

according to Regulation (EC) No 1907/2006

VariKEM 200 (Pulver)

Revision date: 20.05.2019

Product code:

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SECTION 1: Identification of the substance/mixture and of the company/undertaking 1.1. Product identifier VariKEM 200 (Pulver) 1.2. Relevant identified uses of the substance or mixture and uses advised against Use of the substance/mixture Resin for metallographic testing. Uses advised against Any non-intended use. 1.3. Details of the supplier of the safety data sheet Company name: Schmitz-Metallographie GmbH Street: Kaiserstraße 100 Place: D-52134 Herzogenrath Telephone: 02407 / 568296-0 Telefax:02407 / 568296-9 info@schmitz-metallographie.de e-mail: Herr Füllmann Contact person: e-mail: info@schmitz-metallographie.de Internet: www.schmitz-metallographie.de **Responsible Department:** Dr. Timo Gans-Eichler e-mail: info@tge-consult.de Chemieberatung Tel.: +49(0)251/394868-69 Raesfeldstr. 22 www.tge-consult.de D-48149 Münster 1.4. Emergency telephone 02407 / 568296-0 (Mo-Fr 9:00 - 16:00) number:

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories: Respiratory or skin sensitisation: Skin Sens. 1 Hazardous to the aquatic environment: Aquatic Chronic 1 Hazard Statements: May cause an allergic skin reaction. Very toxic to aquatic life with long lasting effects.

Warning

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

dibenzoyl peroxide; benzoyl peroxide

Signal word:

Pictograms:



Hazard statements

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May cause an allergic skin reaction.

Very toxic to aquatic life with long lasting effects.

Precautionary statements

P273

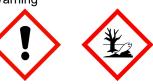
Avoid release to the environment.



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P280	Wear protective gloves/protective clothing/eye protection/face protection.					
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.					
P362+P364	Take off contaminated clothing and wash it before reuse.					
P391	Collect spillage.					
P501	Dispose of contents/container to local/regional/national/international regulations.					
Labelling of packages	where the contents do not exceed 125 ml					
Signal word:	Warning					

Pictograms:



Hazard statements

H317

Precautionary statements

P280-P333+P313-P362+P364-P501

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name				
	EC No	o Index No REACH No			
	GHS Classification				
94-36-0	dibenzoyl peroxide; benzoyl peroxide				
	202-327-6	617-008-00-0	01-2119511472-50		
	Org. Perox. B, Eye Irrit. 2, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1 (M-Factor = 10); H241 H319 H317 H400 H410				

Full text of H and EUH statements: see section 16.

Further Information

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH)

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In case of respiratory tract irritation, consult a physician.

After contact with skin

Gently wash with plenty of soap and water. In case of skin irritation, seek medical treatment.

After contact with eyes

Rinse cautiously with water for several minutes. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). Do NOT induce vomiting.



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In all cases of doubt, or when symptoms persist, seek medical advice.

4.2. Most important symptoms and effects, both acute and delayed No information available.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO2). Dry extinguishing powder. alcohol resistant foam. Water fog.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Can be released in case of fire: Carbon dioxide (CO2). Carbon monoxide (CO).

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Co-ordinate fire-fighting measures to the fire surroundings.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Do not breathe dust. Wear personal protection equipment (refer to section 8).

6.2. Environmental precautions

Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal. Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Safe handling: see section 7

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Wear personal protection equipment (refer to section 8).

Advice on protection against fire and explosion

Usual measures for fire prevention. Dust clouds may present an explosion hazard.

Further information on handling

Avoid generation of dust.

General protection and hygiene measures: refer to chapter 8

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place.



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Hints on joint storage

Do not store together with: Explosives. Oxidizing solids. Oxidizing liquids. Radioactive substances. Infectious substances. Food and animal feedingstuff.

Further information on storage conditions

Keep the packing dry and well sealed to prevent contamination and absorbtion of humidity. Recommended storage temperature: 20°C Protect against: Light. UV-radiation/sunlight. heat. Humidity

7.3. Specific end use(s)

See section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
94-36-0	Dibenzoyl peroxide	-	5		TWA (8 h)	WEL

DNEL/DMEL values

CAS No	Substance					
DNEL type		Exposure route	Effect	Value		
94-36-0	04-36-0 dibenzoyl peroxide; benzoyl peroxide					
Worker DNEL,	long-term	inhalation	systemic	39 mg/m³		
Worker DNEL, long-term		dermal	systemic	13,3 mg/kg bw/day		
Worker DNEL,	long-term	dermal	local	0,034 mg/cm ²		
Consumer DN	EL, long-term	oral	systemic	2 mg/kg bw/day		

PNEC values

CAS No	Substance					
Environmental compartment Value						
94-36-0	dibenzoyl peroxide; benzoyl peroxide					
Freshwater	Freshwater					
Freshwater (in	0,000602 mg/l					
Marine water		0,000002 mg/l				
Freshwater se	diment	0,013 mg/kg				
Marine sediment		0,001 mg/kg				
Micro-organisms in sewage treatment plants (STP)		0,35 mg/l				
Soil		0,003 mg/kg				

8.2. Exposure controls

Appropriate engineering controls

Dust should be exhausted directly at the point of origin.

Protective and hygiene measures

Always close containers tightly after the removal of product. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work.

Eye/face protection

Dust protection goggles.



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Hand protection

Wear suitable gloves. Suitable material: FKM (fluororubber). - Thickness of glove material: 0,4 mm Breakthrough time >= 8 h Butyl rubber. - Thickness of glove material: 0,5 mm Breakthrough time >= 8 h CR (polychloroprenes, Chloroprene rubber). - Thickness of glove material: 0,5 mm Breakthrough time >= 8 h NBR (Nitrile rubber). - Thickness of glove material: 0,35 mm Breakthrough time ≥ 8 h PVC (Polyvinyl chloride). - Thickness of glove material: 0,5 mm Breakthrough time >= 8 h The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Check leak tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well.

Skin protection

Suitable protective clothing: Lab apron.

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at:

-exceeding exposure limit values

-Generation/formation of dust

Suitable respiratory protective equipment: particulates filter device (DIN EN 143). Type: P1-3

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

Environmental exposure controls

No special precautionary measures are necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Colour: Odour:	Powder, solid green odourless	-
pH-Value:	Cacanooc	not determined
Changes in the physical state		
Melting point:		not determined
Initial boiling point and boiling range:		not determined
Sublimation point:		not determined
Softening point:		not determined
Pour point:		not determined
Flash point:		>250 °C
Sustaining combustion:		Not sustaining combustion
Explosive properties		

osive properties

Dust clouds may present an explosion hazard.

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Lower explosion limits:	not determined					
Upper explosion limits:	not determined					
Ignition temperature:	>400 °C					
Auto-ignition temperature						
Solid:	not determined					
Decomposition temperature:	not determined					
Oxidizing properties none						
Vapour pressure:	not determined					
Density:	1,16 g/cm³					
Bulk density:	not determined					
Water solubility:	not determined					
Solubility in other solvents not determined						
Partition coefficient:	not determined					
Viscosity / dynamic:	not determined					
Viscosity / kinematic:	not determined					
Flow time:	not determined					
Vapour density:	not determined					
Evaporation rate:	not determined					
Solvent separation test:	not determined					
Solvent content:	not determined					
9.2. Other information						
Solid content:	99.6%					

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

Refer to chapter 10.5.

10.4. Conditions to avoid

Protect against: UV-radiation/sunlight. heat.

10.5. Incompatible materials

Materials to avoid: Oxidizing agents, strong. Reducing agents, strong.

10.6. Hazardous decomposition products

Can be released in case of fire: Carbon dioxide (CO2). Carbon monoxide (CO).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicocinetics, metabolism and distribution

No data available.



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Acute toxicity

Based on available data, the classification criteria are not met. The product has not been tested.

CAS No	Chemical name						
	Exposure route	Dose		Species	Source	Method	
94-36-0	dibenzoyl peroxide; benzoyl peroxide						
	oral	LD50 mg/kg	>2000	Mouse.	ECHA Dossier	OECD Guideline 401	
	inhalation (4 h) aerosol	LC50	24,3 mg/l	Rat.	ECHA Dossier	OECD Guideline 403	

Irritation and corrosivity

Based on available data, the classification criteria are not met. The product has not been tested.

Sensitising effects

May cause an allergic skin reaction. (dibenzoyl peroxide; benzoyl peroxide) The product has not been tested.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

dibenzoyl peroxide; benzoyl peroxide:

Chronic dermal toxicity/Carcinogenicity:

Method: OECD Guideline 451 (Carcinogenicity Studies)

Species: Rat male. / female. ; Length of test: 2 years

Result: NOAEL > 100 mg/kg / > 150 mg/kg; Literature information: ECHA Dossier

Reproductive toxicity:

Method: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Species: Rat ; Results: NOAEL = 500 mg/kg; Literature information: ECHA Dossier

Developmental toxicity/teratogenicity:

Method: OECD Guideline 414 (Prenatal Developmental Toxicity Study)

Species: Rat

Results: NOAEL = 300 mg/kg; Literature information: ECHA Dossier In-vitro mutagenicity:

Method: OECD Guideline 471 (Bacterial Reverse Mutation Assay) positive (with metabolic activation).

Result negative. ; Literature information: ECHA Dossier

STOT-single exposure

Based on available data, the classification criteria are not met. No data available.

STOT-repeated exposure

Based on available data, the classification criteria are not met. No data available.

Aspiration hazard

Based on available data, the classification criteria are not met. No data available.

Specific effects in experiment on an animal

No data available.

SECTION 12: Ecological information

<u>12.1. Toxicity</u>

The product has not been tested.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method



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94-36-0	dibenzoyl peroxide; benzoyl peroxide						
	Acute fish toxicity	LC50	0,06 mg/l	96 h	Oncorhynchus mykiss	ECHA Dossier	EU Method C.1
	Acute algae toxicity	ErC50 mg/l	0,071		Pseudokirchneriella subcapitata	ECHA Dossier	EU Method C.3
	Acute crustacea toxicity	EC50	0,11 mg/l	48 h	Daphnia magna	ECHA Dossier	EU Method C.2
	Crustacea toxicity	NOEC mg/l	0,001	21 d	Daphnia magna	ECHA Dossier	OECD Guideline 211
	Acute bacteria toxicity	35 g O2/g	(35 mg/l)		activated sludge of a predominantly domestic sewag		OECD Guideline 209

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name							
	Method Value d Source							
	Evaluation							
94-36-0	dibenzoyl peroxide; benzoyl peroxide							
	OECD 301D / EEC 92/69 annex V, C.4-E 68% 28 ECHA Dossier							
	Easily biodegradable (concerning to the criteria of the OECD)							

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

Partition coefficient n-octanol/water				
CAS No	Chemical name	Log Pow		
94-36-0	dibenzoyl peroxide; benzoyl peroxide	3,2		

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No data available.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Observe in addition any national regulations! Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled.

According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

Control report for waste code/ waste marking according to EAKV:

Waste disposal number of waste from residues/unused products

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

Waste disposal number of used product

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste



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Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information					
Land transport (ADR/RID)					
<u>14.1. UN number:</u>	UN 3077				
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (dibenzoyl peroxide; benzoyl peroxide)				
<u>14.3. Transport hazard class(es):</u>	9				
14.4. Packing group:	III				
Hazard label:	9				
Classification code:	M7				
Special Provisions:	274 335 375 601				
Limited quantity: Excepted quantity:	5 kg E1				
Transport category:	3				
Hazard No:	90				
Tunnel restriction code:	-				
Inland waterways transport (ADN)					
<u>14.1. UN number:</u>	UN 3077				
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (dibenzoyl peroxide; benzoyl peroxide)				
14.3. Transport hazard class(es):	9				
14.4. Packing group:	III				
Hazard label:	9				
Classification code:	M7 Č				
Special Provisions:	274 335 375 601				
Limited quantity:	5 kg				
Excepted quantity:	E1				
Marine transport (IMDG)					
<u>14.1. UN number:</u>					
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (dibenzoyl peroxide; benzoyl peroxide)				
14.3. Transport hazard class(es):	9				
14.4. Packing group:					
Hazard label:	9				



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Marine pollutant:	YES	
Special Provisions:	274, 335, 966, 967, 969	
Limited quantity: Excepted quantity:	5 kg E1	
EmS:	F-A, S-F	
Air transport (ICAO-TI/IATA-DGR)	,	
14.1. UN number:	UN 3077	
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O. (dibenzoyl peroxide; benzoyl peroxide)	S.
<u>14.3. Transport hazard class(es):</u>	9	
14.4. Packing group:	III	
Hazard label:	9	
Special Provisions:	A97 A158 A179 A197	
Limited quantity Passenger:	30 kg G	
Passenger LQ:	Y956	
Excepted quantity:	E1	
IATA-packing instructions - Passenger: IATA-max. quantity - Passenger:	956 400 kg	
IATA-max. quantity - Passenger. IATA-packing instructions - Cargo:	400 kg 956	
IATA-max. quantity - Cargo:	400 kg	
14.5. Environmental hazards	-	
ENVIRONMENTALLY HAZARDOUS:	yes	
Danger releasing substance:	dibenzoyl peroxide; benzoyl peroxide	
14.6. Special precautions for user Refer to section 6-8		
14.7. Transport in bulk according to Ann	ex II of Marpol and the IBC Code	
not relevant		
SECTION 15: Regulatory information		
15.1. Safety, health and environmental re	egulations/legislation specific for the substance or mixture	
EU regulatory information		
2010/75/EU (VOC):	No information available.	
2004/42/EC (VOC):	No information available.	
Information according to 2012/18/EU (SEVESO III):	E1 Hazardous to the Aquatic Environment	
Additional information		
The mixture is classified as hazardou REACH 1907/2006 Appendix XVII, N	us according to regulation (EC) No 1272/2008 [CLP]. lo (mixture): -	
National regulatory information		



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Employment restrictions:

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Water contaminating class (D):

1 - slightly water contaminating

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out: dibenzoyl peroxide; benzoyl peroxide

SECTION 16: Other information

Changes

Rev. 1.0; Initial release: 20.05.2019

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen CAS Chemical Abstracts Service DNEL: Derived No Effect Level IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA) ICAO: International Civil Aviation Organization ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO) GHS: Globally Harmonized System of Classification and Labelling of Chemicals GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany) LOAEL: Lowest observed adverse effect level LOAEC: Lowest observed adverse effect concentration LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent NOAEL: No observed adverse effect level NOAEC: No observed adverse effect level NTP: National Toxicology Program N/A: not applicable OSHA: Occupational Safety and Health Administration PNEC: predicted no effect concentration PBT: Persistent bioaccumulative toxic RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) SARA: Superfund Amendments and Reauthorization Act SVHC: substance of very high concern TRGS Technische Regeln fuerGefahrstoffe TSCA: Toxic Substances Control Act VOC: Volatile Organic Compounds VwVwS: Verwaltungsvorschrift wassergefaehrdender Stoffe WGK: Wassergefaehrdungsklasse

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Skin Sens. 1; H317	Calculation method
Aquatic Chronic 1; H410	Calculation method

Relevant H and EUH statements (number and full text)

	`	,
H241	Heating may cause a fire	or explosion.
H317	May cause an allergic ski	n reaction.
H319	Causes serious eye irrita	tion.
H400	Very toxic to aquatic life.	



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H410

Very toxic to aquatic life with long lasting effects.

Further Information

Classification according EC regulation 1272/2008 (CLP): - Classification procedure:

Health hazards: Calculation method.

Environmental hazards: Calculation method.

Physical hazards: On basis of test data and / or calculated and / or estimated.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)