

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product identifier**

**Product Name** TransOptic  
**Product Code(s)** 20-3400-080  
**(M)SDS Number** 1339940\_A

**Other means of identification**

**Synonyms** None

**Recommended use of the chemical and restrictions on use**

**Recommended Use** Laboratory Use Only  
**Uses advised against** No information available

**Details of the supplier of the safety data sheet**

**Manufacturer** Buehler  
**Manufacturer Address** 41 Waukegan Rd  
Lake Bluff, IL 60044  
www.buehler.com  
**Phone number** +1 847 295 6500  
**E-mail Address** custserv@buehler.com

**Emergency telephone number**

Global Access Code: 334545  
Americas: +1 760 476 3962 Asia Pacific: +1 760 476 3960  
Middle East/Africa: +1 760 476 3959 Europe: +1 760 476 3961

**2. HAZARDS IDENTIFICATION****Classification**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

**GHS Label elements, including precautionary statements****Emergency Overview**

The product contains no substances which at their given concentration, are considered to be hazardous to health.

**Appearance** White

**Physical state** Pellets

**Odor** Characteristic

**Precautionary Statements - Prevention**

Obtain special instructions before use

**Precautionary Statements - Response**

None

**Precautionary Statements - Storage**

None

**Precautionary Statements - Disposal**

None

**Hazards not otherwise classified (HNOC)**

Not applicable

**Other information**

No information available

**Interactions with Other Chemicals**

No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Weight-%	Trade Secret
Poly (methyl methacrylate)	9011-14-7	> 99%	*
Methyl Methacrylate	80-62-6	< 1%	*
Water	7732-18-5	< 1%	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret

### 4. FIRST AID MEASURES

**First aid measures**

<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact</b>	Wash skin with soap and water.
<b>Inhalation</b>	Remove to fresh air.
<b>Ingestion</b>	Rinse mouth immediately and drink plenty of water.

**Most important symptoms and effects, both acute and delayed**

**Most Important Symptoms and** No information available.

**Effects****Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically.

**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media**

CAUTION: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical**

Product is or contains a sensitizer. May cause sensitization by skin contact.

**Uniform Fire Code** Sensitizer: Solid

**Explosion Data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**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.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation.

**Environmental precautions**

**Environmental precautions** See Section 12 for additional Ecological Information.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Pick up and transfer to properly labeled containers.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

### Conditions for safe storage, including any incompatibilities

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

**Incompatible Products** None known based on information supplied.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

**Exposure Guidelines** The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here

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 <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>

*ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits 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)

### Appropriate engineering controls

**Engineering Measures** Showers  
Eyewash stations  
Ventilation systems

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin and body protection** Wear protective gloves and protective 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** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical and Chemical Properties

<b>Physical state</b>	Pellets	<b>Odor</b>	Characteristic
<b>Appearance</b>	White	<b>Odor Threshold</b>	No information available
<b>Color</b>	No information available		

Property	Values	Remarks	Method
pH	No data available	None known	
Melting / freezing point	150-230°C	None known	
Boiling point / boiling range	No data available	None known	
Flash Point	No data available	None known	
Evaporation Rate	No data available	None known	
Flammability (solid, gas)	No data available	None known	
Flammability Limit in Air			
Upper flammability limit	No data available		
Lower flammability limit	No data available		
Vapor pressure	No data available	None known	
Vapor density	No data available	None known	
Specific Gravity	1.18	None known	
Water Solubility	Negligible		
Solubility in other solvents	No data available	None known	
Partition coefficient: n-octanol/water	No data available	None known	
Autoignition temperature	No data available	None known	
Decomposition temperature	No data available	None known	
Kinematic viscosity	No data available	None known	
Dynamic viscosity	No data available	None known	
Explosive properties	No data available		
Oxidizing properties	No data available		

### Other Information

<b>Softening Point</b>	No data available
<b>VOC Content (%)</b>	Not applicable
<b>Particle Size</b>	No data available
<b>Particle Size Distribution</b>	

## 10. STABILITY AND REACTIVITY

### Reactivity

No data available.

### Chemical stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Conditions to avoid

None known based on information supplied.

### Incompatible materials

None known based on information supplied.

### Hazardous Decomposition Products

None known based on information supplied.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Inhalation</b>	Specific test data for the substance or mixture is not available.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available.

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Methyl Methacrylate 80-62-6	= 7900 mg/kg ( Rat ) = 7872 mg/kg ( Rat )	> 5 g/kg ( Rabbit )	= 4632 ppm ( Rat ) 4 h
Water 7732-18-5	> 90 mL/kg ( Rat )	-	-

### Information on toxicological effects

**Symptoms** Itching. Rashes. Hives.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Sensitization** May cause sensitization in susceptible persons. May cause sensitization by skin contact.

**Mutagenic Effects** No information available.

**Carcinogenicity** Contains no ingredient listed as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Poly (methyl methacrylate) 9011-14-7		Group 3		
Methyl Methacrylate 80-62-6		Group 3		

*IARC (International Agency for Research on Cancer)  
Group 3 - Not Classifiable as to Carcinogenicity in Humans*

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Chronic Toxicity** Carcinogenic potential is unknown.

**Target Organ Effects** Skin. Eyes. Respiratory system.

**Aspiration Hazard** No information available.

### Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document

**ATEmix (oral)**

13,776.00 mg/kg

**ATEmix (dermal)**

8,750.00 mg/kg (ATE)

**ATEmix (inhalation-vapor)**

50.82 ATEmix

<b>12. ECOLOGICAL INFORMATION</b>
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**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 80-62-6	96h EC50: = 170 mg/L (Pseudokirchneriella subcapitata)	96h LC50: 243 - 275 mg/L (Pimephales promelas) 96h LC50: 125.5 - 190.7 mg/L (Pimephales promelas) 96h LC50: 153.9 - 341.8 mg/L (Lepomis macrochirus) 96h LC50: > 79 mg/L (Oncorhynchus mykiss) 96h LC50: 170 - 206 mg/L (Lepomis macrochirus) 96h LC50: 326.4 - 426.9 mg/L (Poecilia reticulata)		48h EC50: = 69 mg/L

**Persistence and Degradability**

No information available.

**Bioaccumulation**

Chemical name	Log Pow
Methyl Methacrylate 80-62-6	0.7

**Other adverse effects**

No information available.

### 13. DISPOSAL CONSIDERATIONS

#### Waste treatment methods

<b>Disposal methods</b>	This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).
<b>Contaminated Packaging</b>	Dispose of contents/containers in accordance with local regulations.
<b>US EPA Waste Number</b>	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 80-62-6	Toxic Ignitable

### 14. TRANSPORT INFORMATION

<b><u>DOT</u></b>	NOT REGULATED
<b>Proper Shipping Name</b>	NON REGULATED
<b>Hazard Class</b>	N/A
<b><u>TDG</u></b>	NOT REGULATED
<b><u>MEX</u></b>	NOT REGULATED
<b><u>ICAO</u></b>	NOT REGULATED
<b><u>IATA</u></b>	NOT REGULATED
<b>Proper Shipping Name</b>	NON REGULATED
<b><u>IMDG/IMO</u></b>	NOT REGULATED
<b><u>RID</u></b>	NOT REGULATED
<b><u>ADR</u></b>	NOT REGULATED
<b><u>ADN</u></b>	NOT REGULATED

### 15. REGULATORY INFORMATION

#### International Inventories

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

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

#### US Federal Regulations

##### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**CWA (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 80-62-6	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 80-62-6	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Methyl Methacrylate 80-62-6	X	X	X	X	X

**International Regulations**

**Mexico**

**National occupational exposure limits**

Component	Carcinogen Status	Exposure Limits
Methyl Methacrylate 80-62-6 ( < 1% )		Mexico: TWA 100 ppm Mexico: TWA 410 mg/m <sup>3</sup> Mexico: STEL 125 ppm Mexico: STEL 510 mg/m <sup>3</sup>

*Mexico - Occupational Exposure Limits - Carcinogens*

**Canada**

**WHMIS Hazard Class**

Not determined

**16. OTHER INFORMATION**

<b>NFPA</b>	Health Hazards 0	Flammability 1	Instability 0	<b>Physical and Chemical Hazards - Personal Protection</b> X
<b>HMIS</b>	Health Hazards 0	Flammability 1	Physical Hazard 0	

Prepared By Product Stewardship

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<b>Revision Note</b>	No information available

**Disclaimer**

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**End of Safety Data Sheet**