



# MATERIAL SAFETY DATA SHEET

FOR INDUSTRIAL USE ONLY

DESCRIPTION: Cascamite CM-24S

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## 1. Chemical Product and Company Identification

DESCRIPTION: **Cascamite CM-24S**  
PRODUCT CODE: 113917  
PRODUCT TYPE: Urea Formaldehyde Resin  
APPLICATION: General Purpose

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### 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.

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## 2. Hazards Identification

### 2.1 Emergency Overview

|            |                     |
|------------|---------------------|
| Appearance | White powder        |
| Odor       | Slight formaldehyde |

#### WARNING!

Combustible dust when finely divided or suspended in air. Presents a fire or explosion hazard when dispersed and ignited in air.  
Harmful if inhaled.  
Causes chemical burns to eyes.  
May be harmful if absorbed through skin.  
Causes skin irritation.  
May cause allergic skin reaction.

NORTH AMERICAN EMERGENCY RESPONSE GUIDE, 2000, NO: 171

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### HMIS Rating

|              |   |             |
|--------------|---|-------------|
| HEALTH       | = | 3 (serious) |
| FLAMMABILITY | = | 1 (slight)  |
| REACTIVITY   | = | 0 (minimal) |
| CHRONIC      | = | *           |

*HMIS® ratings involve data interpretations that may vary from company to company. They are intended only for the rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.*

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## 2.2 Potential Health Effects

### Immediate Hazards

|             |  |
|-------------|--|
| INGESTION:  | Not expected to be harmful under normal conditions of use. If accidentally swallowed, burns or irritation to mucous membranes, esophagus or GI tract can result. |
| INHALATION: | Harmful if inhaled. Can cause irritation of nose, throat and lungs.  |
| SKIN:       | May be harmful if absorbed through skin. Causes irritation.  |
| EYES:       | Causes chemical burns.   |

### Delayed Hazards

#### 50-00-0 Formaldehyde

May cause cancer. OSHA regulates formaldehyde as a potential human carcinogen. See the OSHA Formaldehyde Workplace Standard at 29CFR 1910.1048. Rats chronically exposed to 14 ppm formaldehyde contracted nasal cancer. The National Toxicology Program (NTP) has listed formaldehyde as a probable human carcinogen. The International Agency for Research on Cancer (IARC) has concluded formaldehyde is carcinogenic to humans.

Safe handling and use instructions are provided in this MSDS and in the OSHA Formaldehyde Workplace Standard at 29CFR1910.1048. OSHA has identified 0.5 ppm as the "Action Level". Please review and understand the guidance contained in this MSDS and refer to the OSHA Formaldehyde Standard for regulatory requirements that may be applicable to your operation and use.

For further information and a review of various studies, go to [www.osha.gov/SLTC/formaldehyde](http://www.osha.gov/SLTC/formaldehyde), [www.iarc.fr](http://www.iarc.fr) and other authoritative websites. May cause allergic skin reaction. Some reports suggest that formaldehyde may cause respiratory sensitization, such as asthma, and that preexisting respiratory and skin disorders may be aggravated by exposure.

## 3. 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.

|                              |                    |
|------------------------------|--------------------|
|                              | <b>% by weight</b> |
| <b>50-00-0 *Formaldehyde</b> | <b>1.0 - 5.0</b>   |

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

## 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. If breathing is difficult, give oxygen. Call a physician.   |

**SKIN:** Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing and shoes before reuse.

**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

Suitable Extinguishing Media: In case of fire, use water spray, dry chemical, "alcohol" foam or CO<sub>2</sub>. Use water to keep fire-exposed containers cool.

Will burn. Refer to NFPA Pamphlet No. 654, "Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids," if this material is to be reduced to or collected as a powder.

## 6. Accidental Release Measures

Gently sweep (scoop) up to avoid creating dust clouds and remove to a chemical disposal area. Prevent entry into natural bodies of water.

## 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:** Do not breathe dust or vapor. Use with adequate ventilation.

**SKIN:** Avoid contact with skin and clothing.

**EYES:** Do not get in eyes.

### 7.2 Storage

Keep container closed.  
Store in a cool, dry place.

## 8. Exposure Controls/Personal Protection

### 8.1 Exposure Guidelines

| 50-00-0   | Formaldehyde  |          |                        |                                      |
|-----------|---------------|----------|------------------------|--------------------------------------|
| ACGIH TLV | Ceiling       | 0.3 ppm  | 0.37 mg/m <sup>3</sup> | A2 - Suspected Human Carcinogen; SEN |
| OSHA PEL  | 8-hr TWA      | 0.75 ppm | 0.9 mg/m <sup>3</sup>  |                                      |
|           | STEL (15 min) | 2 ppm    | 2.5 mg/m <sup>3</sup>  |                                      |

## 8.2 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.

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## 8.3 Personal Protection

Where formaldehyde gas concentrations can exceed acceptable criteria, use NIOSH (42 CFR Part 84) approved full-facepiece respiratory protection equipment. Respirators should be selected based on the concentration of formaldehyde in air in accordance with the OSHA Formaldehyde Standard Respiratory Protection requirements at 29CFR 1910.1048y, and the OSHA Respiratory Protection Standard at 29CFR 1910.134 or other applicable standards or guidelines, including ANSI standards regarding respiratory protection. A full-facepiece respirator with cartridges or canisters specifically approved for formaldehyde may be used for exposure levels up to 7.5 ppm (10 times the PEL). Chemical safety goggles must be worn if there is a possibility of contact with liquid formaldehyde or excessive gas-phase exposures. A full-facepiece respirator complies with this requirement. Wear protective gloves as required to prevent skin contact. Protective gloves must be worn when handling formaldehyde solutions of 1% or higher. Consult your glove manufacturer for specific information on permeation, degradation and breakthrough data to ensure proper selection. Based on available information, butyl, nitrile and Viton appear to be quite impervious to various strengths of formaldehyde solutions. Other glove materials may be equally suitable depending on composition, thickness and use conditions. Where high concentrations of formaldehyde may be present, such as in an emergency, full body protection should be worn. Other protective equipment that must be available when handling formaldehyde solutions of 1% or higher include eye wash fountains and safety showers. Reusable protective clothing should be cleaned and ventilated after any formaldehyde contamination. See the OSHA Formaldehyde Standard requirements at 29CFR 1910.1048(h) Protective Equipment and Clothing and OSHA 29CFR 1910.1048(i) Hygiene Protection for other specific protective measures based on the form of formaldehyde, the conditions of use and the hazards to be prevented.

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## 9. Physical and Chemical Properties

|                                     |                     |
|-------------------------------------|---------------------|
| Appearance                          | White powder        |
| Odor                                | Slight formaldehyde |
| Odor threshold                      | Not available       |
| pH                                  | 7.5 - 8.7           |
| Boiling point, 760 mm Hg            | Not applicable      |
| Flash point                         | Not applicable      |
| Evaporation rate                    | Not applicable      |
| Lower explosion limit               | Not applicable      |
| Upper explosion limit               | Not applicable      |
| Vapor pressure                      | Not applicable      |
| Vapor density                       | Not applicable      |
| Specific gravity                    | Approx. 1.1         |
| Solubility in water                 | Soluble             |
| Octanol/water partition coefficient | Not applicable      |

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## 10. Stability and Reactivity

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### Chemical Stability

Normally stable as defined in NFPA 704-12(4-3.1). In common with most organic materials, this product should be treated as a combustible dust in the finely divided and suspended state.

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### Hazardous Decomposition Products

CO, CO<sub>2</sub>, aldehydes (including formaldehyde), hydrogen cyanide, particulate matter and other organic compounds by thermal decomposition in air.

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### Possibility of Hazardous Reactions

Hazardous polymerization is not expected to occur .

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## 11. Toxicological Information

See Section 3 Hazards Identification information.

### 50-00-0 Formaldehyde

LC50: rat=0.59 mg/l (Sax)

LD50: Oral-rat= 800 mg/kg (Merck); Skin-rabbit= 270 mg/kg (Sax)

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## 12. Ecological Information

No data for ecotoxicity has been found. Effects are expected to be minimal. The material is a soil mobile liquid initially which will solidify on aging. Biodegradation is expected to be very slow; bioaccumulation negligible.

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## 13. Disposal Considerations

Dispose of according to local, state/provincial, and federal requirements.

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## 14. Transport Information

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### 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 or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

|                             |  |
|-----------------------------|--|
| <b>Proper shipping name</b> | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Formaldehyde) |
| <b>UN/NA number</b>         | 3082   |
| <b>Class</b>                | 9  |
| <b>Packing group</b>        | III  |
| <b>Label</b>                | 9  |
| <b>RQ Ingredients</b>       | Formaldehyde   |

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### 14.2 Canadian Transportation of Dangerous Goods (TDG)

Regulation: Non regulated

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### 14.3 Other Regulations

- **ADR/RID**  
Regulation: Non regulated
- **IMO/IMDG**  

|                             |   |
|-----------------------------|---|
| <b>Proper shipping name</b> | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. |
| <b>UN Number</b>            | 3082  |
| <b>Class</b>                | Class 9   |
| <b>Packing group</b>        | III   |
| <b>Label</b>                | 9   |
- **IATA (Passenger)**  
Regulation: Non regulated

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## 15. Regulatory Information (Selected Regulations)

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### 15.1 U.S. Federal Regulations

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#### 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.

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#### SARA Title III: Section 311/312

Immediate health hazard  
Delayed health hazard

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#### 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.

|              |         |       |
|--------------|---------|-------|
| Formaldehyde | 50-00-0 | 1.47% |
|--------------|---------|-------|

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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.

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### 15.2 Canadian Regulations

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#### 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 D1A  
Class D1B  
Class D2A  
Class D2B

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## 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.

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## 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.

|              |         |       |
|--------------|---------|-------|
| Formaldehyde | 50-00-0 | 1.47% |
|--------------|---------|-------|

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## 16. Other Information

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### 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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### Disclaimer

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the product shall conform to contracted specifications, and that the product does not infringe any valid United States or Canadian patent. No claim of any kind shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

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