

**Safety Data Sheet**

according to UK REACH Regulation

Revision date: 22.11.2017

Promolux Polymer

Product code: D251_klar

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Promolux Polymer

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

The product is intended for professional use.

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name: Merz Dental GmbH
Street: Kieferweg 1
Place: D-24321 Luetjenburg (GERMANY)
Telephone: +49-(0)4381-403-0 Telefax: +49-(0)4381-403-100
e-mail: info@merz-dental.de
Contact person: Dipl. Chem Dr. Thomas Panther Telephone: +49-(0)4381-403-448
e-mail: Thomas.Panther@merz-dental.de
Internet: www.merz-dental.de
Responsible Department: Qualitaetssicherung (Quality Assurance)

1.4. Emergency telephone number:

+49-(0)551-19240 (Giftinformationszentrum-Nord)

SECTION 2: Hazards identification**2.2. Label elements****GB CLP Regulation****Special labelling of certain mixtures**

EUH208 Contains methyl methacrylate, dibenzoyl peroxide; benzoyl peroxide. May produce an allergic reaction.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.1. Substances****Chemical characterization**

POLYMETHYL METHACRYLATE / PMMA

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
94-36-0	dibenzoyl peroxide; benzoyl peroxide			< 0,5 %
	202-327-6	617-008-00-0		
	Org. Perox. B, Eye Irrit. 2, Skin Sens. 1; H241 H319 H317			
80-62-6	methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate			< 0,2 %
	201-297-1	607-035-00-6		
	Flam. Liq. 2, Skin Irrit. 2, Skin Sens. 1, STOT SE 3; H225 H315 H317 H335			

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

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Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
94-36-0	202-327-6	dibenzoyl peroxide; benzoyl peroxide	< 0,5 % %
		inhalation: LC50 = > 24300 mg/l (dusts or mists); oral: LD50 = > 2000 mg/kg	
80-62-6	201-297-1	methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate	< 0,2 % %
		inhalation: LC50 = 29,8 mg/l (vapours); dermal: LD50 = > 5000 mg/kg; oral: LD50 = > 5000 mg/kg	

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Change contaminated clothing.

After inhalation

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

After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of eye irritation consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water. 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

Get medical advice/attention.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Extinguishing powder, Carbon dioxide (CO₂), Water spray jet, Foam.

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

This material is combustible, but will not ignite readily. In case of fire may be liberated: Carbon dioxide (CO₂), Carbon monoxide

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.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Avoid dust formation. Do not breathe dust. Wear breathing apparatus if exposed to vapours/dusts/aerosols. Wear personal protection equipment. Special danger of slipping by leaking/spilling product.

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6.2. Environmental precautions

Clean contaminated articles and floor according to the environmental legislation. Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up**Other information**

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Measures to prevent aerosol and dust generation.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink.

Further information on handling

Dust should be exhausted directly at the point of origin.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep the packing dry and well sealed to prevent contamination and absorption of humidity.

Hints on joint storage

To follow: Storage class

Further information on storage conditions

Keep cool. Protect from sunlight. storage temperature: < 40 °C

7.3. Specific end use(s)

Observe instructions for use.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
94-36-0	Dibenzoyl peroxide	-	5		TWA (8 h)	WEL
80-62-6	Methyl methacrylate	50	208		TWA (8 h)	WEL
		100	416		STEL (15 min)	WEL

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DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
94-36-0	dibenzoyl peroxide; benzoyl peroxide			
Consumer DNEL, long-term		inhalation	systemic	2,9 mg/m³
Worker DNEL, long-term		dermal	systemic	6,6 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	1,65 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	11,75 mg/m³
Consumer DNEL, long-term		dermal	systemic	3,3 mg/kg bw/day

PNEC values

CAS No	Substance		
Environmental compartment	Value		
94-36-0	dibenzoyl peroxide; benzoyl peroxide		
Freshwater	0,000602 mg/l		
Marine water	0,000602 mg/l		
Freshwater sediment	0,338 mg/kg		
Micro-organisms in sewage treatment plants (STP)	0,35 mg/l		
Soil	0,0758 mg/kg		

Additional advice on limit values

Monitoring and observation processes: "NIOSH Manual of Analytical Methods", National Institute for Occupational Safety and Health

8.2. Exposure controls

Appropriate engineering controls

Provide adequate ventilation as well as local exhaust at critical locations. Use an "other exhaust ventilation system" according to 2001/59/EC (Annex 7A).. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Recommendation: Suitable material: PE (polyethylene).

Skin protection

Wear suitable protective clothing.

Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Respiratory protection necessary at: exceeding exposure limit values. Use only respiratory protection equipment with CE-symbol including four digit test number. 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. Half-face mask or quarter facepiece: maximum use concentration for substances with exposure limits: P1 filter: up to a max. of 4 times the exposure limit. P2 filter: up to a max. of 10 times the exposure limit. P3 filter: up to a max. of 30 times the expo.

Quarter-face mask (EN 140) / Half-face mask. Observe the wear time limits according GefStoffV in

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combination with the rules for using respiratory protection apparatus (BGR 190).

Environmental exposure controls

Do not allow uncontrolled discharge of product into the environment.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	Powder	
Colour:	-	
Odour:	odourless	
Melting point/freezing point:	not determined	Test method
Boiling point or initial boiling point and boiling range:	not applicable	
Flammability:	not determined	
	not applicable	
Lower explosion limits:	not determined	
Upper explosion limits:	not determined	
Flash point:	> 250 °C	ASTM D 1929
Auto-ignition temperature:	> 400 °C	DIN 51794
Decomposition temperature:	not determined	
pH-Value:	not applicable	
Viscosity / kinematic:	not applicable	
Water solubility:	The study does not need to be conducted because the substance is known to be insoluble in water.	
Partition coefficient n-octanol/water:	not determined	
Vapour pressure:	not applicable	
Vapour pressure:	not applicable	
Density:	1,16 g/cm ³	
Bulk density:	700-750 kg/m ³	ISO 1183 (A)
Relative vapour density:	not applicable	

9.2. Other information**Information with regard to physical hazard classes**

Sustaining combustion:	Not sustaining combustion
Self-ignition temperature	
Solid:	not determined
Gas:	not applicable
Oxidizing properties	
This material is combustible, but will not ignite readily. Not oxidising.	

Other safety characteristics

Evaporation rate:	not applicable
Solvent separation test:	not applicable
Solvent content:	not applicable
Solid content:	99,71 %
Sublimation point:	not applicable
Softening point:	ca. 110 °C
Pour point:	not applicable
Viscosity / dynamic:	not applicable
Flow time:	not applicable

Further Information

none

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SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

Decomposition temperature > 250

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Decomposition takes place from temperatures above: 250 °C

10.5. Incompatible materials

Oxidising agent

10.6. Hazardous decomposition products

Thermal decomposition can lead to the escape of irritating gases and vapours.

Hazardous decomposition products: SECTION 8: Exposure controls/personal protection

Further information

none

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Toxicokinetics, metabolism and distribution

No information available.

Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
94-36-0	dibenzoyl peroxide; benzoyl peroxide				
	oral	LD50 > 2000 mg/kg	Mouse	Nier, Korea 2001	OECD 401
	inhalation dust/mist	LC50 > 24300 mg/l	Rat		
80-62-6	methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate				
	oral	LD50 > 5000 mg/kg	Rat	OECD 401	
	dermal	LD50 > 5000 mg/kg	Rabbit		
	inhalation (4 h) vapour	LC50 29,8 mg/l	Rat		

Irritation and corrosivity

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

slightly irritant but not relevant for classification. Irritating to eyes.

Sensitising effects

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

Similar to related material, not skin sensitizing. Contains: dibenzoyl peroxide, methyl methacrylate. There is no danger as long as the substances are immobilized within the polymer matrix. Only through the Destruction of the polymer matrix, e.g. by suitable solvents, can cause the sensitizing components be mobilized again. In people who have already been sensitized, the remobilized components can lead to allergic reactions.

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Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

Based on available data, the classification criteria are not met.
There are no data available on the preparation/mixture itself.

Specific effects in experiment on an animal

There are no data available on the preparation/mixture itself.

Additional information on tests

none

Practical experience

No information available.

11.2. Information on other hazards**Other information**

The ingredients in this preparation do not meet the criteria for classification as CMR category 1 or 2 according to 67/548/EEC. The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP. Toxicological data are not available. People who suffer from skin sensitization problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this mixture.

SECTION 12: Ecological information**12.1. Toxicity**

According to the criteria of the European classification and labelling system, the substance/the product has not to be labelled as "dangerous for the environment".

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
94-36-0	dibenzoyl peroxide; benzoyl peroxide					
	Acute fish toxicity	LC50 mg/l	0,24	96 h	Oryzias latipes (Ricefish)	Nier, Korea 2002c OECD 203
	Acute algae toxicity	ErC50 mg/l	0,44	72 h	Selenastrum capricornutum	Nier, Korea 2002f OECD 201
	Acute crustacea toxicity	EC50 mg/l	0,07	48 h	Daphnia pulex (water flea)	Nier, Korea 2002g OECD 202
	Algae toxicity	NOEC mg/l	0,02	3 d	Pseudokirchneriella subcapitata	REACH Dossier EU Method C.3
	Crustacea toxicity	NOEC mg/l	0,001	21 d	Daphnia pulex (water flea)	REACH Dossier OECD 211
	Acute bacteria toxicity	0,30 g O2/g (EC50 0,35 mg/l)		0,5 h	activated sludge	REACH Dossier OECD 209
80-62-6	methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate					
	Acute fish toxicity	LC50 mg/l	> 79	96 h	Oncorhynchus mykiss (Rainbow trout)	OECD 203
	Acute algae toxicity	ErC50 mg/l	> 110	72 h	Selenastrum capricornutum	OECD 201
	Acute crustacea toxicity	EC50	69 mg/l	48 h	Daphnia magna (Big water flea)	OECD 202

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/V, C.4-E	71 %	28	REACH Dossier
	Readily biodegradable (according to OECD criteria).			
80-62-6	methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate			
	OECD 301C/ ISO 9408/ EEC 92/69/V, C.4-F	94 %	14	SDB Evonik
	Readily biodegradable (according to OECD criteria).			

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
94-36-0	dibenzoyl peroxide; benzoyl peroxide	3,2
80-62-6	methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate	1,38

BCF

CAS No	Chemical name	BCF	Species	Source
94-36-0	dibenzoyl peroxide; benzoyl peroxide	47,4	n/n	EpiSuite QSAR tool

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of UK REACH.

The product has not been tested.

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12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation. Non-contaminated packages may be recycled.

List of Wastes Code - residues/unused products

180107 WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (EXCEPT KITCHEN AND RESTAURANT WASTES NOT ARISING FROM IMMEDIATE HEALTH CARE); wastes from natal care, diagnosis, treatment or prevention of disease in humans; chemicals other than those mentioned in 18 01 06

List of Wastes Code - used product

180107 WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (EXCEPT KITCHEN AND RESTAURANT WASTES NOT ARISING FROM IMMEDIATE HEALTH CARE); wastes from natal care, diagnosis, treatment or prevention of disease in humans; chemicals other than those mentioned in 18 01 06

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number or ID number:	Not restricted
14.2. UN proper shipping name:	Not restricted
14.3. Transport hazard class(es):	Not restricted
14.4. Packing group:	Not restricted

Inland waterways transport (ADN)

14.1. UN number or ID number:	Not restricted
14.2. UN proper shipping name:	Not restricted
14.3. Transport hazard class(es):	Not restricted
14.4. Packing group:	Not restricted

Marine transport (IMDG)

14.1. UN number or ID number:	Not restricted
14.2. UN proper shipping name:	Not restricted
14.3. Transport hazard class(es):	Not restricted
14.4. Packing group:	Not restricted

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	Not restricted
14.2. UN proper shipping name:	Not restricted
14.3. Transport hazard class(es):	Not restricted
14.4. Packing group:	Not restricted

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Not restricted

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14.7. Maritime transport in bulk according to IMO instruments

Not restricted

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 75

2010/75/EU (VOC): not applicable

2004/42/EC (VOC): not applicable

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 1 - slightly hazardous to water

Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.

Biocide registry number: not applicable

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 1, 11, 16.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

H225 Highly flammable liquid and vapour.
H241 Heating may cause a fire or explosion.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Further Information

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.
Data sources



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ECHA - REACH Dossier

GESTIS - <http://gestis.itrust.de>

TOXNET - <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm> & <https://chem.nlm.nih.gov/chemidplus/>

Danisch (Q)SAR database