

Material Safety Data Sheet

Section 1. Product Identification and Use

Product Name - Trade Name **999-098 CATALYST**

Supplier - Manufacturer **Chemcraft International Inc.,**

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Code 999-098

Synonym CATALYST

Chemical Name Not applicable.

Chemical Family Aromatic sulfonic acid. (Acid.)

Chemical Formula Not applicable.

Material Uses Coatings: Hardener for resins.

Product Identification Number (PIN) 2924, FLAMMABLE LIQUID, CORROSIVE, N.O.S. (TOLUENE SULFONIC ACID, ETHYL ACETATE)

Section 2. Hazardous Ingredients

Name	CAS #	% by Weight	Exposure Limits	
			LC ₅₀ /LD ₅₀	TLV/PEL
Ethyl alcohol	64-17-5	60-100	ORAL (LD50): Acute: 7060 mg/kg [Rat].	TWA: 1000 (ppm) from OSHA (PEL) [United States] TWA: 1000 (ppm) from ACGIH (TLV) [United States] TWA: 1000 (ppm) from NIOSH
Ethyl Acetate	141-78-6	5-10	ORAL (LD50): Acute: 5600 mg/kg [Rat].	TWA: 400 from OSHA (PEL) [United States] TWA: 400 (ppm) from ACGIH (TLV) [United States] TWA: 400 (ppm) from NIOSH TWA: 1400 (mg/m ³) from NIOSH
n-Butanol	71-36-3	5-10	ORAL (LD50): Acute: 2510 mg/kg [Rat]. 790 mg/kg [Rat]. DERMAL (LD50): Acute: 5300 mg/kg [Rabbit]. 3400 mg/kg [Rabbit].	TWA: 50 CEIL: 50 (ppb)
Methyl alcohol	67-56-1	1-5	ORAL (LD50): Acute: 6200 mg/kg [Rat]. 5600 mg/kg [Rat]. DERMAL (LD50): Acute: 15800 mg/kg [Rabbit].	TWA: 200 (ppm) from OSHA (PEL) [United States] TWA: 200 STEL: 250 (ppm) from ACGIH (TLV) [United States] [2000] TWA: 200 STEL: 250 (ppm) from NIOSH [1997] TWA: 260 STEL: 325 (mg/m ³) from NIOSH
Anhydrous para-toluenesulfonic acid	104-15-4	5-10	ORAL (LD50): Acute: 2480 mg/kg [Rat].	Not available.

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)	Acidic.
Boiling Point	The lowest known value is 64.5°C (148.1°F) (Methanol). Weighted average: 81.16°C (178.1°F)
Melting Point	May start to solidify at -83.6°C (-118.5°F) based on data for: Acetic acid, ethyl ester. Weighted average: -108.22°C (-162.8°F)
Critical Temperature	Not available.
Specific Gravity	Weighted average: 0.85 (Water = 1)
Vapor Pressure	The highest known value is 12.2 kPa (@ 20°C) (Methanol). Weighted average: 5.92 kPa (@ 20°C)
Vapor Density	The highest known value is 3.04 (Air = 1) (Acetic acid, ethyl ester). Weighted average: 1.81 (Air = 1)
Volatility	Not available.
Odor Threshold	The highest known value is 180 ppm (Ethanol)
Water/Oil Dist. Coeff.	The product is more soluble in water.
Ionicity (in Water)	Not available.
Dispersion Properties	Partially dispersed in methanol, diethyl ether. See solubility in water, methanol, diethyl ether, n-octanol.
Solubility	Easily soluble in cold water, hot water, methanol, diethyl ether. Partially soluble in n-octanol.

Section 4. Fire and Explosion Hazard

The Product is:	Flammable.
Fire Hazards in Presence of Various Substances	Flammable in presence of open flames and sparks, of heat. Slightly flammable to flammable in presence of oxidizing materials. Non-flammable in presence of shocks, of reducing materials, of combustible materials, of organic materials, of metals, of acids, of alkalis, of moisture.
Fire Fighting Media and Instructions	Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, 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	Containers should be grounded. (Ethanol)
Flash Points	The lowest known value is CLOSED CUP: -1°C (30.2°F). (Tagliabue). OPEN CUP: -0.5°C (31.1°F). (Tagliabue). (Acetic acid, ethyl ester)
Flammable Limits	The greatest known range is LOWER: 6% UPPER: 36.5% (Methanol)
Auto-Ignition Temperature	The lowest known value is 343°C (649.4°F) (1-Butanol).
Products of Combustion	These products are carbon oxides (CO, CO ₂), sulfur oxides (SO ₂ , SO ₃ ...).
Explosion Hazards in Presence of Various Substances	Explosive in presence of open flames and sparks. Non-explosive in presence of shocks, of reducing materials, of combustible materials, of organic materials, of metals, of acids, of alkalis, of moisture.
Special Remarks on Explosion Hazards	Not available.

Section 5. Reactivity Data

Stability	The product is stable.
Decomposition products	Not available.
Conditions of Instability	Not available.
Incompatibility with various substances	Reactive with oxidizing agents. Slightly reactive to reactive with reducing agents. Non-reactive with moisture.

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Corrosivity	Non-corrosive in presence of glass, of aluminum, of zinc, of copper, of stainless steel(304), of stainless steel(316).
Special Remarks on Reactivity	Not available.
Special Remarks on Corrosivity	Not available.

Section 6. Toxicological Properties

Routes of Entry	Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 790 mg/kg [Rat]. (1-Butanol). Acute dermal toxicity (LD50): 3400 mg/kg [Rabbit]. (1-Butanol).
Effects of Acute Exposure	Very hazardous in case of skin contact (corrosive), of ingestion. Hazardous in case of inhalation. Slightly hazardous in case of eye contact (irritant). Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath.
Chronic Effects on Humans	CARCINOGENIC EFFECTS: Classified A4 (Not classifiable for human or animal.) by ACGIH [Ethanol]. Classified A5 (Not suspected for human.) by ACGIH, 4 (Probably not for human.) by IARC [Acetic acid, ethyl ester]. Classified A5 (Not suspected for human.) by ACGIH, 4 (Probably not for human.) by IARC, 4 (No evidence.) by NTP, None. by OSHA [1-Butanol]. Classified A5 (Not suspected for human.) by ACGIH, 4 (Probably not for human.) by IARC, 4 (No evidence.) by NTP, None. by OSHA [Methanol]. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [PROVEN] [Ethanol]. The substance is toxic to the nervous system, the reproductive system. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	Can cause gastrointestinal disturbances. (1-Butanol)
Special Remarks on Other Toxic Effects on Humans	Moderately toxic and narcotic in high concentrations. Experimentally tumorigen. (Ethanol)
Exposure Limits	Ethanol TWA: 1000 (ppm) from OSHA (PEL) [United States] TWA: 1000 (ppm) from ACGIH (TLV) [United States] TWA: 1000 (ppm) from NIOSH Acetic acid, ethyl ester TWA: 400 from OSHA (PEL) [United States] TWA: 400 (ppm) from ACGIH (TLV) [United States] TWA: 400 (ppm) from NIOSH TWA: 1400 (mg/m ³) from NIOSH 1-Butanol TWA: 50 CEIL: 50 (ppb) Methanol TWA: 200 (ppm) from OSHA (PEL) [United States] TWA: 200 STEL: 250 (ppm) from ACGIH (TLV) [United States] [2000] TWA: 200 STEL: 250 (ppm) from NIOSH [1997] TWA: 260 STEL: 325 (mg/m ³) from NIOSH Consult local authorities for acceptable exposure limits.

Section 7. Preventive Measures

Personal Protection	Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.
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 threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

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Small Spill	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of sodium carbonate.	
Large Spill	Flammable liquid. Corrosive liquid. 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. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of sodium carbonate. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.	
Waste Disposal	Waste must be disposed of in accordance with federal, state and local environmental control regulations.	
Precautions	Keep locked up. Keep container dry. 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. Never add water to this product. 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.	
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	Class 3: Flammable liquid. Class 8: Corrosive material	
PIN	2924, FLAMMABLE LIQUID, PG: II CORROSIVE, N.O.S. (TOLUENE SULFONIC ACID, ETHYL ACETATE)	
Special Provisions for Transport	Not available.	
Federal and State Regulations	New York release reporting list: Acetic acid, ethyl ester; Methanol Rhode Island RTK hazardous substances: Acetic acid, ethyl ester; Methanol Pennsylvania RTK: Ethanol; Acetic acid, ethyl ester; Methanol: (environmental hazard) Florida: Acetic acid, ethyl ester; Methanol Minnesota: Ethanol; Acetic acid, ethyl ester; Methanol Massachusetts RTK: Ethanol; Acetic acid, ethyl ester; Methanol New Jersey: Ethanol; Acetic acid, ethyl ester; Methanol TSCA 8(b) inventory: Ethanol; Acetic acid, ethyl ester; K-Cure 129B; Toluenesulfonic Acid High Para TSCA 5(e) substance consent order: Acetic acid, ethyl ester TSCA 12(b) annual export notification: Acetic acid, ethyl ester SARA 302/304/311/312 extremely hazardous substances: N-Butyl Alcohol; Toluenesulfonic Acid High Para SARA 302/304/311/312 hazardous chemicals: Methanol SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Ethyl Acetate: fire, immediate health hazard SARA 313 toxic chemical notification and release reporting: N-Butyl Alcohol 7%; Methyl Alcohol 3% CERCLA: Hazardous substances.: Ethyl Acetate; N-Butyl Alcohol; Methyl Alcohol;	
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-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC). CLASS E: Corrosive liquid.
	HCS (U.S.A.)	Class: Flammable liquid having a flash point lower than 37.8°C (100°F). Class: Target organ effects. Class: Reproductive toxins. CLASS: Corrosive material
Hazardous Material Information System (U.S.A.)	Health Hazard	* 3
	Fire Hazard	3
	Reactivity	0
	Personal Protection	

National Fire Protection Association (U.S.A.)	Health	3
	Fire Hazard	3
	Reactivity	0
	Specific Hazard	

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. Cold water may be used. Get medical attention immediately.
Skin Contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
Hazardous Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
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 immediate 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	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 C. Kelly on 10/30/2001. Verified by C. Kelly. Printed 9/16/2003.
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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