



MATERIAL SAFETY DATA SHEET

FOR INDUSTRIAL USE ONLY

DESCRIPTION: Catalyst H-7000

1. Chemical Product and Company Identification

DESCRIPTION: **Catalyst H-7000**
 PRODUCT CODE: 339349
 PRODUCT TYPE: Liquid UF Catalyst
 APPLICATION: UF Resin Catalyst

Manufacturer/Supplier Information

MSDS prepared by:
 Hexion Specialty Chemicals, Inc.
 155 West A Street, Bldg. A-1
 Springfield, OR
 97477

For Emergency Medical Assistance
 Call Health & Safety Information Services
 1-866-303-6949

For additional health and safety or regulatory information, call (541)744-3256.

2. Composition, Information on Ingredients

The ingredients listed below have been associated with one or more immediate and/or delayed(*) health hazards. Risk of damage and effects depends upon duration and level of exposure. BEFORE USING, HANDLING, OR EXPOSURE TO THESE INGREDIENTS, READ AND UNDERSTAND THE MSDS.

		% by weight
77-92-9	Citric Acid	1.0 - 5.0
1318-74-7	Kaolinite (H4Al2Si2O9)	10.0 - 30.0
12125-02-9	Ammonium Chloride	1.0 - 5.0

Any applicable Canadian trade secret numbers will be listed in Section 15.2.

3. Hazards Identification

3.1 Emergency Overview

Appearance: Light brown viscous liquid
 Odor: Mild

CAUTION!

May be harmful if inhaled. May cause irritation of nose, throat and lungs.
 Causes eye irritation.

HMIS Rating

HEALTH = 2 (moderate)
 FLAMMABILITY = 0 (minimal)

REACTIVITY = 0 (minimal)

3.2 Potential Health Effects

Immediate Hazards

INGESTION: Not expected to be harmful under normal conditions of use.
 INHALATION: May be harmful if inhaled. Liquid or vapor may cause irritation of nose, throat and lungs.
 SKIN: May cause irritation on prolonged or repeated contact.
 EYES: Causes irritation.

Delayed Hazards

None of the components present in this product at concentrations equal to or greater than 0.1% have been listed by NTP, classified by IARC, nor regulated by OSHA as a carcinogen.

4. First Aid Measures

INGESTION: If accidentally swallowed, dilute by drinking large quantities of water. If the individual is drowsy or unconscious, do not give anything by mouth. Immediately contact poison control center or hospital emergency room for advice on whether to induce vomiting or for any other additional treatment directions.

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Call a physician.

SKIN: In case of irritation, flush with water.

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held apart during irrigation to ensure water contact with entire surface of eyes and lids. Call a physician.

5. Fire Fighting Measures

Flash point	Not applicable
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Autoignition temperature	Not applicable

Will not burn.
 In case of fire, soak (flood) with water.

6. Accidental Release Measures

Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. For large spills, use water spray to disperse vapors and flush spill area. Prevent runoff from entering waterways or sewers. Use appropriate Personal Protective Equipment (PPE).

7. Handling and Storage

7.1 Handling

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin and clothing. Wash thoroughly after handling. Always use appropriate Personal Protective Equipment (PPE).

INHALATION: Avoid breathing vapor. Use with adequate ventilation.

SKIN: Avoid prolonged or repeated contact with skin and clothing.

EYES: Avoid contact with eyes.

7.2 Storage

Store in cool, dry area away from sun and heat.
Keep containers tightly closed.

8. Exposure Controls/Personal Protection

8.1 Exposure Controls

ENGINEERING CONTROLS: The following exposure control techniques may be used to effectively minimize employee exposure: local exhaust ventilation, enclosed system design, process isolation and remote control in combination with appropriate use of personal protective equipment and prudent work practices. These techniques may not necessarily address all issues pertaining to your operations. We, therefore, recommend that you consult with experts of your choice to determine whether or not your programs are adequate.

If airborne contaminants are generated when the material is heated or handled, sufficient ventilation in volume and air flow patterns should be provided to keep air contaminant concentration levels below acceptable criteria.

8.2 Personal Protection

Where air contaminants can exceed acceptable criteria, use NIOSH (42 CFR Part 84) approved respiratory protection equipment. Respirators should be selected based on the form and concentration of contaminants in air in accordance with OSHA laws and regulations or other applicable standards or guidelines, including ANSI standards regarding respiratory protection. Use goggles if contact is likely. Wear impervious gloves as required to prevent skin contact.

8.3 Exposure Guidelines

77-92-9		Citric Acid	
ACGIH TLV	8-hr TWA	10 mg/m ³	inhalable; Particles (Insoluble or Poorly Soluble) Not Otherwise Specified
OSHA PEL	8-hr TWA	5 mg/m ³	respirable particulate total dust
	8-hr TWA	15 mg/m ³	
1318-74-7		Kaolinite (H₄Al₂Si₂O₉)	
ACGIH TLV	8-hr TWA	10 mg/m ³	inhalable particulate; Particles (Insoluble or Poorly Soluble) Not Otherwise Specified

OSHA PEL	8-hr TWA	5 mg/m3	respirable particulate
	8-hr TWA	15 mg/m3	total dust
12125-02-9	Ammonium Chloride		
ACGIH TLV	8-hr TWA	10 mg/m3	Fume
	STEL (15 min)	20 mg/m3	
OSHA PEL	None		
	Established		
	Remanded TWA	10 mg/m3	Fume; 1989 PEL remanded, but in effect in some states
	Remanded		
	STEL	20 mg/m3	

9. Physical and Chemical Properties

Appearance	Light brown viscous liquid
Odor	Mild
Odor threshold	Not available
Specific gravity	1.18 - 1.24
pH	2.7 - 3.2
Viscosity	5,000 - 8,500 cPs Brookfield
Freezing point	Less than -10 °C (14 °F)
Solubility in water	Appreciable
Octanol/water partition coefficient	Not available
Vapor pressure	17.5 mm Hg @25 °C (77 °F)
Vapor density	Not available
Evaporation rate	Approx. 0.3 (Butyl Acetate = 1)
Boiling point, 760 mm Hg	Approx. 102 °C (216 °F)

10. Stability and Reactivity

Normally stable as defined in NFPA 704-12(4-3.1).

Incompatibilities:

Alkalies and their carbonates; lead and silver salts.

Decomposition products may include:

Ammonia gas.

Hazardous polymerization:

Will not occur.

11. Toxicological Information

See Section 3 Hazards Identification information.

77-92-9 Citric Acid

LC50: Not available

LD50: Oral-rat= 3,000 mg/kg (Sax)

1318-74-7 Kaolinite (H4Al2Si2O9)

LC50: Not available

LD50: Not available

12125-02-9 Ammonium Chloride

LC50: Not available

LD50: Oral-rat= 1,650 mg/kg (Sax)

12. Ecological Information

Not determined

13. Disposal Considerations

Recover free liquid. Absorb residue and dispose of according to local, state/provincial, and federal requirements.

14. Transport Information**14.1 U.S. Department of Transportation (DOT)**

The data provided in this section is for information only and may not be specific to your package size. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

Regulation: Non regulated

14.2 Canadian Transportation of Dangerous Goods (TDG)

Regulation: Non regulated

15. Regulatory Information (Selected Regulations)**15.1 U.S. Federal Regulations****OSHA Hazards Communication Standard 29CFR1910.1200**

This material is a "health hazard" and/or a "physical hazard" as determined when reviewed according to the requirements of the Occupational Safety and Health Administration 29 CFR Part 1910.1200 "Hazard Communication" Standard.

SARA Title III: Section 311/312

Immediate health hazard

SARA Title III: Section 313 and 40 CFR Part 372

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.

Ammonia (total), includes anhydrous ammonia and 10% of ammonium ion in solution	12125-02-9	4.97%
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TSCA Section 8(b) Inventory

All reportable chemical substances are listed on the TSCA Inventory. We rely on certifications of compliance from our suppliers for chemical substances not manufactured by us.

15.2 Canadian Regulations

Workplace Hazardous Materials Information System (WHMIS)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR) and the MSDS contains all the information required by the CPR.

Class D2B

Canadian Environmental Protection Act (CEPA)

All reportable chemical substances are listed on the Domestic Substances List (DSL) or otherwise comply with CEPA new substance notification requirements.

National Pollutant Release Inventory (NPRI)

This product contains the following chemical(s) subject to the reporting requirements of the Canadian Environmental Protection Act (CEPA) subsection 16(1), National Pollutant Release Inventory.

Ammonia (total), includes ammonia and ammonium ion in solution	12125-02-9	4.97%
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16. Other Information

User's Responsibility

The OSHA Hazard Communication Standard 29CFR 1910.1200 and the Workplace Hazardous Materials Information System (WHMIS) require that the information contained on these sheets be made available to your workers. Educate and train your workers regarding OSHA and WHMIS precautions. Instruct your workers to handle this product properly. Consult with appropriate experts to guard against hazards associated with use of this product and its ingredients.

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