



MATERIAL SAFETY DATA SHEET

FOR INDUSTRIAL USE ONLY

DESCRIPTION: Cascamite® 12W

1. Chemical Product and Company Identification

DESCRIPTION: **Cascamite® 12W**
PRODUCT CODE: 304222
PRODUCT TYPE: Powder UF Resin
APPLICATION: General Purpose UF Powder Adhesive

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. Hazards Identification

2.1 Emergency Overview

Appearance	Tan 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.
May cause allergic respiratory reaction.
May cause eye irritation.
May cause allergic skin reaction.

NORTH AMERICAN EMERGENCY RESPONSE GUIDE, 2000, NO: 171

HMIS Rating

HEALTH	=	1 (slight)
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.

2.2 Potential Health Effects

Immediate Hazards

INGESTION:	Not expected to be harmful under normal conditions of use.
INHALATION:	Not expected to be harmful under normal conditions of use. However, if allowed to become airborne, may cause irritation of nose, throat and lungs.
SKIN:	May cause irritation on prolonged or repeated contact.
EYES:	May cause irritation on prolonged or repeated contact.

Delayed Hazards

Wood Flour

POTENTIAL CANCER HAZARD. Wood dust has been classified by IARC as a carcinogen to humans (Group 1). This classification is based primarily on IARC's evaluation of increased risk of occurrence of adenocarcinomas in the nasal cavities and paranasal sinuses associated with exposure to wood dust. Wood dust has been listed by NTP as a known human carcinogen. It is not regulated by OSHA as a carcinogen. Depending on species, may cause allergic skin and respiratory reactions.

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, 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.

		% by weight
7783-20-2	Ammonium Sulfate	1.0 - 5.0
	*Wood Flour	1.0 - 5.0
50-00-0	*Formaldehyde	0.1 - 1.0

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:	Remove to fresh air.
SKIN:	In case of irritation, flush with water.
EYES:	Immediately flush eyes with plenty of water. Call a physician if irritation persists.

5. Fire Fighting Measures

Suitable Extinguishing Media: In case of fire, use water spray, dry chemical, "alcohol" foam or CO₂. Use water to keep fire-exposed containers cool. Combustion products may include oxides of carbon and nitrogen.

Will burn.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Organic powders when finely divided (420 microns or smaller in diameter) and suspended in air may form explosive dust-air mixtures and result in a fire or dust explosion.

6. Accidental Release Measures

Minimize airborne dust and eliminate all ignition sources. Do not use air hoses for cleaning. Minimize dry sweeping to avoid generation of dust clouds. Vacuum dust-accumulating surfaces and remove to a chemical disposal area. Vacuums with explosion-proof motors should be used. 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:	Avoid prolonged or repeated breathing of dust or vapor.
SKIN:	Avoid prolonged or repeated contact with skin and clothing.
EYES:	Avoid prolonged or repeated contact with eyes.

COMBUSTIBLE DUST HANDLING PROCEDURES:

Combustible dusts at sufficient concentrations can form explosive mixtures with air. High dust concentrations should be avoided. Follow US NFPA Standard 654, "Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids," UK HSE Guidance HSG 103 or other national guidance on safe handling of combustible dusts. Train workers in the recognition and prevention of hazards associated with combustible dust in the plant.

Minimize airborne dust and eliminate all ignition sources. Keep away from heat, hot surfaces, sparks, and flame. Establish good housekeeping practices. Remove dust accumulations on a regular basis by vacuuming or gentle sweeping to avoid creating dust clouds. Use continuous suction at points of dust generation to capture and minimize the accumulation of dusts. Particular attention should be given to overhead and hidden horizontal surfaces to minimize the probability of a "secondary" explosion. According to NFPA Standard 654, dust layers 1/32 in.(0.8 mm) thick can be sufficient to warrant immediate cleaning of the area.

Control sources of static electricity. This product or the package itself can accumulate static charges, and static discharge can be a source of ignition. Solids handling systems must be designed in accordance with applicable NFPA standards (including 654 and 77) and other national guidance. Do not empty directly into flammable solvents or in the presence of flammable vapors. The operator, the packaging container and all equipment must be grounded with electrical bonding and grounding systems. Plastic bags and plastics cannot be grounded, and antistatic bags do not completely protect against development of static charges.

7.2 Storage

Keep away from heat, hot surfaces, sparks and flame.

Store in a cool, dry place.

If exposure to moisture causes lumping, break lumps into powder before using.

Storage life at 70° F is one year, less at higher temperatures.

8. Exposure Controls/Personal Protection**8.1 Exposure Guidelines**

7783-20-2		Ammonium Sulfate		
ACGIH TLV	8-hr TWA	10 mg/m3	Particles (Insoluble or Poorly Soluble) Not Otherwise Specified	
OSHA PEL	8-hr TWA	5 mg/m3	respirable	
	8-hr TWA	15 mg/m3	total dust	
Wood Flour				
ACGIH TLV	8-hr TWA	1 mg/m3	(certain hardwoods); Inhalable fraction	
OSHA PEL	8-hr TWA	5 mg/m3	(softwood)	
	STEL (15 min)	10 mg/m3	(softwood)	
	8-hr TWA	5 mg/m3	respirable	
	8-hr TWA	15 mg/m3	total dust	
	Remanded TWA	5 mg/m3	(all soft and hard woods); 1989 PEL remanded, but in effect in some states	
	Remanded STEL	10 mg/m3	(all soft and hard woods)	
50-00-0		Formaldehyde		
ACGIH TLV	Ceiling	0.3 ppm	0.37 mg/m3	A2 - Suspected Human Carcinogen; SEN
OSHA PEL	8-hr TWA	0.75 ppm	0.9 mg/m3	

| STEL (15 min) 2 ppm 2.5 mg/m3

8.2 Exposure Controls

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

8.3 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.

9. Physical and Chemical Properties

Appearance	Tan powder
Odor	Slight formaldehyde
Odor threshold	Not available
pH	4.5 - 5.7 @21 °C (70 °F)
Freezing point	Not available
Boiling point, 760 mm Hg	Not available
Flash point	Not applicable
Evaporation rate	Not available
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	Not available
Solubility in water	Dispersible
Octanol/water partition coefficient	Not available
Autoignition temperature	Not applicable
Viscosity	1,000 - 2,500 cPs Brookfield

10. Stability and Reactivity

Chemical Stability

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

Incompatible Materials

Oxidizers such as potassium chlorate and potassium nitrate.

Hazardous Decomposition Products

CO, CO₂, aldehydes (including formaldehyde), hydrogen cyanide, particulate matter and other organic compounds by thermal decomposition in air.

Possibility of Hazardous Reactions

Hazardous polymerization is not expected to occur .

11. Toxicological Information

See Section 3 Hazards Identification information.

7783-20-2 Ammonium Sulfate

LC50: Not available

LD50: Oral-rat= 3,000 mg/kg (Sax); Skin-rat=Greater than 2,000 mg/kg (vender)

Wood Flour

LC50: Not available

LD50: Not available

50-00-0 Formaldehyde

LC50: rat=0.59 mg/l (Sax)

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

12. Ecological Information

Not determined

13. Disposal Considerations

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

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Formaldehyde)
UN/NA number	3077
Class	9
Packing group	III
Label	9
RQ Ingredients	Formaldehyde

14.2 Canadian Transportation of Dangerous Goods (TDG)

Regulation: Non regulated

14.3 Other Regulations

- **ADR/RID**

Regulation: Non regulated

- **IMO/IMDG**

Regulation: Non regulated

- **IATA (Commercial)**

Regulation: Non regulated

- **IATA (Passenger)**

Regulation: Non regulated

15. Regulatory Information (Selected Regulations)

15.1 U.S. Federal Regulations

OSHA Hazards Communication Standard 29CFR1910.1200

This material presents possible health hazards 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

Delayed 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.

Formaldehyde	50-00-0	0.66%
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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 D2A

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.

None required.

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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