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Japan / English

1. PRODUCT AND COMPANY IDENTIFICATION**Product identifier**

Product Name TransOptic
Product Code(s) 20-3400-080
(M)SDS Number 1339940_J

Other means of identification

Synonyms No information available
Registration Number(s) No information available

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
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2. HAZARDS IDENTIFICATION**GHS Classification**

Respiratory sensitization	Category 1
Skin sensitization	Category 1
Specific target organ toxicity (repeated exposure)	Category 2

Category 2 Central nervous system, Respiratory system.
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Label elements**Signal word****Danger****Hazard statements**

H317 - May cause an allergic skin reaction

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H373 - May cause damage to the following organs through prolonged or repeated exposure: Central nervous system, Respiratory system.

Precautionary Statements - Prevention

In case of inadequate ventilation wear respiratory protection

Wear protective gloves

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

Get medical advice/attention if you feel unwell

IF ON SKIN: Wash with plenty of soap and water

If skin irritation occurs: Get medical advice/attention

IF INHALED: Remove person to fresh air and keep comfortable for breathing

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

Precautionary Statements - Storage

Not applicable

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other hazards

Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS
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Substance

Not applicable

Mixture

Chemical name	Weight-%	ENCS - Japan Existing and New Chemical Substances	ISHL No.	CAS-No
Poly (methyl methacrylate)	> 99%	(6)-524	Present	9011-14-7
Methyl Methacrylate	< 1%	(2)-1036	Present	80-62-6

Pollutant Release and Transfer Registry (PRTR)

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed.

Chemical name	Weight-%	Class	Cabinet order number	Relevant substance, conversion factor
Methyl Methacrylate	< 1%	Class I designated chemical	1-420	

80-62-6		substance	
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Industrial Safety and Health Law

ISHL Notifiable Substances - information (safety data sheet) to be supplied; Industrial Safety and Health Law enforcement order Table 9 (related to Industrial Safety and Health Law article 57-2 and ISHL Ordinance Article 34-2-4)

Chemical name	ISHL Notifiable Substances	Threshold Values (%)
Methyl Methacrylate 80-62-6	ISHL Notifiable Substances	0.1

Poisonous and Deleterious Substances Control Law Not applicable

4. FIRST AID MEASURES

First aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Get immediate medical advice/attention.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	May produce an allergic reaction. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.
Symptoms	May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Itching. Rashes. Hives.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. See section 8 for more information.
Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable Properties	Not flammable.
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	No information available.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by inhalation and skin contact. May cause sensitization by skin contact.
Special Extinguishing Media	Cool drums with water spray.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other Information	Refer to protective measures listed in Sections 7 and 8.
For emergency responders	Use personal protection recommended in Section 8.
Environmental precautions	Prevent further leakage or spillage if safe to do so.
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.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.
Reference to other sections	See section 8 for more information. See section 13 for more information.

7. HANDLING AND STORAGE

Handling

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Provide extract ventilation to points where emissions occur. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Take off contaminated clothing and wash before reuse.
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Storage

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.
General hygiene considerations	Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure guidelines

Chemical name	Japan	ISHL Working Environmental Evaluation Standards - Administrative Control Levels	ACGIH TLV
Methyl Methacrylate 80-62-6	TWA: 2 ppm TWA: 8.3 mg/m ³	-	STEL: 100 ppm TWA: 50 ppm

Biological occupational exposure limits	Not applicable
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Engineering controls	Showers Eyewash stations Ventilation systems.
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Personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Wear suitable protective clothing.

Hand protection	Wear suitable gloves.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
Environmental exposure controls	No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical state	Pellets
Appearance	White
Odor	Characteristic
Color	No information available
Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
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		None known	
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	
Relative density	1.18	None known	
Water Solubility	Negligible		
Solubility(ies)	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	
Viscosity	No data available	None known	
Explosive properties	No information available		
Oxidizing properties	No information available		

Other Information

Softening Point	No information available
Molecular Weight	No information available
VOC Content (%)	Not applicable
Liquid Density	No information available
Bulk Density	No information available
Particle Size	No information available
Particle Size Distribution	No information available

10. STABILITY AND REACTIVITY

Reactivity	No information available.
Stability	Stable under normal conditions.
Explosion Data	
Sensitivity to Mechanical Impact	None
Sensitivity to Static Discharge	None

Possibility of hazardous reactions None under normal processing.

Incompatible materials None known based on information supplied.

Hazardous Decomposition Products None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information

Inhalation Specific test data for the substance or mixture is not available. May cause sensitization in susceptible persons. (based on components).

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). May cause sensitization by skin contact. Causes mild skin irritation.

Ingestion Specific test data for the substance or mixture is not available. May cause additional effects as listed under "Inhalation".

Symptoms Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/ or wheezing. Itching. Rashes. Hives.

Numerical measures of toxicity - Product Information

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

ATEmix (inhalation-vapor) 50.82 mg/L

Unknown acute toxicity

98.25 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
 98.25 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
 99.25 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
 98.25 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
 99.25 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Numerical measures of toxicity - Component Information

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

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

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause sensitization by inhalation. May cause sensitization by skin contact.

Germ cell mutagenicity No information available.

Carcinogenicity .

The table below indicates whether each agency has listed any ingredient as a carcinogen.

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

Legend:

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

STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Target Organ Effects	Skin. Eyes. Respiratory system.
Aspiration hazard	No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Percentage for unknown hazards 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Ecotoxicity

Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Methyl Methacrylate	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**Component Information**

Chemical name	Log Pow
Methyl Methacrylate	0.7

Mobility in soil No information available.

Mobility No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

IMDG NOT REGULATED

ADR NOT REGULATED

IATA NOT REGULATED
Proper Shipping Name NON REGULATED

Japan
Hazard Class N/A

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

National Regulations

Japan

Pollutant Release and Transfer Registry (PRTR)

See section 3 for more information

Industrial Safety and Health Law

Harmful Substances Whose Names Are to be Indicated on the Label

Harmful Substances - names to be indicated on the label; Industrial Safety and Health Law enforcement order Table 9 (related to Industrial Safety and Health Law article 57 and ISHL Ordinance Article 33)

ISHL Notifiable Substances

ISHL Notifiable Substances - information (safety data sheet) to be supplied; Industrial Safety and Health Law enforcement order Table 9 (related to Industrial Safety and Health Law article 57-2 and ISHL Ordinance Article 34-2-4)

Fire Service Law:

Not applicable

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (CSCL)

Not applicable

Labor Standards Act

Occupational illnesses caused by chemical substances - Labor Standards Act article 75, Enforcement Ordinance article 35 and Notification Designating Elements and Compounds of Chemical Substances and Occupational Illnesses Table 1-2 item 4-1

Air Pollution Control Law

Air pollutants with regulated emissions standards, Air Pollution Control Act article 3
 Volatile organic compound per Air Pollution Control Law article 2, paragraph 4

Hazardous air pollutants (HAPs) per Air Pollution Control Law article 2, paragraph 1, item 3 and Enforcement Order article 1

International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AICS	Contact supplier for inventory compliance status.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

16. OTHER INFORMATION

Prepared By	Product Stewardship 23 British American Blvd. Latham, NY 12110 1-800-572-6501
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Key or legend to abbreviations and acronyms used in the safety data sheet

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	-	Skin designation
C	Carcinogen		

Disclaimer

This SDS complies with the requirements of JIS Z 7250:2010 and JIS Z 7252:2009 (Japan). The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance 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 materials or in any process, unless specified in the text.



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End of Safety Data Sheet