SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Issuing Date 17-Aug-2016 **Revision Date** 17-Apr-2019 **Revision Number** 4

EGHS / English

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Name **VariDur 10 Powder**

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

(M)SDS Number 1344864_E

Chemical name

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Laboratory Use Only.

Uses advised against No information available.

1.3. Details of the supplier of the safety data sheet

Manufacturer ITW Test & Measurement GmbH

Manufacturer Address Boschstraße 10
73734 Esslingen am Neckar / GERMANY
www.buehler-met.de www.buehler.fr www.buehler.co.uk

Phone number +49 (0) 711 4904690-0

E-mail Address lab.eu@buehler.com

1.4. Emergency telephone number

Global Access Code: 334545
Americas: +1 760 476 3962 Europe: +1 760 476 3961
Middle East/Africa: +1 760 476 3959 Asia Pacific: +1 760 476 3960
UK: +44 8 08 189 0979

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Reproductive Toxicity	Category 1B - (H360D)

2.2. Label elements

Signal word **Danger**

Hazard Statements
H360D - May damage the unborn child

Precautionary Statements - EU (§28, 1272/2008)
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P308 + P313 - IF exposed or concerned: Get medical advice/attention
P405 - Store locked up
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

2.3. Other hazards

No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable.

3.2 Mixtures

Chemical name	EC No	CAS No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Reg. No.
Polymethyl methacrylate	-	9011-14-7	90 - 100%	No data available	No data available
Methyl methacrylate	Present	80-62-6	0 - 1%	Skin Irrit. 2 (H315)Liq. 2 (H225)SE 3(H335)Sens. 1 (H317)	No data available
Benzoyl peroxide	Present	94-36-0	0 - 1%	Org. Perox. B (H241) Eye Irrit. 2 (H319) Skin Sens. 1 (H317)	No data available
1,2-Benzenedicarboxylic acid, dicyclohexyl ester	201-545-9	84-61-7	0 - 1%	Repr. 1B (H360D) Skin Sens. 1 (H317)	No data available

Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Chemical name	CAS No.	SVHC candidates
Polymethyl methacrylate	9011-14-7	-
Benzoyl peroxide	94-36-0	-
Methyl methacrylate	80-62-6	-
1,2-Benzenedicarboxylic acid, dicyclohexyl ester	84-61-7	-

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation Remove to fresh air.

Skin contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Ingestion Clean mouth with water and drink afterwards plenty of water.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

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

Unsuitable extinguishing media No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

5.3. Advice for firefighters

Special protective equipment for fire-fighters
Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Should not be released into the environment. See Section 12 for additional Ecological Information.

6.3. 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 Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure Limits

Chemical name	EU	United Kingdom	France	Spain	Germany
Methyl methacrylate 80-62-6	TWA: 50 ppm STEL: 100 ppm	STEL: 100 ppm STEL: 416 mg/m³ TWA: 50 ppm TWA: 208 mg/m³	TWA: 50 ppm TWA: 205 mg/m³ STEL: 100 ppm STEL: 410 mg/m³	STEL: 100 ppm TWA: 50 ppm	TWA: 50 ppm TWA: 210 mg/m³
Benzoyl peroxide 94-36-0	-	STEL: 15 mg/m³ TWA: 5 mg/m³	TWA: 5 mg/m³	TWA: 5 mg/m³	TWA: 5 mg/m³
1,2-Benzenedicarboxylic acid, dicyclohexyl ester 84-61-7	-	STEL: 15 mg/m³ TWA: 5 mg/m³	-	-	-
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Methyl methacrylate	TWA: 50 ppm	STEL: 100 ppm	STEL: 410 mg/m³	TWA: 10 ppm	TWA: 25 ppm

80-62-6	STEL: 100 ppm	TWA: 50 ppm	TWA: 205 mg/m³	TWA: 42 mg/m³ STEL: 50 ppm STEL: 210 mg/m³	TWA: 102 mg/m³ H*
Benzoyl peroxide 94-36-0	-	TWA: 5 mg/m³	-	TWA: 5 mg/m³ STEL: 10 mg/m³	TWA: 5 mg/m³
1,2-Benzenedicarboxylic acid, dicyclohexyl ester 84-61-7	-	-	-	-	TWA: 3 mg/m³

Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Methyl methacrylate 80-62-6	STEL 100 ppm STEL 420 mg/m³ TWA: 50 ppm TWA: 210 mg/m³	STEL: 100 ppm STEL: 420 mg/m³ TWA: 50 ppm TWA: 210 mg/m³	STEL: 300 mg/m³ TWA: 100 mg/m³	TWA: 25 ppm TWA: 100 mg/m³ H* STEL: 100 ppm STEL: 400 mg/m³	TWA: 50 ppm STEL: 100 ppm
Benzoyl peroxide 94-36-0	STEL 10 mg/m³ TWA: 5 mg/m³	STEL: 5 mg/m³ TWA: 5 mg/m³	STEL: 10 mg/m³ TWA: 5 mg/m³	TWA: 5 mg/m³ STEL: 10 mg/m³	TWA: 5 mg/m³ STEL: 15 mg/m³
1,2-Benzenedicarboxylic acid, dicyclohexyl ester 84-61-7	TWA: 5 mg/m³	-	-	-	TWA: 5 mg/m³ STEL: 15 mg/m³

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available

8.2. Exposure controls

Personal protective equipment

Eye/face protection Tight sealing safety goggles.

Hand Protection Protective gloves. Butyl rubber. Nitrile rubber.

Skin and body protection Wear suitable protective clothing.

Environmental exposure controls No information available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state Powder(s)
Appearance Powder(s)
Odor Odorless
Color No information available
Odor Threshold No information available

Property	Values	Remarks Method
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

9.2. 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/cm3
Particle Size	No information available
Particle Size Distribution	No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

Explosion Data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.

10.3. Possibility of hazardous reactions

Possibility of Hazardous Reactions	None under normal processing.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

None under normal use conditions.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Information on likely routes of exposure

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.

Information on toxicological effects

Symptoms No information available.

Numerical measures of toxicity

Acute Toxicity

Unknown acute toxicity

98.5 % of the mixture consists of ingredient(s) of unknown 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)

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Methyl methacrylate	= 7900 mg/kg (Rat) = 7872 mg/kg (Rat)	> 5 g/kg (Rabbit)	= 4632 ppm (Rat) 4 h
Benzoyl peroxide	= 7710 mg/kg (Rat) = 6400 mg/kg (Rat)	-	-
1,2-Benzenedicarboxylic acid, dicyclohexyl ester	= 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 No information available.

Reproductive Toxicity No information available.

Chemical name	EU - Annex VI Reproductive
1,2-Benzenedicarboxylic acid, dicyclohexyl ester	Repr. 1B

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

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

12.2. Persistence and degradability

Persistence and Degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation

Chemical name	Log Pow
Methyl methacrylate	0.7

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

Chemical name	PBT and vPvB assessment
Methyl methacrylate	The substance is not PBT / vPvB PBT assessment does not apply
Benzoyl peroxide	The substance is not PBT / vPvB
1,2-Benzenedicarboxylic acid, dicyclohexyl ester	The substance is not PBT / vPvB

12.6. Other adverse effects

Other adverse effects No information available.

Chemical name	EU - Endocrine Disrupters Candidate List	EU - Endocrine Disruptors - Evaluated Substances
1,2-Benzenedicarboxylic acid, dicyclohexyl ester	Group III Chemical	-

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

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

Contaminated packaging No information available.

Section 14: TRANSPORT INFORMATION

IMDG/IMO NOT REGULATED
14.1 UN-No. Not Regulated
14.2 Proper Shipping Name NOT REGULATED
14.3 Hazard Class NOT REGULATED
14.4 Packing group NOT REGULATED
14.5 Marine Pollutant Not applicable
14.6 Special Provisions None
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

RID NOT REGULATED
14.1 UN-No. NOT REGULATED
14.2 Proper Shipping Name NOT REGULATED
14.3 Hazard Class NOT REGULATED
14.4 Packing Group NOT REGULATED
14.5 Environmental hazard Not applicable
14.6 Special Provisions None

ADR NOT REGULATED
14.1 UN-No. NOT REGULATED
14.2 Proper Shipping Name NOT REGULATED
14.3 Hazard Class NOT REGULATED
14.4 Packing Group NOT REGULATED

14.5 Environmental hazard Not applicable
14.6 Special Provisions None

IATA NOT REGULATED
14.1 UN-No. NOT REGULATED
14.2 Proper Shipping Name NON REGULATED
14.3 Hazard Class NOT REGULATED
14.4 Packing group NOT REGULATED
14.5 Environmental hazard Not applicable
14.6 Special Provisions None

Section 15: REGULATORY INFORMATION

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

National regulations

France
Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
Polymethyl methacrylate 9011-14-7	RG 65	-
Methyl methacrylate 80-62-6	RG 65,RG 82 RG 65	-
Benzoyl peroxide 94-36-0	RG 66	-

Water hazard class (WGK) slightly hazardous to water (WGK 1)

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

Authorizations and/or restrictions on use:
This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV). This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

Persistent Organic Pollutants
Not applicable.

Ozone-depleting substances (ODS) regulation (EC) 1005/2009
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.
IECSC 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
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

No information available.

Section 16: OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under sections 2 and 3
H315 - Causes skin irritation
H225 - Highly flammable liquid and vapor
H335 - May cause respiratory irritation
H317 - May cause an allergic skin reaction
H241 - Heating may cause a fire or explosion
H319 - Causes serious eye irritation

Legend
SVHC: Substances of Very High Concern for Authorization:

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Key literature references and sources for data
www.ChemADVISOR.com/

Issuing Date	01-Mar-2017
Revision Date	17-Apr-2019

This safety data sheet complies with the requirements of: Regulation (EC) No. 1907/2006.

Disclaimer
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.

End of Safety Data Sheet