

# **Material Safety Data Sheet**

Issuing Date 07-Feb-2012 Revision Date 05-Nov-2012 Revision Number 1

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name HPS-6 MMA LF Yellow 1:1 Spray – Part A

Product Code(s) T-46-601A

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.

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**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
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

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. Remove and wash contaminated clothing before

re-use. If skin irritation persists, call a physician.

**Inhalation** Move victim to fresh air. If not breathing, give artificial respiration. Administer oxygen if

breathing is difficult and you are trained. 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. Consult a physician.

**Notes to Physician** May cause sensitization of susceptible persons. Treat symptomatically.

**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<sub>2</sub>, 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.

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 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.

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 tightly closed in a dry and cool place. Keep in properly labeled containers.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### **Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Methyl Methacrylate	STEL: 100 ppm	TWA: 100 ppm	IDLH: 1000 ppm
80-62-6	TWA: 50 ppm	TWA: 410 mg/m <sup>3</sup>	TWA: 100 ppm
		(vacated) TWA: 100 ppm	TWA: 410 mg/m <sup>3</sup>
		(vacated) TWA: 410 mg/m <sup>3</sup>	
Titanium dioxide	TWA: 10 mg/m <sup>3</sup>	TWA: 15 mg/m³ total dust	IDLH: 5000 mg/m <sup>3</sup>
13463-67-7		(vacated) TWA: 10 mg/m³ total	
		dust	
Quartz	TWA: 0.025 mg/m³ respirable	30/(%SiO2+2) mg/m <sup>3</sup> TWA, Total	IDLH: 50 mg/m <sup>3</sup> respirable dust
14808-60-7	fraction	Dust;250/%SiO2+5) mppcf TWA,	
		respirable fraction; 10/(%SiO2+2)	
		mg/m³ TWA, respirable	
		TWA: 0.1 mg/m³ (vacated)	
Ethyl benzene	STEL: 125 ppm	TWA: 100 ppm	IDLH: 800 ppm
100-41-4	TWA: 100 ppm	TWA: 435 mg/m <sup>3</sup>	TWA: 100 ppm
		(vacated) TWA: 100 ppm	TWA: 435 mg/m <sup>3</sup>
		(vacated) TWA: 435 mg/m <sup>3</sup>	STEL: 125 ppm
		(vacated) STEL: 150 ppm	STEL: 545 mg/m <sup>3</sup>
		(vacated) STEL: 655 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**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 Flashpoint Method Seta closed cup

Methacrylate)

**Autoignition Temperature** 250 °C / 482 °F (For **Decomposition Temperature** Not applicable 2-Ethylhexyl acrylate)

Boiling Point/Boiling Range 100 °C @ 1013 mbar / 212 Melting Point/Range Not applicable

°F (For Methyl Methacrylate)

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 Content (%)** 22.529

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 (CO2).

**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. May be harmful if inhaled.

#### **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. This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Chemical Name	ACGIH	IARC	NTP	OSHA
Methyl Methacrylate		Group 3		
2-Ethylhexyl acrylate		Group 3		
Titanium dioxide		Group 2B		Х
Quartz	A2	Group 1	Known	Х
Ethyl benzene	A3	Group 2B	-	-

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

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. Eyes. Lungs. Skin.

# 12. ECOLOGICAL INFORMATION

<u>Ecotoxicity</u>
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: 1 flow-through macro-LC50 96 h: 2 flow-through prom LC50 96 h: mg/L static reticc LC50 96 h: flow-through (imp/k)	(Pimephales lelas) 153.9-341.8 c (Lepomis chirus) 170-206 mg/L h (Lepomis chirus) 243-275 mg/L (Pimephales lelas) 326.4-426.9 c (Poecilia llata) 1 > 79 mg/L Oncorhynchus liss) 79 mg/L static	Ī	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: (Leuciscus idu	: = 23 mg/L	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: static (Poecil LC50 96 h: s	mephales lelas) = 1400 mg/L lia reticulata) = 4000 mg/L ciscus idus) 332 mg/L static		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) L LC50 96 h: 7.55-11 mg/L		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	(. seema l	Log Pow		
	ethyl Methacrylate			0.7	
	Ethylhexyl acrylate thalate compound		4.64		
	lethyl pyrrolidone		9.2		
	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

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
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-NumberUN1263Proper shipping namePaintHazard Class3Subsidiary ClassNonePacking GroupII

**Description** UN1263,Paint,3,PG II

Emergency Response Guide 1

Number

## TDG

UN-NumberUN1263Proper Shipping NamePaintHazard Class3Packing GroupII

**Description** UN1263,PAINT,3,PG II

#### MEX

UN-NumberUN1263Proper Shipping NamePaintHazard Class3Packing GroupII

**Description** UN1263 Paint,3,II

#### **ICAO**

UN-NumberUN1263Proper shipping namePaintHazard Class3Packing GroupII

**Description** UN1263,Paint,3,PG II

## IATA

UN-NumberUN1263Proper Shipping NamePaintHazard Class3Packing GroupIIERG Code3L

**Description** UN1263,Paint,3,PG II

#### IMDG/IMO

UN-NumberUN1263Proper Shipping NamePaintHazard Class3Packing GroupIIEmS No.F-E, S-E

**Description** UN1263, Paint,3,PG II, FP 13C

#### RID

UN-NumberUN1263Proper Shipping NamePaintHazard Class3Packing GroupIIClassification CodeF1

**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-NoUN1263Proper Shipping NamePaintHazard Class3Packing GroupIIClassification CodeF1

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	22.25	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			Х
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
ᆫ				

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
Ethyl benzene	1000 lb	RQ 1000 lb final RQ RQ 454 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
Limestone	X	X	X		X
Methyl Methacrylate	X	X	X	X	Х
2-Ethylhexyl acrylate	X	X	X		Х
Phthalate compound	Х	X	X	X	
Titanium dioxide	Х	X	X	-	Х
Quartz	X	X	Х	-	X
Methyl pyrrolidone	Х	X	Х		

### **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 <sup>3</sup>	
		Mexico: STEL 125 ppm	
		Mexico: STEL 510 mg/m <sup>3</sup>	
Titanium dioxide		Mexico: TWA= 10 mg/m <sup>3</sup>	
		Mexico: STEL= 20 mg/m <sup>3</sup>	
Quartz		Mexico: TWA= 0.1 mg/m <sup>3</sup>	
Ethyl benzene		Mexico: TWA 100 ppm	
•		Mexico: TWA 435 mg/m <sup>3</sup>	
		Mexico: STEL 125 ppm	
		Mexico: STEL 545 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** 07-Feb-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**