

Safety Data Sheet



according to OSHA Hazard Communication
29 CFR Part 1910.1200

according to Regulation (EC)
No. 1907/2006 Article 31

Section 1. Identification

Product Code: MY0015B

Product Name: HPS6 MMA YEL 1:1 B MTQ GUQ-1561

Product Type: MMA

Recommended Use: Traffic Markings

Supplied by: Ennis-Flint
A Traffic Safety Solutions Company
115 Todd Court
Thomasville, NC 27360
T: 800.331.8118 (For Technical Inquiries)

Emergency Telephone: Chemtrec 1-800-424-9300

Section 2. Hazard(s) identification

EMERGENCY OVERVIEW: FLAMMABLE liquid and vapor. Sensitizer.

Classification

Symbol(s) of Product



Signal Word

Danger

GHS Named Chemicals On Label

Titanium Dioxide, n-butyl acrylate, 1,4 butanediol dimethacrylate, Methyl Methacrylate (MMA)

GHS HAZARD STATEMENTS

Flammable Liquid, category 2	H225	Highly flammable liquid and vapour.
Skin Irritation, category 2	H315	Causes skin irritation.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.
Eye Irritation, category 2	H319	Causes serious eye irritation.
Acute Toxicity, Inhalation, category 2	H330	Fatal if inhaled.
STOT, single exposure, category 3, RTI	H335	May cause respiratory irritation.
STOT, single exposure, category 3, NE	H336	May cause drowsiness or dizziness.
Carcinogenicity, category 2	H351	Suspected of causing cancer.

GHS PRECAUTIONARY STATEMENTS

P201	Obtain special instructions before use.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233	Keep container tightly closed.

P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/.../ equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.
P284	Wear respiratory protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P310	Immediately call a POISON CENTER or doctor/physician.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P363	Wash contaminated clothing before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

Section 3. Composition/Information on ingredients

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>Wt. %</u>	<u>GHS Symbols</u>	<u>GHS Statements</u>
Methyl Methacrylate (MMA)	80-62-6	10-25	GHS02-GHS06	H225-315-317-330-335-336
n-butyl acrylate	141-32-2	10-25	GHS02-GHS07	H226-302-312-315-317-319-332-335-336
Titanium Dioxide	13463-67-7	2.5-10	GHS08	H351
1,4 butanediol dimethacrylate	2082-81-7	1.0-2.5	GHS07	H315-317-319
Crystalline Silica, Quartz	14808-60-7	0.1-1.0	GHS08	H351-373

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>EINECS No.</u>	<u>REACH Reg No.</u>	<u>M-Factors</u>
n-butyl acrylate	141-32-2	205-480-7	14059-33-7	0
Methyl Methacrylate (MMA)	80-62-6	201-297-1	not available	0
Titanium Dioxide	13463-67-7	236-675-5	not available	0
1,4 butanediol dimethacrylate	2082-81-7	218-218-1	not available	0
Crystalline Silica, Quartz	14808-60-7	238-878-4	not available	0

The text for GHS Hazard Statements shown above (if any) is given in the "Other information" Section.

Section 4. First-aid measures



FIRST AID - INHALATION: Move to fresh air. Give oxygen or artificial respiration if needed. Call a physician or poison control center immediately. Consult a physician if symptoms persist.

FIRST AID - SKIN CONTACT: Wash affected area immediately with soap and plenty of water. Remove contaminated clothing and launder before reuse. Consult a physician if symptoms persist.

FIRST AID - EYE CONTACT: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult a physician if symptoms persist.

FIRST AID - INGESTION: Do NOT induce vomiting. If conscious, rinse mouth and drink plenty of water. Never give anything by mouth to an unconscious person. Consult a physician.

Section 5. Fire-fighting measures

UNUSUAL FIRE AND EXPLOSION HAZARDS: Flammable liquid. Vapors can form an ignitable mixture with air. Vapors can flow along surfaces to a distant ignition source and flash back. Vapors can spread along ground and collect in low or confined areas (sewers, basements, tanks). Water spray may reduce vapor, but may not prevent ignition in closed spaces.

SPECIAL FIREFIGHTING PROCEDURES: Flammable. Cool fire-exposed containers using water spray. As in any fire, wear self-

contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

EXTINGUISHING MEDIA: Alcohol Foam, Carbon Dioxide, Dry Chemical, Foam, Water Fog

Section 6. Accidental release measures

ENVIRONMENTAL PRECAUTIONS: Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use personal protective equipment. Ensure adequate ventilation. Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material. Take up mechanically. Keep in suitable and closed containers for disposal. Use clean non-sparking tools to collect absorbed material.

Section 7. Handling and storage



HANDLING: Flammable liquid. Avoid heat, sparks and open flames. Ensure adequate ventilation. Avoid breathing vapor, mists or dust. Avoid contact with eyes, skin, and clothing. Wear appropriate personal protective equipment. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Observe good industrial hygiene practices. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded.

STORAGE: Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

Section 8. Exposure controls/personal protection

Ingredients with Occupational Exposure Limits

<u>Chemical Name</u>	<u>ACGIH TLV-TWA</u>	<u>ACGIH-TLV STEL</u>	<u>OSHA PEL-TWA</u>	<u>OSHA PEL-CEILING</u>
Methyl Methacrylate (MMA)	50 PPM	100 PPM	100 PPM	
n-butyl acrylate	2 PPM		10 ppm	
Titanium Dioxide	10 mg/m3		15 mg/m3	
1,4 butanediol dimethacrylate				
Crystalline Silica, Quartz	0.025 mg/m3		0.05 mg/m3	

<u>Name</u>	<u>Percentage</u>	<u>VME mg/m3</u>	<u>VME ppm</u>	<u>OEL Note</u>
n-butyl acrylate	10-25	5	1	10 ppm
Methyl Methacrylate (MMA)	10-25	208	50	100 PPM
Titanium Dioxide	2.5-10	10	0	15 mg/m3

Further Advice: MEL = Maximum Exposure Limit OES = Occupational Exposure Standard SUP = Supplier's Recommendation
Sk = Skin Sensitizer N.E. = Not Established

Personal Protection



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.



SKIN PROTECTION: Protective gloves/clothing.



EYE PROTECTION: Safety glasses with side-shields.



OTHER PROTECTIVE EQUIPMENT: Eyewash stations, safety showers, ventilation systems.



HYGIENIC PRACTICES: When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.

Section 9. Physical and chemical properties

Appearance:	yellow	Physical State:	Liquid
Odor:	Strong acrylic/ester-like	Odor Threshold:	Not Established
Density, g/cm3:	1.649	pH:	NI
Freeze Point, °C:	NI	Viscosity:	NI
Solubility in Water:	Not soluble	Partition Coefficient, n-octanol/water:	NI
Decomposition Temp., °C:	NI		
Boiling Point, °C:	N.I.	Explosive Limits, vol%:	N.I.
Combustibility:	Supports Combustion	Flash Point, °C:	13
Evaporation Rate:	Slower than Diethyl Ether	Auto-ignition Temp., °C:	NI
Vapor Density:	Heavier than air	Vapor Pressure:	NI

(See "Other information" Section for abbreviation legend)

Section 10. Stability and reactivity

STABILITY: Stable under recommended storage conditions.

CONDITIONS TO AVOID: Excessive heat.

INCOMPATIBILITY: Oxidizing agents Free-radical generating sources

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide. Carbon dioxide.

HAZARDOUS POLYMERIZATION: Polymerization may occur when exposed to excessive heating and incompatibles.

Section 11. Toxicological information



Practical Experiences

EFFECT OF OVEREXPOSURE - INHALATION: May be harmful if inhaled. Irritating to the respiratory tract (nose, mouth, mucous membranes) May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.

EFFECT OF OVEREXPOSURE - SKIN CONTACT: May cause allergic skin reaction. Irritating to skin.

EFFECT OF OVEREXPOSURE - EYE CONTACT: Direct eye contact may cause irritation.

EFFECT OF OVEREXPOSURE - INGESTION: Ingestion may cause irritation to mucous membranes. May cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

EFFECT OF OVEREXPOSURE - CHRONIC HAZARDS: This product contains titanium dioxide in a non-respirable form. Inhalation of titanium dioxide is unlikely to occur from exposure to this product. Inhalation exposure to respirable levels of crystalline silica may cause respiratory impairment and lung damage. 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. Repeated contact may cause allergic reactions.

Acute Toxicity Values

The acute effects of this product have not been tested. Data on individual components are tabulated below:

<u>CAS-No.</u>	<u>Name according to EEC</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Gas LC50</u>
80-62-6	Methyl Methacrylate (MMA)	7872 mg/kg rat	>5000 mg/kg rabbit	19 PPM - 4 h rat
141-32-2	n-butyl acrylate	900 mg/kg rat	1796 mg/kg rabbit	2730 ppm - 4 h rat
13463-67-7	Titanium Dioxide	> 10000 mg/kg rat	> 10000 mg/kg rabbit	>20001 ppm
2082-81-7	1,4 butanediol dimethacrylate	>2000 mg/kg	>2000 mg/kg	>20001 ppm
14808-60-7	Crystalline Silica, Quartz	>2000 mg/kg	> 2000 mg/kg	>20001 ppm

N.I. - No Information

Section 12. Ecological information

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

Further Ecological Information

Contains the following ingredients which are classified as water dangerous according to EEC directive No. 76/464/EEC in percentages > 1%.

<u>CAS-No.</u>	<u>Name according to EEC</u>	<u>Bio. Conc. Factor (BCF)</u>	<u>Octanol-water par. Coeff (KOW)</u>
141-32-2	n-butyl acrylate	17	2.36
80-62-6	Methyl Methacrylate (MMA)	4	1.38
13463-67-7	Titanium Dioxide	not available	not available
2082-81-7	1,4 butanediol dimethacrylate	not available	not available
14808-60-7	Crystalline Silica, Quartz	not available	not available

Section 13. Disposal considerations



Product

DISPOSAL METHOD: This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261). Dispose of contents/ container in accordance with the local/regional/national/international regulations. Do not re-use empty containers. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

European Waste Code: 080111 waste paint/var.w.org.solv/DS

Uncleaned Packaging

European Waste Code: 150110 packaging dangerous residuals

Section 14. Transport information

SPECIAL TRANSPORT PRECAUTIONS: No Information

Road Transport

UN Number:	UN1263
ADR/RID Class:	3
Packing Group:	2
Shipping Name:	Paint
Primary Shipping Hazard:	No Information
Road Tunnel Transport Code:	NI

Sea Transport

UN Number:	UN1263
IMDG/GGVSee Class:	3
EmS-No:	F-E, S-E
Packing Group:	2
Shipping Name:	Paint
Primary Shipping Hazard:	* MARINE POLLUTANT*
Marine Pollutant:	Marine Pollutant
Shipping Hazard(Marine Pollutant):	XC_141-32-2

**Air Transport**

UN Number:	UN1263
ICAO/IATA Class:	3
Packing Group:	2
Shipping Name:	Paint
Primary Shipping Hazard:	No Information

Section 15. Regulatory information**U.S. Federal Regulations:****CERCLA - SARA Hazard Category**

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

<u>Chemical Name</u>	<u>CAS-No.</u>
Methyl Methacrylate (MMA)	80-62-6
n-butyl acrylate	141-32-2
Xylene	1330-20-7
Dinonylphenol (branched)	872-50-4
Ethylbenzene	100-41-4

TOXIC SUBSTANCES CONTROL ACT:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

<u>Chemical Name</u>	<u>CAS-No.</u>
n-butyl acrylate	141-32-2
Methyl Methacrylate (MMA)	80-62-6
Titanium Dioxide	13463-67-7
1,4 butanediol dimethacrylate	2082-81-7

Crystalline Silica, Quartz	14808-60-7
Silicon dioxide, amorphous	7631-86-9
N-butyl acetate	123-86-4
Xylene	1330-20-7
1-methoxy-2-propanol acetate	108-65-6
Dinonylphenol (branched)	872-50-4
Ethylbenzene	100-41-4
Iron Oxide Red	1309-37-1
Lithium Chloride	7447-41-8

U.S. State Regulations:**NEW JERSEY RIGHT-TO-KNOW:**

The following materials are non-hazardous, but are among the top five components in this product.

<u>Chemical Name</u>	<u>CAS-No.</u>
Calcium Carbonate	1317-65-3
hydroxypropyl methacrylate	27813-02-1

PENNSYLVANIA RIGHT-TO-KNOW

The following non-hazardous ingredients are present in the product at greater than 3%.

<u>Chemical Name</u>	<u>CAS-No.</u>
Calcium Carbonate	1317-65-3
hydroxypropyl methacrylate	27813-02-1

CALIFORNIA PROPOSITION 65 CARCINOGENS

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

<u>Chemical Name</u>	<u>CAS-No.</u>
Titanium Dioxide	13463-67-7
Crystalline Silica, Quartz	14808-60-7

CALIFORNIA PROPOSITION 65 REPRODUCTIVE TOXINS

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards.

No Proposition 65 Reproductive Toxins exist in this product.

International Regulations: As follows -**CANADIAN WHMIS:**

This SDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

WHMIS Class: B2, D2A, D2B

Denmark

B-Value: 0.000000

France

Storage Conditions: No Information

Professional Illness Table:

<u>CAS Number</u>	<u>Chemical Name</u>	<u>Professional Illness</u>
80-62-6	Methyl Methacrylate (MMA)	not available
141-32-2	n-butyl acrylate	14059-33-7
13463-67-7	Titanium Dioxide	not available
2082-81-7	1,4 butanediol dimethacrylate	not available
14808-60-7	Crystalline Silica, Quartz	not available

Germany**VbF-Class:** No Information**WGK-class:** 1

Remarks: WGK 0 = in general not a water pollutant
 WGK 1 = weak water pollutant
 WGK 2 = water pollutant
 WGK 3 = severe water pollutant

Processing restrictions:***Incident Regulation:**

No Information

Spain**Storage Conditions:** No Information**Switzerland****VOC-Value:** 1.74**United Kingdom****Storage Conditions:** No Information**Section 16. Other information, including date of preparation of the last revision****Revision Date:** 10/6/2016 **Supersedes Date:** 9/26/2016**Reason for revision:** Substance and/or Product Properties Changed in Section(s):
16 - Other Information**Datasheet produced by:** Regulatory Department**HMIS Ratings:**

Health:	*2	Flammability:	3	Reactivity:	1	Personal Protection:	X
----------------	----	----------------------	---	--------------------	---	-----------------------------	---

NFPA Ratings:

Health:	2	Flammability:	3	Reactivity:	1	Hazards:	N.I.
----------------	---	----------------------	---	--------------------	---	-----------------	------

Volatile Organic Compounds, gr/ltr: 3**Text for GHS Hazard Statements shown in Section 3 describing each ingredient:**

H225 Highly flammable liquid and vapour.
 H226 Flammable liquid and vapour.
 H302 Harmful if swallowed.
 H312 Harmful in contact with skin.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.
 H330 Fatal if inhaled.
 H332 Harmful if inhaled.
 H335 May cause respiratory irritation.
 H336 May cause drowsiness or dizziness.
 H351 Suspected of causing cancer.
 H373 May cause damage to organs through prolonged or repeated exposure.

Icons for GHS Pictograms shown in Section 3 describing each ingredient:

GHS02



GHS06



GHS07



GHS08



Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined, N.I. - No Information

The information on this sheet corresponds to our present knowledge. It is not a specification and it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage, and use of the product. It is not applicable to unusual or non-standard uses of the product where instructions and recommendations are not followed. Any use of the product not in conformance with this SDS or in combination with any other product or process is the responsibility of the user.