

Safety Data Sheet

artBloc Temp® / artificial Teeth OMP-N® + HMP-N® / PMMA-Discs / artVeneer® / BD Load®

Revision date: 02.02.2018

Product code: D101-2

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1. Identification

Product identifier

artBloc Temp® / artificial Teeth OMP-N® + HMP-N® / PMMA-Discs / artVeneer® / BD Load®

Further trade names

artBloc® Temp

artegral® life, artegral®, artegral® HD, Polystar HK, Polystar® Selection EDITION, Polystar® Selection

EDITION HD, integral®, Polystar® Lux HK,

Polystar® Selection EDITION 2, DeltaForm®, DeltaForm® HD,

M-PM® Disc

BDLoad®, BDLoad® ECO

artVeneer®

Recommended use of the chemical and restrictions on use

Use of the substance/mixture

The product is intended for professional use.

Uses advised against

Do not use for private purposes (household).

Details of the supplier of the safety data sheet

Company name:	Merz Dental GmbH	
Street:	Eetzweg 20	
Place:	D-24321 Lütjenburg (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:	Qualitätssicherung (Quality Assurance)	

Emergency phone number: +49-(0)551-19240 (Giftinformationszentrum-Nord)

Further Information

none

2. Hazard(s) identification

Classification of the chemical

Regulation (EC) No. 1272/2008

This mixture is not classified as hazardous in accordance with Regulation (EC) No. 1272/2008.

Label elements

Regulation (EC) No. 1272/2008

Additional advice on labelling

There is no requirement for the product to be specially labelled according to EC directives or the corresponding national laws.

Hazards not otherwise classified

Harmful dust is produced during dry-state pulverisation. Inhalation of dust may cause irritation of the respiratory system.

3. Composition/information on ingredients

Mixtures

Chemical characterization

POLYMETHYL METHACRYLATE

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Hazardous components

CAS No	Components	Quantity
	PMMA	> 98 %
80-62-6	methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; methyl methacrylate	< 1 %
94-36-0	dibenzoyl peroxide; benzoyl peroxide	< 1 %

Further Information

May cause sensitisation by skin contact.

4. First-aid measures

Description of first aid measures

General information

No special measures are necessary.

After inhalation

Inhalation of dust may cause irritation of the respiratory system. In case of allergic symptoms, especially in the breathing area, seek medical advice immediately. Provide fresh air.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, consult a physician.

After contact with eyes

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

After ingestion

No known symptoms to date. Observe risk of aspiration if vomiting occurs. When in doubt or if symptoms are observed, get medical advice.

Most important symptoms and effects, both acute and delayed

Allergic reactions

Indication of any immediate medical attention and special treatment needed

When in doubt or if symptoms are observed, get medical advice.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Water mist, Foam, Carbon dioxide (CO₂), Extinguishing powder

Unsuitable extinguishing media

High power water jet

Specific hazards arising from the chemical

This material is combustible, but will not ignite readily. Exothermal decomposition with formation of: Carbon dioxide (CO₂), Carbon monoxide.

Special protective equipment and precautions for fire-fighters

Wear a self-contained breathing apparatus and chemical protective clothing. Co-ordinate fire-fighting measures to the fire surroundings. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Use caution when applying carbon dioxide in confined spaces. Carbon dioxide can displace oxygen.

Additional information

Do not inhale explosion and combustion gases. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

6. Accidental release measures

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Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Wear breathing apparatus if exposed to vapours/dusts/aerosols. Use personal protection equipment.

Environmental precautions

No special environmental measures are necessary. Avoid release to the environment.

Methods and material for containment and cleaning up

Wet clean or vacuum up solids. Use approved industrial vacuum cleaner for removal. Do not use a dry brush as dust clouds or static can be created. Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

Reference to other sections

Safe handling: see section 7. Personal protection equipment: see section 8. Disposal: see section 13.

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Measures to prevent aerosol and dust generation. Do not breathe dust. Dust should be exhausted directly at the point of origin. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Further information on handling

Dust should be exhausted directly at the point of origin.

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.

Advice on storage compatibility

To follow: Storage class

Further information on storage conditions

Protect against direct sunlight.

8. Exposure controls/personal protection

Control parameters

Exposure limits

CAS No.	Substance	ppm	mg/m ³	f/cc	Category	Origin
94-36-0	Benzoyl peroxide	-	5		TWA (8 h)	PEL
		-	5		TWA (8 h)	REL
80-62-6	Methyl methacrylate	100	410		TWA (8 h)	PEL
		100	410		TWA (8 h)	REL

Additional advice on limit values

Monitoring and observation processes: Monitoring and observation processes see for example "NIOSH Masnual of Analytical Methods", National Institute for Occupational Safety and Health.

Exposure controls

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**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation should be used if possible. Hand tool with integrated exhaust. Use an "effective exhaust ventilation system" according to 2001/59/EC (Annex 7A)..

Preferably use hand tools or low-speed tools equipped, if necessary, with an appropriate dust-extraction facility.

If high-speed tools are used, they should always be equipped with such a facility.

Protective and hygiene measures

When using do not eat, drink, smoke, sniff. Do not breathe dust. General health and safety measures. Wash hands before breaks and after work. When using do not eat or drink.

Eye/face protection

Dust protection eye glasses. Wear eye/face protection.

Hand protection

Tested protective gloves must be worn. Wear cotton undermitten if possible. Take recovery periods for skin regeneration.

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

Environmental exposure controls

No special environmental measures are necessary.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	solid
Color:	whitish - light beige
Odor:	odourless

Test method

pH-Value:	not applicable
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Changes in the physical state

Melting point/freezing point:	not applicable
Initial boiling point and boiling range:	not applicable
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	not applicable
not applicable:	

Flash point:	> 250 °C	ASTM D 1929-68
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Sustaining combustion:	Not sustaining combustion
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Flammability

Solid:	not determined
Gas:	not applicable

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Explosive properties

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Ignition temperature:	> 400 °C ASTM D 1929-68

Auto-ignition temperature

Solid:	not determined
Gas:	not applicable
Decomposition temperature:	> 250 °C

Oxidizing properties

No data available

Vapor pressure:	not applicable
Vapor pressure:	not applicable
Density:	1,189 – 1,198 g/cm³
Bulk density:	not applicable
Water solubility:	insoluble

Solubility in other solvents

practically insoluble

Partition coefficient:	not applicable
Viscosity / dynamic:	not applicable
Viscosity / kinematic:	not applicable
Flow time:	not applicable
Vapor density:	not applicable
Evaporation rate:	not applicable
Solvent separation test:	not applicable
Solvent content:	not applicable

Other information

Solid content:	100 %
none	

10. Stability and reactivity

Reactivity

No hazardous reaction when handled and stored according to provisions.

Chemical stability

Stability: Stable

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

Decomposition takes place from temperatures above: > 250 °C

Possibility of hazardous reactions

Hazardous reactions: May occur

No hazardous reaction when handled and stored according to provisions.

Conditions to avoid

Harmful dust is produced during dry-state pulverisation.

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Incompatible materials

Oxidising agent, strong

Hazardous decomposition products

Thermal decomposition can lead to the escape of irritating gases and vapours. Hazardous decomposition products: SECTION 8: Exposure controls/personal protection (Control parameters)

Further information

none

11. Toxicological information

Information on toxicological effects**Toxicokinetics, metabolism and distribution**

No information available.

Acute toxicity

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

No information available.

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

Irritation and corrosivity

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

No information available.

Sensitizing effects

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

May cause sensitisation especially in sensitive humans. People who suffer from skin sensitization problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this preparation.

Carcinogenic/mutagenic/toxic effects for reproduction

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

Based on existing data the substance does not fulfill the criteria of CMR-substances Cat. 1 and 2 according 67/548/EEC. No indications of human germ cell mutagenicity exist. No indications of human reproductive toxicity exist.

Specific target organ toxicity (STOT) - single exposure

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

No information available.

Specific target organ toxicity (STOT) - repeated exposure

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

No information available.

Carcinogenicity (IARC):

Methyl methacrylate (CAS 80-62-6) is listed in group 3. Benzoyl peroxide (CAS 94-36-0) is listed in group 3.

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Aspiration hazard

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

Specific effects in experiment on an animal

No information available.

Additional information on tests

none

Practical experience**Observations relevant to classification**

No information available.

Other observations

No information available.

Further information

Toxicological data are not available. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Do not breathe dusts or mists.

12. Ecological information

Ecotoxicity

Due to the consistency along with the low water solubility of the product a bioavailability is unlikely. 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".

Persistence and degradability

There are no data available on the preparation/mixture itself. According to experiences this product is inert and not degradable.

Bioaccumulative potential

Water solubility < 1 mg/L at 20°C. The product has not been tested. On the basis of existing data about the elimination/degradation and bioaccumulation potential longer term damage to the environment is unlikely.

Mobility in soil

No data available.

Other adverse effects

No data available.

Further information

none

13. Disposal considerations

Waste treatment methods**Advice on disposal**

Waste disposal according to EC directives 75/442/EEC and 91/689/EEC in the corresponding versions, covering waste and dangerous waste. Dispose according to legislation. Can be incinerated together with household waste in compliance with applicable technical regulations following consultation with approved waste disposal management companies and authorities in charge.

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself. Recycling possible without special treatment.. May be disposed of in household waste landfill. Recycle sales packaging via DSD (Duales System Deutschland).

14. Transport information

US DOT 49 CFR 172.101

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Proper shipping name: Not restricted

Marine transport (IMDG)

UN number: Not restricted

UN proper shipping name: Not restricted

Transport hazard class(es): Not restricted

Packing group: Not restricted

Air transport (ICAO-TI/IATA-DGR)

UN number: Not restricted

UN proper shipping name: Not restricted

Transport hazard class(es): Not restricted

Packing group: Not restricted

Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

Special precautions for user

Not restricted

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not restricted

Other applicable information

No dangerous good in sense of this transport regulation.

15. Regulatory information

U.S. Regulations

National regulatory information

SARA Section 304 CERCLA:

Methyl methacrylate (80-62-6): Reportable quantity = 1,000 (454) lbs. (kg)

SARA Section 311/312 Hazards:

Methyl methacrylate (80-62-6): Fire hazard, Immediate (acute) health hazard

Benzoyl peroxide (94-36-0): Reactive, Immediate (acute) health hazard

SARA Section 313 Toxic release inventory:

Methyl methacrylate (80-62-6): De minimis limit = 1.0 %, Reportable threshold = Standard

Benzoyl peroxide (94-36-0): De minimis limit = 1.0 %, Reportable threshold = Standard

Clean Air Act Section 112(b):

Methyl methacrylate (80-62-6)

SARA

Section 313 Toxic Release Chemicals

Methyl methacrylate (CAS 80-62-6).

State Regulations

Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)

This product contains no chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Other information

Changes

Revision date: 02.02.2018

Revision No: 6

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

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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%

Other data

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.)