MaterialSafety DataSheet

Section 1. Product Identification and Use

Product Name - Trade Name **999-067 CATALYST**

Supplier - Manufacturer

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CANUTEC (613) 996-6666

Code	999-067
Synonym	CATALYST
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	30 - 50	ORAL (LD50): Acute: 14130 mg/kg [Rat]. 7100 mg/kg [Mouse]. DERMAL (LD50): Acute: 5000 mg/kg [Rabbit]. 8770 mg/kg [Guinea pig].	**OSHA (Canada).** TWA: 150 ppm STEL: 200 ppm **ACGIH (Canada, 2000).** TWA: 150 ppm STEL: 200 ppm
Hexamethylene diisocyanate homopolymer	28182-81-2	30 - 50	ORAL (LD50): Acute: >10000 mg/kg [Rat]. DERMAL (LD50): Acute: >5000 mg/kg [Rabbit].	Not available.
Xylenes	1330-20-7	5 - 15	ORAL (LD50): Acute: 4300 mg/kg [Rat.].	**ACGIH (Canada, 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 (Canada).** TWA: 100 ppm STEL: 125 ppm
Hexamethylene diisocyanate	822-06-0	0.1 - 1	ORAL (LD50): Acute: 350 mg/kg [Mouse]. 768 mg/kg [Rat]. DERMAL (LD50): Acute: 617 mg/kg [Rabbit].	**ACGIH (Canada).** TWA: 0.005 ppm

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.

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Section 3. Physical Data

Physical State and Appearance	Liquid.
Color	Not available. **Odor** Not available. **Taste** 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: 173.26°C (343.9°F)
Melting Point	May start to solidify at -77.9°C (-108.2°F) based on data for: Acetic Acid, Butyl Ester. Weighted average: -78.54°C (-109.4°F)
Critical Temperature	Not available.
Specific Gravity	Weighted average: 0.99 (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: 3.96 (Air = 1)
Volatility	Not available.
Odor Threshold	The lowest known value is 0.04 ppm (Acetic Acid, Butyl Ester) Weighted average: 0.13 ppm
Water/Oil Dist. Coeff.	The product is much more soluble in octanol.
Ionicity (in Water)	Not available.
Dispersion Properties	Is not dispersed 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 presence of open flames, sparks and static discharge, of heat.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition 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: 15°C (59°F). Open cup: 27°C (80.6°F). (Cleveland). (Benzene, ethyl-)
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...).
Explosion Hazards in Presence of Various Substances	Highly explosive in presence of open flames, sparks and static discharge.
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	Reactive with oxidizing agents, reducing agents, acids, alkalis, moisture. Slightly reactive to reactive with organic materials, metals.
Corrosivity	Not available.
Special Remarks on Reactivity	Extremely reactive; reacts readily with water, alkalies, amines, alcohols and most acids. (Benzenesulfonyl isocyanate, 4-methyl-)
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(s) [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 human.) 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	Prolonged or repeated contact with skin can cause defatting and drying of the skin resulting in skin irritaion and dermatitis. Prolonged exposure to high vapour concentration can cause headache, dizziness, nausea and central nervous system depression. High level exposure to Xylene in laboratory animals, often at levels which are toxic to the mother, have affected the development of the fetus. The revelance of this to humans is not known. (Benzene, dimethyl-)
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. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; 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 proximal to the work-station location.
Small Spill	Absorb with an inert material and put the spilled material in an appropriate waste disposal.

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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 get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. 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	Illinois toxic substances disclosure to employee act: Benzene, ethyl- New York release reporting list: Acetic Acid, Butyl Ester New York acutely hazardous substances: Benzene, ethyl- Rhode Island RTK hazardous substances: Benzene, ethyl- Pennsylvania RTK: Acetic Acid, Butyl Ester; Benzene, ethyl-; Benzene, dimethyl- Florida: Acetic Acid, Butyl Ester; Benzene, ethyl- Minnesota: Acetic Acid, Butyl Ester; Benzene, ethyl- Massachusetts RTK: Acetic Acid, Butyl Ester; Benzene, ethyl- New Jersey: Acetic Acid, Butyl Ester; Benzene, ethyl-; Hexane, 1,6-diisocyanato- TSCA 8(b) inventory: Acetic Acid, Butyl Ester; Benzene, ethyl-; Benzene, dimethyl- TSCA 5(e) substance consent order: Acetic Acid, Butyl Ester TSCA 8(d) H and S data reporting: Benzene, ethyl- TSCA 12(b) annual export notification: Acetic Acid, Butyl Ester 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 CERCLA: Hazardous substances.: Acetic Acid, Butyl Ester; Benzene, ethyl-: 1000 lbs. (453.6 kg); Benzene, dimethyl-: 100 lbs. (45.36 kg);
Other Regulations	OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
Other Classifications	**WHMIS (Canada)** **Class B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).** **Class D-2A: Material causing other toxic effects (VERY TOXIC).** **Class D-2B: Material causing other toxic effects (TOXIC).** **HCS (U.S.A.)** Flammable liquid Irritating material 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**	0
	Fire Hazard	0
	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 Evacuate 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 whether the tissues are damaged, a possible indication that the 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

- Please note that this material contains isocyanates as a component of the formulation. Isocyanates have been prescribed as a designated substance (R.R.O. 1990, Reg. 182, s. 2) by the Government of Ontario under the Occupational Health and Safety Act (the Act). This Occupational Health and Safety Division of the Ministry of Labour is responsible for administering the Act. The Act places duties on employers to take all precautions reasonable in the circumstances to protect the health of workers. Employers are also required to comply with regulations and to provide information, instruction and supervision to workers.
- A “designated substance” is defined by the Act to mean a biological, chemical or physical agent or combination thereof prescribed as a designated substance to which the exposure of a worker is prohibited, regulated, restricted, limited or controlled. As such, there are regulations associated with the production, use handling and storage of isocyanates such as exposure limits, assessment and control programs and medical surveillance. Information regarding the type of isocyanate supplied by Chemcraft Inc. and used at your facility may be obtained from the individual MSDS’s of the materials purchased.
- There are several informative books and guides to the Act and the Regulation respecting Isocyanates published by the Ontario Government such as:

· Occupational Health and Safety Act
· Occupational Health and Safety Act and Regulations for Industrial Establishments
· Regulations respecting Isocyanates - made under the Occupational Health and Safety Act
· Designated Substances in the Workplace: A Guide to the Isocyanates Regulation

These books may be obtained through your local office of the Ministry of Labour.
- Please be aware that the regulations may require you to control exposure limits by the use of personal protective equipment. In this case, the regulations clearly state that the use of charcoal filter respirators are not an effective control for isocyanates. When respiratory protection is required fresh air respirators or self-contained breathing apparatus, as specified in the Respirator Code, must be used.
- If you have further questions regarding these products or the regulations, or require more detailed information, you may contact us or your local branch of the Ministry of Labour.

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 Florendo Tarnate on 9/16/2005.**
Verified by Florendo Tarnate.
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