

Material Safety Data Sheet

Section 1. Product Identification and Use

Product Name - Trade Name **999-009 CATALYST**

Supplier - Manufacturer **Chemcraft International Inc.,**
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Canada L1A 3Z3

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For Transport Emergency or After Hours

CANUTEC (613) 996-6666

Code 999-009

Synonym CATALYST

Chemical Name Not applicable.

Chemical Family Acid. (Acid.)

Chemical Formula Not applicable.

Material Uses Coatings: Surface coatings and finishes.

Product Identification Number (PIN) 2924 FLAMMABLE LIQUID CORROSIVE, N.O.S. (ethyl acetate)

Section 2. Hazardous Ingredients

Name	CAS #	% by Weight	Exposure Limits	
			LC ₅₀ /LD ₅₀	TLV/PEL
Ethyl alcohol	64-17-5	30-60	ORAL (LD50): Acute: 7060 mg/kg [Rat].	OSHA (Canada). TWA: 1000 ppm ACGIH (Canada). TWA: 1000 ppm
Ethyl Acetate	141-78-6	5-10	ORAL (LD50): Acute: 5600 mg/kg [Rat].	ACGIH (Canada). TWA: 400 ppm
Anhydrous para-toluenesulfonic acid	104-15-4	30-60	ORAL (LD50): Acute: 2480 mg/kg [Rat].	Not available.
Phosphoric acid	7664-38-2	1-5	ORAL (LD50): Acute: 1530 mg/kg [Rat]. DERMAL (LD50): Acute: 2740 mg/kg [Rabbit].	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.

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 77°C (170.6°F) (Acetic Acid, Ethyl Ester). Weighted average: 79.73°C (175.5°F)

Melting Point May start to solidify at 0°C (32°F) based on data for: Water. Weighted average: -102.89°C (-153.2°F)

Critical Temperature Not available.

Specific Gravity Weighted average: 0.96 (Water = 1)

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Vapor Pressure	The highest known value is 9.7 kPa (73 mmHg) (at 20°C) (Acetic Acid, Ethyl Ester). Weighted average: 5.96 kPa (44.7 mmHg) (at 20°C)
Vapor Density	The highest known value is 3.04 (Air = 1) (Acetic Acid, Ethyl Ester). Weighted average: 1.73 (Air = 1)
Volatility	Not available.
Odor Threshold	The lowest known value is 180 ppm (Ethanol)
Water/Oil Dist. Coeff.	The product is much more soluble in water.
Ionicity (in Water)	Not available.
Dispersion Properties	Partially dispersed in methanol, diethyl ether. See solubility in water, methanol, diethyl ether.
Solubility	Easily soluble in cold water, hot water, methanol, diethyl ether. Insoluble 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, sparks and static discharge, of heat. Slightly flammable to flammable in presence of oxidizing materials.
Fire Fighting Media and Instructions	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: 3.3% UPPER: 19% (Ethanol)
Auto-Ignition Temperature	The lowest known value is 422°C (791.6°F) (Ethanol).
Products of Combustion	These products are carbon oxides (CO, CO ₂), sulfur oxides (SO ₂ , SO ₃ ...), phosphates.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
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, alkalis.
Corrosivity	Not available.
Special Remarks on Reactivity	Incompatible with finely powdered metals. (Phosphoric acid)
Special Remarks on Corrosivity	Corrosive to ferrous metals and alloys. (Phosphoric acid)

Section 6. Toxicological Properties

Routes of Entry	Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 1530 mg/kg [Rat.]. (Phosphoric acid). Acute dermal toxicity (LD50): 2740 mg/kg [Rabbit.]. (Phosphoric acid). Acute toxicity of the vapor (LC50): 8000 ppm 4 hour(s) [Rat.]. (Ethanol).
Effects of Acute Exposure	Extremely hazardous in case of skin contact (corrosive). Very hazardous in case of ingestion. Slightly hazardous in case of inhalation. 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.

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Chronic Effects on Humans	<p>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].</p> <p>MUTAGENIC EFFECTS: Not available.</p> <p>TERATOGENIC EFFECTS: Not available.</p> <p>DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [PROVEN] [Ethanol].</p> <p>The substance is toxic to the reproductive system.</p> <p>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.</p>
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	Not available.
Special Remarks on Other Toxic Effects on Humans	Moderately toxic and narcotic in high concentrations. Experimentally tumorigen. (Ethanol)
Exposure Limits	Not available.

Section 7. Preventive Measures

Personal Protection	Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Chemical resistant gloves, such as Norfoil should be used when handling this product. Please consult a Glove Manufacturer for alternate choices. Boots.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Vapor respirator. Boots. Chemical resistant gloves, such as Norfoil should be used when handling this product. Please consult a Glove Manufacturer for alternate choices. 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	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	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.
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. 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, alkalis.
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 8
PIN	2924 FLAMMABLE LIQUID PG: II CORROSIVE, N.O.S. (ethyl acetate)
Special Provisions for Transport	
Federal and State Regulations	<p>New York release reporting list: Acetic Acid, Ethyl Ester</p> <p>Rhode Island RTK hazardous substances: Acetic Acid, Ethyl Ester</p> <p>Pennsylvania RTK: Ethanol; Acetic Acid, Ethyl Ester</p> <p>Florida: Acetic Acid, Ethyl Ester</p> <p>Minnesota: Ethanol; Acetic Acid, Ethyl Ester</p> <p>Massachusetts RTK: Ethanol; Acetic Acid, Ethyl Ester</p> <p>New Jersey: Ethanol; Acetic Acid, Ethyl Ester</p> <p>TSCA 8(b) inventory: Ethanol; Acetic Acid, Ethyl Ester</p> <p>TSCA 5(e) substance consent order: Acetic Acid, Ethyl Ester</p> <p>TSCA 12(b) annual export notification: Acetic Acid, Ethyl Ester</p> <p>SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Acetic Acid, Ethyl Ester:</p> <p>Fire Hazard, Immediate (Acute) Health Hazard</p> <p>SARA 313 toxic chemical notification and release reporting: Phosphoric acid 1.6%</p>

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	CERCLA: Hazardous substances.: Acetic Acid, Ethyl Ester;
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). 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: 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.M. Kelly on 11/19/2004. Verified by C.M. Kelly. Printed 12/13/2004.
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

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Notice to Reader

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