

# Material Safety Data Sheet

Issuing Date 07-Aug-2012

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Revision Number 0

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name **TYPE 3 YELLOW DURASET MMA**

Product Code(s) **MY0031**

UN-Number **UN1263**

Recommended Use **Traffic paint**

Product Technology **MMA**

**Supplier Address**

Road Optics, Inc.  
PO Box 9127  
Brooks, OR 97305  
TEL: 503-393-3343

**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**

## 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 **Acrid fruity**

**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. 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 %
Quartz	14808-60-7	10-30
Methyl Methacrylate	80-62-6	10-30
2-Ethylhexyl acrylate	103-11-7	7-13
Titanium dioxide	13463-67-7	1-5
Methyl pyrrolidone	872-50-4	0.1-1

### 4. FIRST AID MEASURES

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If irritation persists, call a physician.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. Consult a physician.
<b>Inhalation</b>	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.
<b>Ingestion</b>	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Drink plenty of water. Call a physician immediately.
<b>Notes to Physician</b>	Treat symptomatically. May cause sensitization of susceptible persons.
<b>Protection of First-aiders</b>	Remove all sources of ignition. Use personal protective equipment.

### 5. FIRE-FIGHTING MEASURES

<b>Flammable Properties</b>	Flammable liquid.
<b>Flash Point</b>	55.4 °F / 13 °C
<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> 2	<b>Physical and Chemical Hazards</b> -
<b>HMIS</b>	<b>Health Hazard</b> 2*	<b>Flammability</b> 3	<b>Physical Hazard</b> 2	<b>Personal Protection</b> X

## 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 product from entering drains. Do not flush into surface water or sanitary sewer system.
<b>Methods for Containment</b>	Prevent further leakage or spillage if safe to do so. 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). 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 contact with skin, eyes and clothing. Avoid breathing vapors or mists.
<b>Storage</b>	Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. Keep container tightly closed.

## 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>
Titanium dioxide 13463-67-7	TWA: 10 mg/m <sup>3</sup>	TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 10 mg/m <sup>3</sup> total dust	IDLH: 5000 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

Eyewash stations. Showers. 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

<b>Appearance</b>	Yellow.	<b>Odor</b>	Acrid fruity.
<b>Odor Threshold</b>	Not applicable	<b>Physical State</b>	Viscous liquid
<b>pH</b>	Not applicable		
<b>Flash Point</b>	55.4 °F / 13 °C	<b>Autoignition Temperature</b>	Not applicable
<b>Decomposition Temperature</b>	Not applicable	<b>Boiling Point/Boiling Range</b>	Not applicable
<b>Melting Point/Range</b>	Not applicable	<b>Flammability Limits in Air</b>	Not applicable
<b>Solubility</b>	Not applicable	<b>Evaporation Rate</b>	Not applicable
<b>Vapor Pressure</b>	Not applicable	<b>Vapor Density</b>	Not applicable
<b>VOC (g/l)</b>	< 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>	Excessive heat.
<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

#### **Product Information**

Irritating to respiratory system and skin.

### **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 )	
Titanium dioxide	> 10000 mg/kg ( Rat )		> 6820 mg/m <sup>3</sup>
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. 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
Quartz	A2	Group 1	Known	X
Methyl Methacrylate		Group 3		
2-Ethylhexyl acrylate		Group 3		
Titanium dioxide		Group 2B		X

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

A2 - Suspected Human Carcinogen

A4 - Not Classifiable as a 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**

None known.

## 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)
Chemical Name		Log Pow		
Methyl Methacrylate		0.7		
2-Ethylhexyl acrylate		4.64		
Methyl pyrrolidone		-0.46		

## 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.

### 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

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

## 14. TRANSPORT INFORMATION

**DOT**

<b>UN-Number</b>	UN1263
<b>Proper shipping name</b>	Paint
<b>Hazard Class</b>	3
<b>Subsidiary Class</b>	None
<b>Packing Group</b>	II
<b>Description</b>	UN1263,Paint,3,PG 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,PG 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,PG 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,PG 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,PG II, FP 13C

**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	All components are listed on the TSCA Inventory.
DSL	All components are listed either on the DSL or NDSL.

**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

**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
Titanium dioxide	13463-67-7	Carcinogen
Methyl pyrrolidone	872-50-4	Developmental

## 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
Titanium dioxide	X	X	X	-	X
Methyl pyrrolidone	X	X	X		

## International Regulations

Chemical Name	Carcinogen Status	Exposure Limits
Limestone		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>
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>

## 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-Aug-2012

**Revision Date** 07-Aug-2012

**Revision Note** Initial Release

**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**