



**ENNIS-FLINT**

A Traffic Safety Solutions Company

# Material Safety Data Sheet

**Issuing Date** 13-Apr-2012

**Revision Date** 05-Nov-2012

**Revision Number** 1

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** HPS-6 MMA Red Screed (T1)

**Product Code(s)** MR0018

**UN-Number** UN1263

**Recommended Use** Traffic paint

**Product Technology** MMA

**Manufacturer 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 for US/ 703-527-3887 outside US

## 2. HAZARDS IDENTIFICATION

**DANGER!**

### Emergency Overview

Flammable liquid

Irritating to respiratory system and skin

May produce an allergic reaction

Cancer hazard

WARNING! This product contains a chemical known in the State of California to cause cancer and birth defects or other reproductive harm.

**Appearance** Red

**Physical State** Viscous liquid.

**Odor** Strong acrylic/ester-like

**Potential Health Effects**

**Acute Toxicity**

**Eyes** May cause irritation.

**Skin** Irritating to skin.

**Inhalation** Irritating to respiratory system.

**Ingestion** Ingestion may cause irritation to mucous membranes. May cause additional affects as listed under "Inhalation".

**Chronic Effects**

Repeated contact may cause allergic reactions in very susceptible persons. This product contains crystalline silica (quartz) in a non-respirable form. Inhalation of crystalline silica is unlikely to occur from exposure to this product. Crystalline silica (quartz) has been classified by the International Agency for Research on Cancer (IARC) as a known human carcinogen (Group 1).

**Aggravated Medical Conditions**

Skin disorders. Respiratory disorders.

**Environmental Hazard**

See Section 12 for additional Ecological Information.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS-No	Weight %
Quartz	14808-60-7	10-30
Methyl Methacrylate	80-62-6	10-30
2-Ethylhexyl acrylate	103-11-7	7-13
Methyl pyrrolidone	872-50-4	<0.1
Ethyl benzene	100-41-4	<0.1

**4. FIRST AID MEASURES**

<b>Eye Contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing. If symptoms persist, call a physician.
<b>Skin Contact</b>	Wash off immediately with plenty of water. Remove and wash contaminated clothing before re-use. If skin irritation persists, call a physician.
<b>Inhalation</b>	Move victim to fresh air. If not breathing, give artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Administer oxygen if breathing is difficult. Seek immediate medical attention/advice.
<b>Ingestion</b>	Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician immediately.
<b>Notes to Physician</b>	Treat symptomatically. May cause sensitization of susceptible persons.
<b>Protection of First-aiders</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**5. FIRE-FIGHTING MEASURES**

<b>Flammable Properties</b>	Flammable liquid.
<b>Flash Point</b>	50 °F / 10 °C (For Methyl Methacrylate)
<b>Flashpoint Method</b>	Seta closed cup
<b>Suitable Extinguishing Media</b>	Dry chemical, CO <sub>2</sub> , water spray or alcohol-resistant foam.
<b>Explosion Data</b>	
<b>Sensitivity to Mechanical Impact</b>	None.
<b>Sensitivity to Static Discharge</b>	Yes.
<b>Specific Hazards Arising from the Chemical</b>	Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
<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> 3	<b>Instability</b> 1	<b>Physical and Chemical Hazards - Personal Protection</b> X
<b>HMIS</b>	<b>Health Hazard</b> 2*	<b>Flammability</b> 3	<b>Physical Hazard</b> 1	

\*Indicates a chronic health hazard.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use personal protective equipment. Avoid contact with skin, eyes and clothing.
<b>Environmental Precautions</b>	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.
<b>Methods for Containment</b>	Dike far ahead of liquid spill for later disposal.
<b>Methods for Cleaning Up</b>	Dam up. Use personal protective equipment. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Use non-sparking tools and equipment. Take up mechanically and collect in suitable container for disposal.
<b>Other Information</b>	Water spray may reduce vapor; but may not prevent ignition in closed spaces.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Wear personal protective equipment. Avoid breathing vapors or mists. Avoid contact with skin, eyes and clothing.
<b>Storage</b>	Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Quartz 14808-60-7	TWA: 0.025 mg/m <sup>3</sup> respirable fraction	30/(%SiO <sub>2</sub> +2) mg/m <sup>3</sup> TWA, Total Dust; 250/(%SiO <sub>2</sub> +5) mppcf TWA, respirable fraction; 10/(%SiO <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
Methyl Methacrylate 80-62-6	STEL: 100 ppm TWA: 50 ppm	TWA: 100 ppm TWA: 410 mg/m <sup>3</sup> (vacated) TWA: 100 ppm (vacated) TWA: 410 mg/m <sup>3</sup>	IDLH: 1000 ppm TWA: 100 ppm TWA: 410 mg/m <sup>3</sup>

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. Explosion proof ventilation systems.

### Personal Protective Equipment

#### Eye/Face Protection

Tightly fitting safety 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. Provide regular cleaning of equipment, work area and clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Red.	<b>Odor</b>	Strong acrylic/ester-like.
<b>Odor Threshold</b>	Not applicable	<b>Physical State</b>	Viscous liquid
<b>pH</b>	Not applicable	<b>Flashpoint Method</b>	Seta closed cup
<b>Flash Point</b>	50 °F / 10 °C (For Methyl Methacrylate)	<b>Decomposition Temperature</b>	Not applicable
<b>Autoignition Temperature</b>	250 °C / 482 °F (For 2-Ethylhexyl acrylate)	<b>Melting Point/Range</b>	Not applicable
<b>Boiling Point/Boiling Range</b>	100 °C @ 1013 mbar / 212 °F (For Methyl Methacrylate)	<b>Flammability Limits in Air</b>	(For 2-ethylhexyl acrylate)
		<b>Upper</b>	6.0%
		<b>Lower</b>	0.9%
<b>Specific Gravity</b>	1.7 - 1.9	<b>Solubility</b>	Not applicable
<b>Evaporation Rate</b>	>1 (BuAc = 1)	<b>Vapor Pressure</b>	29 mmHg @ 20°C (for Methyl Methacrylate)
<b>Vapor Density</b>	>1 (air = 1)	<b>VOC (g/l)</b>	Less than 50

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under recommended storage conditions.
<b>Incompatible Products</b>	Alkaline. Amines. Oxidizing or reducing agents. Sulfur compounds.
<b>Conditions to Avoid</b>	Keep away from open flames, hot surfaces and sources of ignition.
<b>Hazardous Decomposition Products</b>	Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ).
<b>Hazardous Polymerization</b>	Polymerization may occur when exposed to excessive heating and incompatibles.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

<b>Product Information</b>	No acute toxicity information is available for this product.
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### Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Quartz	500 mg/kg ( Rat )		
Methyl Methacrylate	= 7872 mg/kg ( Rat )	> 5 g/kg ( Rabbit )	= 400 ppm ( Rat ) 1 h = 4632 ppm ( Rat ) 4 h
2-Ethylhexyl acrylate	= 4435 mg/kg ( Rat )	= 7522 mg/kg ( Rabbit )	

### Chronic Toxicity

<b>Chronic Toxicity</b>	Repeated contact may cause allergic reactions in very susceptible persons. This product contains crystalline silica (quartz) in a non-respirable form. Inhalation of crystalline silica is unlikely to occur from exposure to this product. Crystalline silica (quartz) has been classified by the International Agency for Research on Cancer (IARC) as a known human carcinogen (Group 1).
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<b>Carcinogenicity</b>	The table below indicates whether each agency has listed any ingredient as a carcinogen.
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Chemical Name	ACGIH	IARC	NTP	OSHA
Quartz	A2	Group 1	Known	X
Methyl Methacrylate		Group 3		
2-Ethylhexyl acrylate		Group 3		
Ethyl benzene	A3	Group 2B	-	-

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

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

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

Group 1 - Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

Group 3: Not Classifiable as to its Carcinogenicity to Humans

#### **NTP: (National Toxicity Program)**

Known - Known Carcinogen

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

X - Present

<b>Target Organ Effects</b>	Respiratory system.
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## 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)
Methyl Methacrylate	EC50 96 h: = 170 mg/L (Pseudokirchneriella subcapitata)	LC50 96 h: 125.5-190.7 mg/L static (Pimephales promelas) LC50 96 h: 153.9-341.8 mg/L static (Lepomis macrochirus) LC50 96 h: 170-206 mg/L flow-through (Lepomis macrochirus) LC50 96 h: 243-275 mg/L flow-through (Pimephales promelas) LC50 96 h: 326.4-426.9 mg/L static (Poecilia reticulata) LC50 96 h: > 79 mg/L flow-through (Oncorhynchus mykiss) LC50 96 h: > 79 mg/L static (Oncorhynchus mykiss)		EC50 48 h: = 69 mg/L (Daphnia magna)
2-Ethylhexyl acrylate	EC50 72 h: = 44 mg/L (Desmodesmus subspicatus) EC50 96 h: = 47 mg/L (Desmodesmus subspicatus)	LC50 48 h: = 23 mg/L (Leuciscus idus melanotus)	EC50 > 10000 mg/L 30 min	EC50 48 h: = 17.45 mg/L (Daphnia magna)
Methyl pyrrolidone	EC50 72 h: > 500 mg/L (Desmodesmus subspicatus)	LC50 96 h: = 1072 mg/L static (Pimephales promelas) LC50 96 h: = 1400 mg/L static (Poecilia reticulata) LC50 96 h: = 4000 mg/L static (Leuciscus idus) LC50 96 h: = 832 mg/L static (Lepomis macrochirus)		EC50 48 h: = 4897 mg/L (Daphnia magna)
Ethyl benzene	EC50 96 h: 1.7 - 7.6 mg/L static (Pseudokirchneriella subcapitata) EC50 72 h: 2.6 - 11.3 mg/L static (Pseudokirchneriella subcapitata) EC50 72 h: = 4.6 mg/L (Pseudokirchneriella subcapitata) EC50 96 h: > 438 mg/L (Pseudokirchneriella subcapitata)	LC50 96 h: 11.0-18.0 mg/L static (Oncorhynchus mykiss) LC50 96 h: 7.55-11 mg/L flow-through (Pimephales promelas) LC50 96 h: 9.1-15.6 mg/L static (Pimephales promelas) LC50 96 h: = 32 mg/L static (Lepomis macrochirus) LC50 96 h: = 4.2 mg/L semi-static (Oncorhynchus mykiss) LC50 96 h: = 9.6 mg/L static (Poecilia reticulata)	EC50 = 9.68 mg/L 30 min EC50 = 96 mg/L 24 h	EC50 48 h: 1.8 - 2.4 mg/L (Daphnia magna)
Chemical Name	Log Pow			
Methyl Methacrylate	0.7			
2-Ethylhexyl acrylate	4.64			
Methyl pyrrolidone	-0.46			
Ethyl benzene	3.118			

### 13. DISPOSAL CONSIDERATIONS

<b>Waste Disposal Methods</b>	This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).
<b>Contaminated Packaging</b>	Do not re-use empty containers. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.
<b>US EPA Waste Number</b>	D001 U107 U162 U239

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Methyl Methacrylate - 80-62-6	U162	Included in waste stream: F039		U162

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

Chemical Name	California Hazardous Waste
Methyl Methacrylate	Toxic Ignitable
Ethyl benzene	Toxic Ignitable

## 14. TRANSPORT INFORMATION

**DOT**

<b>UN-Number</b>	UN1263
<b>Proper shipping name</b>	Paint
<b>Hazard Class</b>	3
<b>Subsidiary Class</b>	
<b>Packing Group</b>	II
<b>Description</b>	UN1263, Paint, 3, , II
<b>Emergency Response Guide Number</b>	128

**TDG**

<b>UN-Number</b>	UN1263
<b>Proper Shipping Name</b>	Paint
<b>Hazard Class</b>	3
<b>Packing Group</b>	II
<b>Description</b>	UN1263, PAINT, 3, II

**MEX**

<b>UN-Number</b>	UN1263
<b>Proper Shipping Name</b>	Paint
<b>Hazard Class</b>	3
<b>Packing Group</b>	II
<b>Description</b>	UN1263 Paint, 3, II

**ICAO**

<b>UN-Number</b>	UN1263
<b>Proper shipping name</b>	Paint
<b>Hazard Class</b>	3
<b>Packing Group</b>	II
<b>Description</b>	UN1263, Paint, 3, II

**IATA**

<b>UN-Number</b>	UN1263
<b>Proper Shipping Name</b>	Paint
<b>Hazard Class</b>	3
<b>Packing Group</b>	II
<b>ERG Code</b>	3L
<b>Description</b>	UN1263, Paint, 3, II

**IMDG/IMO**

<b>UN-Number</b>	UN1263
<b>Proper Shipping Name</b>	Paint
<b>Hazard Class</b>	3
<b>Packing Group</b>	II
<b>EMS No.</b>	F-E, S-E
<b>Description</b>	UN1263, Paint, 3, II, FP 10C

**RID**

<b>UN-Number</b>	UN1263
<b>Proper Shipping Name</b>	Paint
<b>Hazard Class</b>	3
<b>Packing Group</b>	II
<b>Classification Code</b>	F1
<b>Description</b>	UN1263 Paint, 3, II

**ADR**

UN-Number	UN1263
Proper Shipping Name	Paint
Hazard Class	3
Packing Group	II
Classification Code	F1
Description	UN1263 Paint, 3, II

**ADN**

UN-No	UN1263
Proper Shipping Name	Paint
Hazard Class	3
Packing Group	II
Classification Code	F1
Special Provisions	163, 640C, 650
Description	UN1263 Paint, 3, II
Hazard Labels	3
Limited Quantity	LQ6
Ventilation	VE01

**15. REGULATORY INFORMATION****International Inventories**

TSCA	Complies
DSL	Complies

**Legend**

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

DSL/NDSL - 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 %
Methyl Methacrylate	80-62-6	10-30	1.0

**SARA 311/312 Hazard Categories**

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

**Clean Water Act**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Methyl Methacrylate	1000 lb			X

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ

Methyl Methacrylate	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ
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### 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
Methyl pyrrolidone	872-50-4	Developmental
Ethyl benzene	100-41-4	Carcinogen

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

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Quartz	X	X	X	-	X
Methyl Methacrylate	X	X	X	X	X
2-Ethylhexyl acrylate	X	X	X		X

### International Regulations

#### **Mexico - Grade**

Serious risk, Grade 3

Chemical Name	Carcinogen Status	Exposure Limits
Quartz		Mexico: TWA= 0.1 mg/m <sup>3</sup>
Methyl Methacrylate		Mexico: TWA 100 ppm Mexico: TWA 410 mg/m <sup>3</sup> Mexico: STEL 125 ppm Mexico: STEL 510 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**

B2 Flammable liquid  
D2A Very toxic materials  
D2B Toxic materials



**16. OTHER INFORMATION**

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

**Issuing Date** 13-Apr-2012  
**Revision Date** 05-Nov-2012  
**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**