Material Safety Data Sheet

Issuing Date 17-Feb-2012 **Revision Date** 05-Nov-2012 **Revision Number** 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name **HPS-6 MMA LF Yellow 98:2 Spray**

Product Code(s) **T-46-623C**

UN-Number UN1263

Recommended Use Traffic paint

Product Technology MMA

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

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 Yellow **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. Crystalline silica (quartz) has been classified by the International Agency for Research on Cancer (IARC) as a known human carcinogen (Group 1). 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.

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
Di-n-octyl phthalate	117-84-0	1-5
Titanium dioxide	13463-67-7	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

General Advice Show this safety data sheet to the doctor in attendance.

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 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 and you are trained. 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 or Poison Control Center immediately.

Notes to Physician Treat symptomatically.

Protection of First-aiders Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

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.

Unsuitable Extinguishing Media CAUTION: All these products have a very low flash point. Use of water spray when fighting fire may be inefficient.

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.

NFPA	**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

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.

Keep container tightly closed when not in use. Accidental contamination with catalyst will result in immediate exothermic chemical reaction, hardening tank, hoses, and equipment.

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/m³ (vacated) TWA: 100 ppm (vacated) TWA: 410 mg/m³	IDLH: 1000 ppm TWA: 100 ppm TWA: 410 mg/m³
Titanium dioxide 13463-67-7	TWA: 10 mg/m³	TWA: 15 mg/m³ total dust (vacated) TWA: 10 mg/m³ total dust	IDLH: 5000 mg/m³
Quartz 14808-60-7	TWA: 0.025 mg/m³ respirable fraction	30/(%SiO2+2) mg/m³ TWA, Total Dust;250/%SiO2+5) mppcf TWA, respirable fraction; 10/(%SiO2+2) mg/m³ TWA, respirable TWA: 0.1 mg/m³ (vacated)	IDLH: 50 mg/m³ respirable dust TWA: 0.05 mg/m³ respirable dust
Ethyl benzene 100-41-4	STEL: 125 ppm TWA: 100 ppm	TWA: 100 ppm TWA: 435 mg/m³ (vacated) TWA: 100 ppm (vacated) TWA: 435 mg/m³ (vacated) STEL: 150 ppm (vacated) STEL: 655 mg/m³	IDLH: 800 ppm TWA: 100 ppm TWA: 435 mg/m³ STEL: 125 ppm STEL: 545 mg/m³

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 Safety glasses with side-shields.

Skin and Body Protection Protective gloves.

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

Appearance	Yellow.	**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. Crystalline silica (quartz) has been classified by the International Agency for Research on Cancer (IARC) as a known human carcinogen (Group 1). 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.

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		
Titanium dioxide		Group 2B		X
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
Di-n-octyl phthalate	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
Di-n-octyl phthalate - 117-84-0	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	None
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/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	No

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
Di-n-octyl phthalate		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
Di-n-octyl phthalate	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
Titanium dioxide	13463-67-7	Carcinogen
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
Methyl Methacrylate	X	X	X	X	X
2-Ethylhexyl acrylate	X	X	X		X
Phthalte compound	X	X	X	X	
Titanium dioxide	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
Titanium dioxide		Mexico: TWA= 10 mg/m^3 Mexico: STEL= 20 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
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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