



CRAFCO, Inc.  
420 North Roosevelt Avenue  
Chandler, AZ 85226  
Phone 602-276-0406  
Hours of Operation 7:30 am – 4:30 pm  
ERGON 24 Hour Emergency Phone Number 1-800-222-7122  
CHEMTREC 1-800-424-9300  
MSDS Number: CRF019

Effective Date: August 7, 2009

Material Safety Data Sheet

HFS

## 1. PRODUCT IDENTIFICATION

Trade Name: HFS  
Chemical Family: Epoxy  
Intended Use or Product Type: Epoxy Coating

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA Hazardous Ingredients: NA

**Resin:** DGEBA-Epoxy Resin: CAS# 25068-38-6 80%-90%

Trade Secret: 10%-20%

OSHA (PEL/STEL) NE  
ACGIH (TWA/STEL) NE

**Hardener:** Accelerated amine adduct: CAS# Mixture >90%

Trade Secret <10%

OSHA (PEL/STEL) NE  
ACGIH (TWA/STEL) NE

## 3. HAZARDS IDENTIFICATION

Emergency Overview: Toxic fumes are released in fire situation. Harmful if swallowed. May cause allergic skin and eye reaction.
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## 4. FIRST AID MEASURES

**Ingestion:** Resin - If large amounts are ingested, induce vomiting if conscious.  
Hardener - Call physician immediately. Give generous amounts of water if conscious.  
**Do not** induce vomiting.

**Skin:** Resin - Promptly wash with mild soap and water.  
Hardener - Promptly wash with mild soap and water.

**Inhalation:** Resin - Remove to fresh air. Give oxygen if breathing is difficult.  
Hardener - Remove to fresh air. Give oxygen if breathing is difficult.

**Eyes:** Resin - Immediately flush eyes with water for 15 minutes. Call physician.  
Hardener - Immediately flush eyes with water for 15 minutes. Call physician.

**Overexposure Effects:** Overexposure to this material can cause chemical burns to the skin and eyes and inhalation of vapors can cause severe respiratory irritation. Can cause allergic skin and respiratory reactions. Can have effects on the nervous system evidenced by central nervous system depression, tremors, paralysis, diarrhea and vasodilation. May also cause headache, nausea and dizziness.

**Medical Conditions Aggravated by Exposure:** Allergy, eczema or skin conditions.

**Additional Information:** Promptly remove wet contaminated non-impervious clothing, wash before reuse. Destroy contaminated leather and absorbent shoes.

## 5. FIRE FIGHTING MEASURES

<b>Flash Point:</b>	<b>Resin</b> >300°F (149°C)	<b>Hardener</b> >200°F (93°C)
<b>Flash Point Method Used:</b>	Closed cup	
<b>Fire Fighting Extinguishing Media:</b>	Carbon Dioxide, foam, dry chemical	
<b>Fire Fighting Equipment:</b>	Use a self-contained breathing apparatus	
<b>Fire and Explosion Hazards:</b>	Decomposition and combustion products may be toxic.	

**NOTE:** decomposition and combustion products may be toxic

## 6. ACCIDENTAL RELEASE MEASURES

**Accidental Release Measures:** Steps to be taken if material is spilled:

**Resin** - Shovel into closeable container for disposal.

**Hardener** - Absorb into sand or other absorbent material. Shovel into closeable container and dispose of in professional manner.

## 7. HANDLING AND STORAGE

**Precautions:** Do not get in eyes, on skin, on clothing. Do not breathe vapor, mist or spray. Use only with adequate ventilation. Individuals should wash thoroughly after handling. For industrial use only.

**Storage Information:** Keep away from heat, sparks and open flame. Ground and bond metal containers for liquid transfer to avoid static spark. Store at temperatures between 2°C and 40°C in tightly closed containers in dry area to prevent moisture and carbon dioxide contamination.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Personal Protective Equipment:</b>	Wear protective equipment to prevent exposure and personal contact.
<b>Skin Protection:</b>	Impervious gloves
<b>Respiratory Protection:</b>	Organic chemical cartridge respirator if needed in non-vented area
<b>Eye Protection:</b>	Splash-proof chemical goggles
<b>Engineering Controls:</b>	Good general mechanical ventilation and local exhaust

**9. PHYSICAL AND CHEMICAL PROPERTIES**

	<u>Resin</u>	<u>Hardener</u>
<b>Appearance:</b>	Clear	Light Amber
<b>Odor:</b>	None	slight ammonia odor
<b>Physical State:</b>	Liquid	Liquid
<b>Solubility in Water (% by weight):</b>	Negligible	Negligible
<b>Melting Point:</b>	<0° F (-18° C)	<0° F (-18° C)
<b>Density:</b>	1.14	1.02
<b>PH:</b>	ca 5	ca 8

**10. STABILITY AND REACTIVITY**

**Stability:** Stable  
**Incompatibility:** Strong oxidizers, strong acids and bases

**Hazardous Decomposition Products:**

Resin - Carbon Monoxide, Carbon Dioxide, Phenolics

Hardener - Carbon Monoxide, Carbon Dioxide, Phenolic Nitrogen Oxides and Compounds

**Hazardous Polymerization:**

Resin - will not occur

Hardener - Do not heat in bulk as dangerous decomposition may occur, liberating toxic fumes.

**11. TOXICOLOGICAL INFORMATION****Acute Oral Effects (Ingestion):**

Resin - LD<sub>50</sub> (rabbits): 4000 mg/kg

Hardener - LD<sub>50</sub> (rabbits): 3000 mg/kg

**Sensitization:** Can cause skin and respiratory sensitization

**Skin Irritation:** Irritant

**Eye Irritation:** Irritant

**12. ECOLOGICAL INFORMATION**

**Additional Information:** Amines, in general, may be toxic to aquatic organisms. Epoxies are only slightly soluble in water.

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Method:** Dispose in accordance with federal, state and local regulations.

**14. TRANSPORT INFORMATION****DOT:****Resin:** Not Regulated**Hardener:** Corrosive liquid, basic, organic, n.o.s. (m-Xylylenediamine, Nonylphenol), 8, UN3267, PG III (Marine Pollutant)**15. REGULATORY INFORMATION****US Federal Regulations:**

Occupational Safety and Health Act (OSHA): This Material Safety Data Sheet (MSDS) has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered not to be a hazardous chemical under that standard.

Resource Conservation and Recovery Act (RCRA): Not a hazardous waste under RCRA (40 CFR 261).

SARA Title III: Section 304 - CERCLA: Not listed.

SARA Title III: Section 313 Toxic Chemical List (TCL): This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Sec. 313 (40 CFR 372). This information must be included in all MSDS's that are copied and distributed for this material.

**16. OTHER INFORMATION**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific features and shall not establish a legally valid contractual relationship.

Contact: Crafc0, Inc. - 602-276-0406