



Material Safety Data Sheet # 350

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NFPA	HMIS	PPE	Transport Symbol						
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Preparation Date Jan 7, 2008

Revision Date 7/25/08

Revision Number 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identity: HERCULES PVC CEMENT BELOW ZERO

Intended Use: Solvent cement.

Manufacturer: Hercules Chemical Company, Inc.
111 South Street
Passaic, New Jersey 07055-7398

Information Telephone: (800) 221-9330

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Emergency Phone: CHEMTREC: (800) 424-9300

2. HAZARDS IDENTIFICATION

This product is a clear viscous liquid with an ether-like odor.

EMERGENCY OVERVIEW

DANGER!

Extremely flammable liquid and vapor. Vapors may cause flash fires. May cause eye and skin irritation. Inhalation of vapors will cause irritation of mucous membranes, nose, eyes and throat coughing and difficulty breathing. Exposure to high level concentration may cause headache, dizziness, nausea, and narcosis. Prolonged skin contact causes common solvent defatting effect such as redness, itching, pain and may result to dermatitis. Harmful or fatal if swallowed.

Potential Health Effects.

Inhalation: May cause irritation of the nose, throat and upper respiratory tract. High concentrations may cause headache dizziness, nausea, shortness of breath and vomiting. Concentrations above TLV (Threshold Limit Value), may cause central nervous system depression and unconsciousness.

Ingestion: May produce abdominal pain and nausea. Aspiration into lungs can produce severe lung damage and is a medical emergency.

Eye: Causes painful burning or stinging of eyes and lids, watering of eyes and inflammation of conjunctiva.

Skin: Causes irritation of skin. Prolonged skin contact causes common solvent defatting effect such as redness, itching and pain.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Percentage	OSHA PEL	ACGIH TLV	Other limits
Tetrahydrofuran	109-99-9	40-70	200 ppm	200 ppm	
Methyl ethyl Ketone	78-93-3	5-10	200 ppm	200 ppm	
Cyclohexanone	108-94-1	5-10	50 ppm	20 ppm	
PVC Resin	9002-86-2	10-30	15 mg/m3	10 mg/m3	

HMIS Hazard Rating: 3 4 1 G

4. EMERGENCY AND FIRST AID PROCEDURES.

Eye: Immediately flush eyes with large quantities of water, for at least 15 minutes, holding the eyelids apart. Get immediate medical attention.

Skin: Wash with soap and water. Remove contaminated clothing. Wash contaminated clothing before reuse. If irritation develops, get medical attention.

Inhalation: Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, have qualified person administer oxygen,. Call a doctor.

Ingestion: DO NOT INDUCE VOMITING. If conscious, give 1-2 glasses of water to dilute. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Call a doctor immediately.

5. FIRE FIGHTING MEASURES

Flashpoint: 6°F (TCC) (Based on THF)

Flammable Limits: LEL: 2.0 % UEL: 11.8 %

Autoignition Temperature: Not determined

Extinguishing Media: Foam, Dry Chemical or Carbon Dioxide.

Unusual Fire or Explosion Hazards: Vapors are heavier than air, and will travel considerable distance to source of ignition causing a flashback. On long standing may form peroxides which may cause violent reactions especially upon evaporation to dryness.

Special Fire-Fighting Instructions: Handle as flammable liquid. Firefighters should wear positive pressure self-contained breathing apparatus and chemical goggles. Water may be ineffective but should be used to keep fire exposed containers cool.

Hazardous Combustion Products: Carbon Dioxide and Carbon Monoxide are formed. Irritating peroxide fumes are formed when heated to decomposition.

6. ACCIDENTAL RELEASE MEASURES

Eliminate all sources of ignition. Ventilate area. Wear appropriate personal protection equipment. Absorb with inert absorbing material and dispose of with solid waste according to Federal, State and Local regulations. Wash spill area with water. Do not flush wash water into confined areas.

7. HANDLING AND STORAGE

Handling: Do not get in eyes, on skin or clothing. Avoid breathing vapors. Keep product away from heat, sparks and open flames and all sources of ignition. Use with adequate ventilation. Wash thoroughly with soap and water after handling. Keep containers closed when not in use.

Storage: Store in a cool, dry, well ventilated area away from incompatible materials. Store only in original container. Keep containers closed when not in use, and away from open flame or other sources of ignition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: In confined spaces, or in areas where adequate ventilation cannot be assured, use NIOSH-approved organic vapor respirator or a positive-pressure airline mask, or a self-contained breathing apparatus.

Engineering Controls: Use with general or local exhaust ventilation as required.

When using cements in areas with limited ventilation, use a ventilation device such as a fan or air mover to maintain safe air/vapor concentrations. All ventilation devices should be located such that they do not become sources of ignition.

Skin Protection: Avoid skin contact. Wear chemical resistant gloves such as PVA gloves. Rubber gloves are acceptable for short time usage.

Eye Protection: Safety glasses with side shields or Chemical Safety goggles when necessary.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance And Odor: Clear viscous liquid with ether like odor

Physical State: Liquid	Boiling Point: 151° F (Based on THF)
Vapor Density: 2.0 to 2.5	Vapor Pressure: 143 @ 68° F (Based on THF)
Solubility In Water: 60-85%	Evaporation Rate: 7 to 11
Specific Gravity: 0.910 +/- .03	Volatile Components: 65-85%
Melting Point: N/A	VOC Content: 800-810 g/L

10. STABILITY AND REACTIVITY

Stability: Stable under normal storage and handling conditions.

Conditions to avoid: Keep in closed containers and away from sparks and open flame.

Incompatibility: Strong oxidizing materials, Lithium Aluminum Hydride, Sodium Aluminum Hydroxide & Sodium & Potassium Hydroxides.

Hazardous Decomposition Products: Carbon Dioxide and Carbon Monoxide are formed. Irritating peroxide fumes formed when heated to Decomposition.

Hazardous Polymerization: Avoid excessive exposure to air and cationic initiators like Lewis Acids

11. TOXICOLOGICAL INFORMATION

HEALTH HAZARDS:

Ingestion: Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. May cause kidney and liver damage. Aspiration during swallowing or vomiting, can cause chemical pneumonia and lung damage.

Inhalation: Inhalation of vapors will cause irritation of mucous membranes, nose, eyes and throat and difficult of breathing. High concentrations may cause headache, dizziness, narcosis and nausea.

Eye: May cause moderate to severe irritation. Eye injury is possible.

Skin: May cause irritation with redness itching and pain.

Sensitization: None of the components are known to cause sensitization.

Chronic: Prolonged or repeated contact or overexposure can cause skin defatting and dermatitis.

Carcinogenicity: None of the components is listed as a carcinogen or suspected carcinogen by IARC, NTP or OSHA.

Cyclohexanone is classified by ACGIH as "A3", a confirmed animal carcinogen with unknown relevance to humans.

Mutagenicity: Methyl Ethyl Ketone is not considered genotoxic based on laboratory studies.

Medical Conditions Aggravated by Exposure: Pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.

Reproductive Toxicity: Methyl Ethyl Ketone and Cyclohexanone have been found to cause teratogenic effects in Laboratory animals. Tetrahydrofuran (THF) has been found to cause adverse developmental effects only when exposure levels cause other toxic effects to mother.

Acute Toxicity Values:

Methyl Ethyl Ketone: Oral Rat LD50: 2,737mg/kg, Inhalation Rat LC50: 23,500 mg/m³ /8 hour/, Skin Rabbit LD50: 6,480 mg/kg

Cyclohexanone: Oral Rat LD50: 1,620 mg/kg, Inhalation Rat LC50: 8,000 ppm/4hrs., Skin Rabbit LD50: 1 mL/kg

Tetrahydrofuran: Oral rat LD50: 1,650 mg/kg, Inhalation rat LC50: 21,000 ppm/3 hrs.

12. ECOLOGICAL INFORMATION

Environmental Toxicity: This product is not expected to be toxic to aquatic life.

Tetrahydrofuran: Not expected to bioaccumulate. 96-hr LC50: Fathead minnows, 2160 mg/L, Cyclohexanone: 96-hr LC50: fish >100 mg/L, Methyl Ethyl Ketone 96-hr LC50: fish >100 mg/L

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with local, state and federal environmental regulations.

14. TRANSPORT INFORMATION**Transportation of Dangerous Goods Description:**

DOT	<u>Less than 1 liter (0.3 gal)</u>	<u>Greater than 1 liter (0.3 gal)</u>
Proper Shipping Name:	Consumer Commodity	Flammable Liquid, n.o.s (Tetrahydrofuran, Methyl Ethyl Ketone)
Hazard Class:	ORM-D	3
UN Number/Packing Group:	NONE	UN 1993 PGII
Labels Required:	NONE	Flammable Liquid Label

IMDG

Proper Shipping Name:	Flammable Liquid, n.o.s(Contains - (Tetrahydrofuran, Methyl Ethyl Ketone)	Flammable Liquid, n.o.s(Contains - (Tetrahydrofuran, Methyl Ethyl Ketone)
Hazard Class:	3	3
UN Number/Packing Group	UN 1993/PGII	UN 1993/PGII
Label	None	Flammable Liquid
Flash Point	6°F	6°F

15. REGULATORY INFORMATION

Hazard Category for Section 311/312: Acute health - Yes, chronic health - Yes, Flammable – Yes
Section 302 Extremely Hazardous Substances (TQP): This product does not contain chemicals regulated under SARA section 302.

Section 313 Toxic Chemicals: This product does not contain chemicals subject to SARA Title III Section 313 reporting requirements.

California Proposition 65: This product does not contain any chemicals subject to California Proposition 65 Regulation.

TSCA Inventory: All the components in this product are listed on the TSCA inventory.

Canada DSL list—yes

WHMIS Classification: Class B-2, flammable liquid
D-2A, Materials causing other toxic effects (very Toxic), D-2B Toxic material

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

16. OTHER INFORMATION

DISCLAIMER:

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, Hercules cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.