

Issuing Date No data available

Revision Date 08-Nov-2018

Revision Number 2

Japan / English

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

Product Name VariDur 10 Powder

Product Code(s) 10-1027, 11-1031

(M)SDS Number 1344864_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**

Reproductive toxicity	Category 1B
Acute aquatic toxicity	Category 3

Label elements

Signal word

Danger

Hazard statements

H360 - May damage fertility or the unborn child

H402 - Harmful to aquatic life

Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/protective clothing/eye protection/face protection

Avoid release to the environment

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other hazards

Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

Chemical name	Weight-%	ENCS - Japan Existing and New Chemical Substances	ISHL No.	CAS-No
Polymethyl methacrylate	90 - 100%	(6)-524	Present	9011-14-7
Methyl methacrylate	0 - 1%	(2)-1036	Present	80-62-6
Benzoyl peroxide	0 - 1%	(3)-1349	Present	94-36-0
1,2-Benzenedicarboxylic acid, dicyclohexyl ester	0 - 1%	(3)-1311	Present	84-61-7

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 80-62-6	0 - 1%	Class I designated chemical substance	1-420	
1,2-Benzenedicarboxylic acid, dicyclohexyl ester 84-61-7	0 - 1%	Class II designated chemical substance	2-78	

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
Benzoyl peroxide 94-36-0	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	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water.
Ingestion	Clean mouth with water and drink afterwards plenty of water.
Symptoms	No information available.
Note to physicians	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	No information available.
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	Ensure adequate ventilation.
For emergency responders	Use personal protection recommended in Section 8.
Environmental precautions	See Section 12 for additional Ecological Information.
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. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes.

Storage

Storage Conditions Store locked up.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

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
Benzoyl peroxide 94-36-0	-	-	TWA: 5 mg/m ³

Biological occupational exposure limits Not applicable

Engineering controls Showers
Eyewash stations
Ventilation systems.

Personal protective equipment

Eye/face protection No special protective equipment required.

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 Powder(s)
Appearance Powder(s)
Odor Odorless
Color No information available

Odor Threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks Method</u>
pH	No data available	None known
Melting / freezing point	110°C	None known
Boiling point / boiling range	No data available	None known
Flash Point	>250°C	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	No data available	None known
Water Solubility	Insoluble	
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	1.16 g/cm ³
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.

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.
Ingestion	Specific test data for the substance or mixture is not available.
Symptoms	No information available.

Numerical measures of toxicity - Product Information

Unknown acute toxicity

- 98.5 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 98.5 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 98.5 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
- 98.5 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 98.5 % 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
Benzoyl peroxide 94-36-0	= 7710 mg/kg (Rat) = 6400 mg/kg (Rat)		
1,2-Benzenedicarboxylic acid, dicyclohexyl ester 84-61-7	= 30 mL/kg (Rat)		

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	No information available.
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
Polymethyl methacrylate 9011-14-7		Group 3
Methyl methacrylate 80-62-6		Group 3
Benzoyl peroxide 94-36-0		Group 3

Legend:

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

Reproductive toxicity	Contains a known or suspected reproductive toxin. Classification based on data available for ingredients.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.

Target Organ Effects Skin.

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 Harmful to aquatic life. .

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.

Endocrine Disruptor Information

Chemical name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
1,2-Benzenedicarboxylic acid, dicyclohexyl ester	Group III Chemical	-	Industrial chemical

13. DISPOSAL CONSIDERATIONS

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

products	environmental legislation.
Contaminated packaging	Do not reuse empty containers.

14. TRANSPORT INFORMATION

<u>IMDG</u>	NOT REGULATED
<u>ADR</u>	NOT REGULATED
<u>IATA</u>	NOT REGULATED
Proper Shipping Name	NON REGULATED
<u>Japan</u>	
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

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:

Verify that requirements related to using, handling, and storing substances subject to prohibition, authorization or restriction are met

Self-reactive materials, group 5, 2nd category, hazard rank II, 100 kg

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
Issuing Date	01-Mar-2017
Revision Date	08-Nov-2018
Revision Note	No information available

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

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End of Safety Data Sheet