

Material Safety Data Sheet

Cascophen SP-6580HE.1

1. Product and company identification

Product name	Cascophen SP-6580HE.1
MSDS Number	300000002648
Product Type	Phenol Formaldehyde Resin
Product use	Wood Adhesives, Composites, Laminates or Related Board Products
Manufacturer, Importer, Supplier	Hexion Specialty Chemicals, Inc. 155 West A Street, Bldg. A-1 Springfield OR 97477 hazcom@hexion.com
Print date	11-AUG-2008
Telephone	For Emergency Medical Assistance Call Health & Safety Information Services, 1-866-303-6949 For Emergency Transportation Information CHEMTREC US Domestic (800) 424-9300 CHEMTREC International (703) 527-3887 CANUTEC CA Domestic (613) 996-6666 For additional health and safety or regulatory information, call (614)225-4778.

This MSDS covers the following product trade names: Cascophen SP-6380FP-1, SP-6380FP-2, SP-628CFP-1, SP-628CFP-2, SP-638CFP-1, SP-638CHE, SP-6380HE, SP-6580HE, SP-638CHE.1, SP-6580HE.1, SP-658CHE, SP-658CHE.1, SP-6380HE.1

The MSDS is not to be used as a specification sheet. For Specific technical information on any of the above products, a sales specification sheet should be obtained from your Hexion representative.

Part of the CASCO[®] Brand of Adhesives and Resins from Hexion

2. Hazards identification

Form	Liquid
Odor	Slight aromatic
OSHA/HCS status	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency overview	WARNING ! CAUSES EYE IRRITATION. MAY CAUSE RESPIRATORY TRACT AND SKIN IRRITATION.
<u>Potential acute health effects</u>	
Inhalation	Slightly irritating to the respiratory system.
Ingestion	Not expected to be harmful under normal conditions of use.
Skin	Slightly irritating to the skin.

Eyes Severely irritating to eyes. Risk of serious damage to eyes.

Potential chronic health effects

Chronic effects No known significant effects or critical hazards.

Carcinogenicity No known significant effects or critical hazards.

Mutagenicity No known significant effects or critical hazards.

Teratogenicity No known significant effects or critical hazards.

Developmental effects No known significant effects or critical hazards.

Fertility effects No known significant effects or critical hazards.

Target organs Review Section 2 and 11 for any additional assessments.

Note: Residual formaldehyde gas may be released from this product during processing. The amount and level will depend on local conditions of use. Formaldehyde gas is irritating to the eyes and upper respiratory tract and may aggravate existing respiratory conditions or allergies. OSHA has listed formaldehyde as a potential human carcinogen. See the OSHA formaldehyde standard 29 CFR 1910.1048 for further details. The International Agency for Research on Cancer (IARC) has classified formaldehyde as carcinogenic to humans.

Over-exposure signs/symptoms

Inhalation Adverse symptoms may include the following: respiratory tract irritation, coughing,

Ingestion No specific data.

Skin Adverse symptoms may include the following: irritation, redness,

Eyes Adverse symptoms may include the following: pain or irritation, watering, redness,

Medical conditions aggravated by over-exposure None known.

See section 11 for more detailed information on health effects and symptoms.

3. Composition and information on ingredients

<u>Ingredient name</u>	<u>CAS number</u>	<u>%</u>
Phenol-Formaldehyde Polymer Sodium Salt	40798-65-0	10.0 - 30.0
Formaldehyde, Polymer With Phenol, Potassium Salt	120712-84-7	10.0 - 30.0

** Any applicable Canadian trade secret numbers will be listed in Section 15.

4. First aid measures

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention. Chemical burns must be treated promptly by a physician.

Skin contact Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Obtain medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse. Flush contaminated skin with plenty of water. Remove contaminated clothing

and shoes. Continue to rinse for at least 10 minutes. Obtain medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Inhalation	Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Ingestion	Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Protection of first aid personnel	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
Notes to physician	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

See section 11 for more detailed information on health effects and symptoms.

5. Fire-fighting measures

Flammability of the product	In a fire or if heated, a pressure increase will occur and the container may burst.
<u>Extinguishing media</u> Suitable	Use an extinguishing agent suitable for the surrounding fire.
Special exposure hazards	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Hazardous combustion products	Decomposition products may include the following materials: carbon oxides, nitrogen oxides,
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through
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spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Large spill

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

Handling

Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Separate from acids. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Respiratory	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Hands	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eyes	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
Skin	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Form	Liquid
Flash point	Not applicable
Auto-ignition temperature	Not applicable
Flammable limits	
Lower:	Not applicable
Upper:	Not applicable
Color	Clear, reddish-brown
Odor	Slight aromatic
pH	11.0 - 12.0
Boiling point	Approx. 102 °C(216 °F)
Relative density	1.1865 - 1.2085
Vapor pressure	Approx. 22 mm Hg @ 25 °C(77 °F)
Odor threshold	Not available
Viscosity	Dynamic - 400 - 1,200 cPs
Solubility	Infinite
Partition coefficient: n-octanol/water	Not available
Evaporation rate	Approx. 0.4 (n-Butyl acetate=1)
Vapor density	Not available
Typical % solids	41.0 - 46.0 % (m)

10. Stability and reactivity

Stability	Hazardous polymerization may occur under certain conditions of storage or use.
Conditions to avoid	Strong oxidizer,
Materials to avoid	Reactive or incompatible with the following materials: acids, oxidizing materials,
Hazardous decomposition products	Decomposition products may include the following materials: carbon monoxide, carbon dioxide, aldehydes (including formaldehyde), particulate matter, other organic compounds, oxides of nitrogen,

11. Toxicological information

Acute toxicity

Product name

Cascophen SP-6580HE.1

LC50 Inhalation	Rat	> 2501 ppm/1 h Estimated.
16 CFR Part 1500.41	Rabbit	Slight Skin Irritant
16 CFR Part 1500.42	Rabbit	Severe Eye Irritant

Acute toxicity

Ingredient name

Other Toxicological Information

Carcinogenicity

Classification

Ingredient name

Phenol-Formaldehyde Polymer Sodium Salt

ACGIH	Not classified
IARC	Not classified
NTP	Not listed
OSHA	Not regulated

Formaldehyde, Polymer With Phenol, Potassium Salt

ACGIH	Not classified
IARC	Not classified
NTP	Not listed
OSHA	Not regulated

12. Ecological information

Environmental effects

No known significant effects or critical hazards.

Biodegradability

Conclusion/Summary Phenol-formaldehyde polymers have a very low rate of biodegradation.

Other adverse effects

Bioaccumulation is expected to be minimal. Product is initially a mobile liquid which will solidify on aging. Unreacted monomer may be leached into ground water even after normal curing has occurred.

13. Disposal considerations

Waste disposal

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional

local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. Transportation

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.

International transport regulations

Regulatory information	UN number	Proper shipping name	Classes/*PG	Reportable Quantity (RQ)
CFR		Non-regulated		
TDG		Non-regulated		
IMO/IMDG		Non-regulated		
IATA (Cargo)		Non-regulated		

*PG : Packing group

15. Regulatory information

US regulations

HCS Classification Irritating material

U.S. Federal regulations **SARA 311/312 Classification** Immediate (acute) health hazard, reactive

SARA 313 - Supplier Notification

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.
None required.

SARA 302 Extremely Hazardous Substances None required.

State regulations **Massachusetts RTK Substances** None required.

New Jersey RTK Hazardous Substances The following components are listed: Formaldehyde, Polymer With Phenol, Potassium Salt, Methanol,

Pennsylvania RTK Hazardous Substances The following components are listed: Methanol,

California Prop. 65: WARNING: This product contains a chemical known to the State of California to cause cancer. Formaldehyde - ,

Canada

WHMIS (Canada) Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists **Canadian NPRI:** None required.

International regulations

Chemical inventories
 Europe inventory Not determined.
 Australia inventory (AICS) Not determined.
 China inventory (IECSC) Not determined.

Korea inventory (KECI) Not determined.
Philippines inventory (PICCS) Not determined.
Japan inventory (ENCS) Not determined.
United States inventory (TSCA 8b) All components are listed or exempted.
Canada inventory At least one component is not listed in DSL but all such components are listed in NDSL.

16. Other information

Hazardous Material Information System III (U.S.A.)	Health : 2 Flammability: 0 Physical hazards : 0 Chronic :
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Date of issue	25-JUN-2008
Date of printing	11-AUG-2008
Version	10

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