



# Material Safety Data Sheet

Issuing Date 23-Jan-2012

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Revision Number 1

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** HPS-4 BLACK

**Product Code(s)** 999413

**Recommended Use** Traffic paint

**Product Technology** Epoxy

### Supplier Address

Ennis-Flint  
5910 North Central Expressway  
Suite 1050  
Dallas TX 75206  
T: 800.331.8118  
800.331.8118 (For Technical Inquiries)

**Chemical Emergency Phone Number** Chemtrec 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

**WARNING!**

### Emergency Overview

Irritating to eyes and skin  
May cause sensitization by inhalation and skin contact  
**WARNING!** This product contains a chemical known in the State of California to cause cancer.

**Appearance** Black      **Physical State** Viscous liquid.      **Odor** Mild, epoxy

### Potential Health Effects

**Principle Routes of Exposure** Skin contact. Eye contact. Inhalation.

### **Acute Toxicity**

**Eyes** Irritating to eyes.  
**Skin** Irritating to skin. May cause sensitization by skin contact.  
**Inhalation** May cause sensitization of susceptible persons by inhalation of aerosol or dust.  
**Ingestion** Ingestion may cause irritation to mucous membranes.

### **Chronic Effects**

Some liquid and solid epoxy resins have been tested for carcinogenicity and mutagenicity. When all of the studies are reviewed as a whole, the weight of evidence does not indicate that epoxy resins are carcinogenic. This product contains titanium dioxide in a non-respirable form. Inhalation of titanium dioxide is unlikely to occur from exposure to this product. Titanium dioxide has been classified by the International Agency for Research on Cancer (IARC) as possibly carcinogenic to humans (Group 2B) by inhalation. Repeated contact may cause allergic reactions in very susceptible persons.

**Aggravated Medical Conditions** Skin disorders. Respiratory disorders. Central nervous system. Pre-existing eye disorders.

**Environmental Hazard** Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. See Section 12 for additional Ecological Information.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Reaction product of epichlorohydrin & bisphenol A	25085-99-8	30-60
Silica, cristobalite	14464-46-1	7-13
Iron manganese oxide ((Fe,Mn)2O3)	75864-23-2	1-5
Quartz	14808-60-7	0.1-1
Nickel	7440-02-0	<0.1

### 4. FIRST AID MEASURES

<b>General Advice</b>	Show this safety data sheet to the doctor in attendance.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water. Remove and wash contaminated clothing before re-use. Consult a physician.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. Artificial respiration and/or oxygen may be necessary. Seek immediate medical attention/advice.
<b>Ingestion</b>	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Drink plenty of water. Consult a physician.
<b>Notes to Physician</b>	May cause sensitization of susceptible persons. Treat symptomatically.
<b>Protection of First-aiders</b>	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

### 5. FIRE-FIGHTING MEASURES

<b>Flammable Properties</b>	Not flammable.			
<b>Flash Point</b>	206.6 °F / 97 °C			
<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.			
<b>Hazardous Combustion Products</b>	Carbon monoxide. Carbon dioxide (CO <sub>2</sub> ). Phenols.			
<b>Explosion Data</b>				
<b>Sensitivity to Mechanical Impact</b>	None.			
<b>Sensitivity to Static Discharge</b>	None			
<b>Specific Hazards Arising from the Chemical</b>	Thermal decomposition can lead to release of irritating gases and vapors. Containers may explode when heated.			
<b>Protective Equipment and Precautions for Firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.			
<b>NFPA</b>	<b>Health Hazard</b> 2	<b>Flammability</b> 1	<b>Instability</b> 1	<b>Physical and Chemical Hazards -</b>
<b>HMIS</b>	<b>Health Hazard</b> 2*	<b>Flammability</b> 1	<b>Physical Hazard</b> 1	<b>Personal Protection</b> X

\*Indicates a chronic health hazard.

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions</b>	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing.
<b>Environmental Precautions</b>	Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.
<b>Methods for Containment</b>	Prevent further leakage or spillage if safe to do so. Dike far ahead of liquid spill for later disposal.
<b>Methods for Cleaning Up</b>	Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically and collect in suitable container for disposal.

**7. HANDLING AND STORAGE**

<b>Handling</b>	Wear personal protective equipment. Avoid breathing vapors or mists. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling.
<b>Storage</b>	Keep containers tightly closed in a cool, well-ventilated place.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Silica, cristobalite 14464-46-1	TWA: 0.025 mg/m <sup>3</sup> respirable fraction	(vacated) TWA: 0.05 mg/m <sup>3</sup> respirable dust : (1/2)(30)/(100SiO <sub>2</sub> + 2) mg/m <sup>3</sup> TWA total dust : (1/2)(250)/(100SiO <sub>2</sub> + 5) mppcf TWA respirable fraction : (1/2)(10)/(100SiO <sub>2</sub> + 2) mg/m <sup>3</sup> TWA respirable fraction	IDLH: 25 mg/m <sup>3</sup> respirable dust TWA: 0.05 mg/m <sup>3</sup> respirable dust
Iron manganese oxide ((Fe,Mn)2O3) 75864-23-2	TWA: 1 mg/m <sup>3</sup> Fe TWA: 0.2 mg/m <sup>3</sup> Mn	(vacated) TWA: 1 mg/m <sup>3</sup> Fe (vacated) Ceiling: 5 mg/m <sup>3</sup> Ceiling: 5 mg/m <sup>3</sup> Mn	IDLH: 500 mg/m <sup>3</sup> Mn TWA: 1 mg/m <sup>3</sup> Fe TWA: 1 mg/m <sup>3</sup> Mn STEL: 3 mg/m <sup>3</sup> Mn
Quartz 14808-60-7	TWA: 0.025 mg/m <sup>3</sup> respirable fraction	30/(100SiO <sub>2</sub> +2) mg/m <sup>3</sup> TWA, Total Dust;250/(100SiO <sub>2</sub> +5) mppcf TWA, respirable fraction; 10/(100SiO <sub>2</sub> +2) mg/m <sup>3</sup> TWA, respirable TWA: 0.1 mg/m <sup>3</sup> (vacated)	IDLH: 50 mg/m <sup>3</sup> respirable dust TWA: 0.05 mg/m <sup>3</sup> respirable dust

OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. NIOSH IDLH: Immediately Dangerous to Life or Health.

### Other Exposure Guidelines

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

### Engineering Measures

Showers  
Eyewash stations  
Ventilation systems

### Personal Protective Equipment

#### Eye/Face Protection

Goggles.

#### Skin and Body Protection

Wear protective gloves/clothing.

#### Respiratory Protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

### Hygiene Measures

When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Black.	<b>Odor</b>	Mild, epoxy.
<b>Odor Threshold</b>	Not applicable	<b>Physical State</b>	Viscous liquid
<b>pH</b>	Not applicable	<b>Autoignition Temperature</b>	Not applicable
<b>Flash Point</b>	206.6 °F / 97 °C	<b>Boiling Point/Boiling Range</b>	Not applicable
<b>Decomposition Temperature</b>	Not applicable	<b>Flammability Limits in Air</b>	Not applicable
<b>Melting Point/Range</b>	Not applicable	<b>Solubility</b>	Not applicable
<b>Specific Gravity</b>	1.2-1.4	<b>Vapor Pressure</b>	Not applicable
<b>Evaporation Rate</b>	Not applicable		
<b>Vapor Density</b>	Not applicable		

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under recommended storage conditions.
<b>Incompatible Products</b>	Strong oxidizing agents. Acids. Bases. Reducing agents. Amines.
<b>Conditions to Avoid</b>	Excessive heat. Contamination by incompatible materials.
<b>Hazardous Decomposition Products</b>	Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ). Hydrocarbons. Violent decomposition can occur at temperatures over 300°C/572°F.
<b>Hazardous Polymerization</b>	Polymerization may occur at temperatures above 200°C/392°F. More than 1 pound of product plus an aliphatic amine will cause irreversible polymerization with considerable heat build up.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

**Product Information** Irritating to eyes and skin. No acute toxicity information is available for this product.

### **Component Information**

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Quartz	500 mg/kg ( Rat )		

### Chronic Toxicity

**Chronic Toxicity** Some liquid and solid epoxy resins have been tested for carcinogenicity and mutagenicity. When all of the studies are reviewed as a whole, the weight of evidence does not indicate that epoxy resins are carcinogenic. This product contains titanium dioxide in a non-respirable form. Inhalation of titanium dioxide is unlikely to occur from exposure to this product. Titanium dioxide has been classified by the International Agency for Research on Cancer (IARC) as possibly carcinogenic to humans (Group 2B) by inhalation. Repeated contact may cause allergic reactions in very susceptible persons.

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Silica, cristobalite	A2	Group 1		X
Quartz	A2	Group 1	Known	X
Nickel		Group 2B Group 1	Reasonably Anticipated	X

**ACGIH: (American Conference of Governmental Industrial Hygienists)**

A2 - Suspected Human Carcinogen

**IARC: (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

**NTP: (National Toxicity Program)**

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

**OSHA: (Occupational Safety & Health Administration)**

X - Present

**Sensitization** Repeated or prolonged contact may cause allergic reactions in very susceptible persons

**Target Organ Effects** Respiratory system.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Nickel	EC50 96 h: 0.174 - 0.311 mg/L static (Pseudokirchneriella subcapitata) EC50 72 h: = 0.18 mg/L (Pseudokirchneriella subcapitata)	LC50 96 h: = 1.3 mg/L semi-static (Cyprinus carpio) LC50 96 h: = 10.4 mg/L static (Cyprinus carpio) LC50 96 h: > 100 mg/L (Brachydanio rerio)	-	EC50 48 h: = 1 mg/L Static (Daphnia magna) EC50 48 h: > 100 mg/L (Daphnia magna)

## 13. DISPOSAL CONSIDERATIONS

### Waste Disposal Methods

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

### Contaminated Packaging

Do not re-use empty containers.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Nickel - 7440-02-0	(hazardous constituent - no waste number)	Included in waste streams: F006, F039		

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Nickel	Toxic powder Ignitable powder

## 14. TRANSPORT INFORMATION

<b>DOT</b>	Not regulated
<b>TDG</b>	Not regulated
<b>MEX</b>	Not regulated
<b>ICAO</b>	Not regulated
<b>IATA</b>	Not regulated
<b>IMDG/IMO</b>	Not regulated

## 15. REGULATORY INFORMATION

### International Inventories

<b>TSCA</b>	Complies
<b>DSL</b>	Complies

### Legend

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**U.S. Federal Regulations**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Iron manganese oxide ((Fe,Mn)2O3)	75864-23-2	1-5	1.0

**SARA 311/312 Hazard Categories**

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**U.S. State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	California Prop. 65
Quartz	14808-60-7	Carcinogen
Nickel	7440-02-0	Carcinogen

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Silica, cristobalite	X	X	X		
Iron manganese oxide ((Fe,Mn)2O3)			X	X	X
Quartz	X	X	X	-	X

**International Regulations****Mexico - Grade**

Slight risk, Grade 1

Chemical Name	Carcinogen Status	Exposure Limits
Silica, cristobalite		Mexico: TWA 0.05 mg/m <sup>3</sup>
Iron manganese oxide ((Fe,Mn)2O3)		Mexico: TWA 1 mg/m <sup>3</sup> Mexico: TWA 0.2 mg/m <sup>3</sup> Mexico: STEL 2 mg/m <sup>3</sup>
Quartz		Mexico: TWA= 0.1 mg/m <sup>3</sup>

**Canada**

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

**WHMIS Hazard Class**

D2B Toxic materials

D2A Very toxic materials



Component	NPRI
Nickel 7440-02-0 (<0.1)	X

**16. OTHER INFORMATION**

**Prepared By** Product Stewardship  
23 British American Blvd.  
Latham, NY 12110  
1-800-572-6501

**Issuing Date** 23-Jan-2012  
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**Revision Note** (M)SDS sections updated: 1

**General Disclaimer**

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication and it does not purport to be all inclusive and shall be used only as a guide. We urge each customer or recipient of this MSDS to study it carefully to become aware of and understand the potential hazards associated with the product. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text. Any use of the product not in conformance with this MSDS or in combination with any other product or process is the responsibility of the user. Customary precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Wash hands before breaks and at the end of work. Remove all soiled and contaminated clothing immediately.

**End of Safety Data Sheet**