 lbs. (453.6 kg); Benzene, dimethyl-: 100 lbs. (45.36 kg);</p>	
Other Regulations	OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).	
Other Classifications	WHMIS (Canada)	<p>Class B-2: Flammable liquid</p> <p>Class D-2A: Material causing other toxic effects (Very toxic).</p> <p>Class D-2B: Material causing other toxic effects (Toxic).</p>
	HCS (U.S.A.)	Contains material which may cause cancer Toxic Target organ effects
Hazardous Material Information System (U.S.A.)	Health Hazard	* 1
	Fire Hazard	3
	Reactivity	2
	Personal Protection	G
National Fire Protection Association (U.S.A.)	Health	1
	Fire Hazard	3
	Reactivity	0
	Specific Hazard	

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Section 8. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin Contact	Wash with soap and water. Get medical attention if irritation develops.
Hazardous Skin Contact	Not available.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Hazardous Inhalation	Move the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Warning: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.
Ingestion	Do not induce vomiting. Examine the lips and mouth to ascertain if the tissues are damaged, a possible indication that toxic material was ingested. The absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.
Hazardous Ingestion	Not available.

Section 9. Preparation Information

References	-Manufacturers Material Safety Data Sheets.
Other Special Considerations	Not available.
Related Information	This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by CPR.
Preparation Information	Validated by S.Bice on 9/15/2006. Verified by S.Bice. Printed 9/27/2006.
Information Contact	Prepared by the Health, Safety and Environment Department, Chemcraft International Inc., P.O. Box 458, 155, Rose Glen Road North, Port Hope, ON. Canada. Phone: 905 885-6388 Fax: 905 885-5097

Notice to Reader

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