



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 1:1 Spray - Part B

Product Code(s) MR0025B

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. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Inhalation

Irritating to respiratory system.

Ingestion

Ingestion may cause irritation to mucous membranes.

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. Ethylbenzene has been classified by the International Agency for Research on Cancer (IARC) as possibly carcinogenic to humans (Group 2B). Prolonged or repeated overexposure to ethylbenzene may result in adverse effects to the kidneys, liver, respiratory system, thyroid, testicles, and pituitary glands.

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 % |
|-----------------------|-------------|----------|
| Methyl Methacrylate | 80-62-6 | 10-30 |
| 2-Ethylhexyl acrylate | 103-11-7 | 7-13 |
| Phthalate compound | Proprietary | 1-5 |
| Quartz | 14808-60-7 | 0.1-1 |
| Methyl pyrrolidone | 872-50-4 | 0.1-1 |
| Ethyl benzene | 100-41-4 | <0.1 |

4. FIRST AID MEASURES

| | |
|-----------------------------------|---|
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If irritation persists, call a physician. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. Consult a physician. |
| Inhalation | Move to fresh air. If not breathing, give artificial respiration. Administer oxygen if breathing is difficult. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Seek immediate medical attention/advice. |
| Ingestion | Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Drink plenty of water. Call a physician immediately. |
| Notes to Physician | Treat symptomatically. May cause sensitization of susceptible persons. |
| Protection of First-aiders | Remove all sources of ignition. Use personal protective equipment. |

5. FIRE-FIGHTING MEASURES

| | | | | |
|--|---|-----------------------|--------------------------|--|
| Flammable Properties | Flammable liquid. | | | |
| Flash Point | 50 °F / 10 °C (For Methyl Methacrylate) | | | |
| Flashpoint Method | Seta closed cup | | | |
| Suitable Extinguishing Media | Dry chemical, CO 2, water spray or alcohol-resistant foam. | | | |
| Explosion Data | | | | |
| Sensitivity to Mechanical Impact | None. | | | |
| Sensitivity to Static Discharge | Yes. | | | |
| Specific Hazards Arising from the Chemical | 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). | | | |
| Protective Equipment and Precautions for Firefighters | As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. | | | |
| <u>NFPA</u> | Health Hazard 2 | Flammability 3 | Instability 1 | Physical and Chemical Hazards - |
| HMIS | Health Hazard 2* | Flammability 3 | Physical Hazard 1 | Personal Protection X |

*Indicates a chronic health hazard.

6. ACCIDENTAL RELEASE MEASURES

| | |
|----------------------------------|---|
| Personal Precautions | 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. |
| Environmental Precautions | Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. |
| Methods for Containment | Prevent further leakage or spillage if safe to do so. Dike far ahead of liquid spill for later disposal. |
| Methods for Cleaning Up | Dam up. Use personal protective equipment. 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. |
| Other Information | Water spray may reduce vapor; but may not prevent ignition in closed spaces. |

7. HANDLING AND STORAGE

| | |
|-----------------|---|
| Handling | <p>MIX CATALYST IN PART B ONLY. 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 contact with skin, eyes and clothing. Avoid breathing vapors or mists.</p> <p>Keep container tightly closed when not in use. Material mixed with catalyst must be drained out of tank after 12 hours to avoid gelling or curing in equipment. For safety purposes, do not leave mixture of activated Part B unattended for more than 12 hours. Pot life will shorten if the activated material is exposed to temperatures higher than 20°C/68°F. Exothermic chemical reaction can also occur.</p> |
| Storage | 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 |
|--------------------------------|--|---|---|
| Methyl Methacrylate 80-62-6 | STEL: 100 ppm TWA: 50 ppm | TWA: 100 ppm TWA: 410 mg/m ³ (vacated) TWA: 100 ppm (vacated) TWA: 410 mg/m ³ | IDLH: 1000 ppm TWA: 100 ppm TWA: 410 mg/m ³ |
| Quartz 14808-60-7 | TWA: 0.025 mg/m ³ respirable fraction | 30/(%SiO ₂ +2) mg/m ³ TWA, Total Dust; 250/(%SiO ₂ +5) mppcf TWA, respirable fraction; 10/(%SiO ₂ +2) mg/m ³ TWA, respirable TWA: 0.1 mg/m ³ (vacated) | IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust |
| Ethyl benzene 100-41-4 | STEL: 125 ppm TWA: 100 ppm | TWA: 100 ppm TWA: 435 mg/m ³ (vacated) TWA: 100 ppm (vacated) TWA: 435 mg/m ³ (vacated) STEL: 150 ppm (vacated) STEL: 655 mg/m ³ | IDLH: 800 ppm TWA: 100 ppm TWA: 435 mg/m ³ STEL: 125 ppm STEL: 545 mg/m ³ |

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

Hexavalent chrome may be formed during welding. 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

Safety glasses with side-shields.

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. Wash thoroughly after handling. Provide regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|------------------------------------|---|-----------------------------------|--|
| Appearance | Red. | Odor | Strong acrylic/ester-like. |
| Odor Threshold | Not applicable | Physical State | Viscous liquid |
| pH | Not applicable | | |
| Flash Point | 50 °F / 10 °C (For Methyl Methacrylate) | Flashpoint Method | Seta closed cup |
| Autoignition Temperature | 250 °C / 482 °F (For 2-Ethylhexyl acrylate) | Decomposition Temperature | Not applicable |
| Boiling Point/Boiling Range | 100 °C @ 1013 mbar / 212 °F (For Methyl Methacrylate) | Melting Point/Range | Not applicable |
| | | Flammability Limits in Air | (For 2-ethylhexyl acrylate) |
| | | Upper | 6.0% |
| | | Lower | 0.9% |
| Specific Gravity | 1.4 - 1.6 | Solubility | Not applicable |
| Evaporation Rate | >1 (BuAc = 1) | Vapor Pressure | 29 mmHg @ 20°C (for Methyl Methacrylate) |
| Vapor Density | >1 (air = 1) | VOC (g/l) | Less than 50 |

10. STABILITY AND REACTIVITY

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

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

| | |
|----------------------------|--|
| Product Information | No acute toxicity information is available for this product. |
|----------------------------|--|

Component Information

| Chemical Name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|-----------------------|----------------------|---|---|
| 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) | |
| Quartz | 500 mg/kg (Rat) | | |
| Methyl pyrrolidone | = 3598 mg/kg (Rat) | = 2000 mg/kg (Rabbit) = 2500 mg/kg (Rat) | = 3.1 mg/L (Rat) 4 h |

Chronic Toxicity

| | |
|-------------------------|---|
| Chronic Toxicity | 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. Ethylbenzene has been classified by the International Agency for Research on Cancer (IARC) as possibly carcinogenic to humans (Group 2B). Prolonged or repeated overexposure to ethylbenzene may result in adverse effects to the kidneys, liver, respiratory system, thyroid, testicles, and pituitary glands. |
|-------------------------|---|

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

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|-----------------------|-------|----------|-------|------|
| Methyl Methacrylate | | Group 3 | | |
| 2-Ethylhexyl acrylate | | Group 3 | | |
| Quartz | A2 | Group 1 | Known | X |
| 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

| | |
|-----------------------------|---------------------|
| 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) |
|-----------------------|---|--|--|--|
| 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 | | |
| Phthalate compound | | 9.2 | | |
| Methyl pyrrolidone | | -0.46 | | |
| Ethyl benzene | | 3.118 | | |

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

Contaminated Packaging Do not re-use empty containers. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

US EPA Waste Number D001

| 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 |
| Phthalate compound - | U017 | Included in waste stream: F039 | | U107 |

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**

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

TDG

| | |
|----------------------|----------------------|
| UN-Number | UN1263 |
| Proper Shipping Name | Paint |
| Hazard Class | 3 |
| Packing Group | II |
| Description | UN1263, PAINT, 3, II |

MEX

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

ICAO

| | |
|----------------------|----------------------|
| UN-Number | UN1263 |
| Proper shipping name | Paint |
| Hazard Class | 3 |
| Packing Group | II |
| Description | UN1263, Paint, 3, II |

IATA

| | |
|----------------------|----------------------|
| UN-Number | UN1263 |
| Proper Shipping Name | Paint |
| Hazard Class | 3 |
| Packing Group | II |
| ERG Code | 3L |
| Description | UN1263, Paint, 3, II |

IMDG/IMO

| | |
|----------------------|------------------------------|
| UN-Number | UN1263 |
| Proper Shipping Name | Paint |
| Hazard Class | 3 |
| Packing Group | II |
| EmS No. | F-E, S-E |
| Description | UN1263, Paint, 3, II, FP 10C |

RID

| | |
|----------------------|---------------------|
| UN-Number | UN1263 |
| Proper Shipping Name | Paint |
| Hazard Class | 3 |
| Packing Group | II |
| Classification Code | F1 |
| Description | 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/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 % |
|---------------------|---------|----------|-------------------------------|
| 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 |
| Phthalate compound | | X | 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 |
| Phthalate compound | 5000 lb | | RQ 5000 lb final RQ RQ 2270 kg final RQ |

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 |
|-----------------------|------------|---------------|--------------|----------|--------------|
| Limestone | X | X | X | | X |
| Methyl Methacrylate | X | X | X | X | X |
| 2-Ethylhexyl acrylate | X | X | X | | X |
| Phthalate compound | X | X | X | X | |
| Quartz | X | X | X | - | X |
| Methyl pyrrolidone | X | X | X | | |

International Regulations

Mexico - Grade

Serious risk, Grade 3

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

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