



# Safety data sheet

## 1. Substance/preparation and company identification

Trade name:

BKF 80:20-Harz NV

Application of the substance/ the preparation:

Orthopedic resin

BEIL

Kunststoffproduktions- und Handelsgesellschaft mbH

Lehmkuhlenweg 25

D- 31224 Peine

Telefon: +49 (0)5171/70 99-0

Telefax: +49 (0)5171/7099-29

E-Mail: [service@beil-peine.de](mailto:service@beil-peine.de)

Information in case of emergency:

Giftzentrale Göttingen

Tel.: +49 (0)551/19240

Telefax: +49 (0)551/3831881

## 2. Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

#### Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xi; Irritant

R37/38: Irritating to respiratory system and skin.

Xi; Sensitising

R43: May cause sensitisation by skin contact.

F; Highly flammable

R11: Highly flammable.

#### Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

#### Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

### 2.2 Label elements

#### Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

#### Hazard pictograms



GHS02



GHS07

**Signal word** Danger

**Hazard-determining components of labelling:**

methyl methacrylate

**Hazard statements**

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

**Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P243 Take precautionary measures against static discharge.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**2.3 Other hazards****Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

**3. COMPOSITION/ INFORMATION ON INGREDIENTS****3.2 Chemical characterization: Mixtures****Description:** Mixture of substances listed below with nonhazardous additions.

<b>Dangerous components:</b>		
CAS: 80-62-6 EINECS: 201-297-1	methyl methacrylate Xi R37/38; Xi R43; F R11 Flam. Liq. 2, H225; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	>=50-100 %
CAS: 38668-48-3 EINECS: 254-075-1	1,1'-(p-tolylimino)dipropan-2-ol T R25 R52/53 Acute Tox. 3, H301; Aquatic Chronic 3, H412	< 0,5 %

**Additional information:** For the wording of the listed risk phrases refer to section 16.**4. FIRST AID MEASURES****4.1 Description of first aid measures****After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:** If symptoms persist consult doctor.**After swallowing:** If symptoms persist consult doctor.**4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

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

No further relevant information available.

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

Foam

Sand



CO<sub>2</sub>, powder or water spray. Fight larger fire with alcohol resistant foam.

CO<sub>2</sub>, sand, extinguishing powder. Do not use water.

**For safety reasons unsuitable extinguishing agents:**

Water

Water with full jet

**5.2 Special hazards arising from the substance or mixture**

Exothermic polymerization.

In case of fire, the following can be released:

Hydrocarbons

Carbon monoxide and carbon dioxide

**5.3 Advice for firefighters**

**Protective equipment:** Wear self-contained respiratory protective device.

**Additional information** Cool endangered receptacles with water spray.

---

## 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation

Wear protective clothing.

Keep away from ignition sources.

Use respiratory protective device against the effects of fumes/dust/aerosol.

Wear protective equipment. Keep unprotected persons away.

### 6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.

Prevent seepage into sewage system, workpits and cellars.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

### 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

### 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

---

## 7. Handling and storage

### 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

#### **Information about fire - and explosion protection:**

Fumes can combine with air to form an explosive mixture.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

### 7.2 Conditions for safe storage, including any incompatibilities

#### **Storage:**

#### **Requirements to be met by storerooms and receptacles:**

Store only in the original receptacle.

Store in cool, dry conditions in well sealed receptacles.

Do not allow to enter sewers/ surface or ground water.

Store in a cool location.

**Information about storage in one common storage facility:** Not required.

#### **Further information about storage conditions:**

Store receptacle in a well ventilated area.

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

**Maximum storage temperature:** 25 °C



### 7.3 Specific end use(s) No further relevant information available.

## 8. Exposure controls/personal protection

**Additional information about design of technical facilities:** No further data; see item 7.

### 8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:	
<b>80-62-6 methyl methacrylate</b>	
WEL	Short-term value: 416 mg/m <sup>3</sup> , 100 ppm Long-term value: 208 mg/m <sup>3</sup> , 50 ppm

DNELs		
<b>80-62-6 methyl methacrylate</b>		
Dermal	DNEL Dermal	17 mg/kg/d (-)
Inhalative	DNEL Inhalation	208 mg/m <sup>3</sup> (-)

**Additional information:** The lists valid during the making were used as basis

### 8.2 Exposure controls

**Personal protective equipment:**

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

**Respiratory protection:**

Use the indicated respiratory protection if workplace exposure limits are exceeded.

**Recommended filter device for short term use:** Filter A

**Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves** Butyl rubber, BR

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

For the mixture mentioned below the penetration time has to be at least 60 minutes (Permeation according to EN 374 Part 3: Level 3).

**Eye protection:**



Tightly sealed goggles

**Body protection:** Protective work clothing

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**General Information**

**Appearance:**

<b>Form:</b>	Fluid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Characteristic



<b>Odour threshold:</b>	Not determined.
<b>pH-value:</b>	Not determined.
<b>Change in condition</b>	
<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	100 °C
<b>Flash point:</b>	10 °C
<b>Flammability (solid, gaseous):</b>	Not applicable.
<b>Ignition temperature:</b>	430 °C
<b>Decomposition temperature:</b>	Not determined.
<b>Self-igniting:</b>	Product is not selfigniting.
<b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
<b>Explosion limits:</b>	
<b>Lower:</b>	2.1 Vol %
<b>Upper:</b>	12.5 Vol %
<b>Vapour pressure at 20 °C:</b>	38.7 hPa
<b>Density at 20 °C:</b>	0.95 g/cm <sup>3</sup>
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with water:</b>	Not miscible or difficult to mix.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic at 20 °C:</b>	61 s (ISO 6 mm)
<b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>9.2 Other information</b>	No further relevant information available.

## 10. Stability and reactivity

### 10.1 Reactivity

### 10.2 Chemical stability

**Thermal decomposition / conditions to be avoided:** Keep away from heat and direct sunlight.

**10.3 Possibility of hazardous reactions** Exothermic polymerization.

**10.4 Conditions to avoid** No further relevant information available.

**10.5 Incompatible materials:** Reacts with peroxides and other radical forming substances.

### 10.6 Hazardous decomposition products:

Hydrocarbons

Carbon monoxide and carbon dioxide

### Additional information:

Do not allow product to reach sewage system or any water course.

Prevent seepage into sewage system, workpits and cellars.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

## 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity:

LD/LC50 values relevant for classification:		
80-62-6 methyl methacrylate		
Oral	LD 50	> 5000 mg/kg (rat)
Dermal	LD 50	> 5000 mg/kg (kan)
Inhalative	LC 50 (4h)	29,8 mg/l (rat)

**Primary irritant effect:**

**on the skin:** Irritant to skin and mucous membranes.

**on the eye:** No irritating effect.

**Sensitization:** Sensitization possible through skin contact.

**Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

**12. Ecological information****12.1 Toxicity**

Acquatic toxicity:	
80-62-6 methyl methacrylate	
EC 0	100 mg/l (Pseudomonas putida)
EC 3 (8d)	37 mg/l (Scenedesmus subspicatus od. quadricauda)
EC 50 (48h)	69 mg/l (Daphnia magna)
EC 50 (96h)	170 mg/l (Selenastrum capricornutum)
LC 50 (96h)	> 79 mg/l (fish)
NOEC	37 mg/l (Daphnia magna)

**12.2 Persistence and degradability** No further relevant information available.

**12.3 Bioaccumulative potential** No further relevant information available.

**12.4 Mobility in soil** No further relevant information available.

**Additional ecological information:****General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**12.5 Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**12.6 Other adverse effects** No further relevant information available.

**13. Disposal considerations****13.1 Waste treatment methods****Recommendation**

Must be specially treated adhering to official regulations.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

**Uncleaned packaging:****Recommendation:**

Packaging may be reused or recycled after cleaning.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

**Recommended cleansing agents:** Acetone, ethylacetate

**14. Transport information****14.1 UN-Number**

ADR, IMDG, IATA

UN1866

**14.2 UN proper shipping name**

ADR

1866 RESIN SOLUTION

IMDG, IATA

RESIN SOLUTION

**14.3 Transport hazard class(es)**

ADR, IMDG, IATA



Class 3 Flammable liquids.

Label 3

**14.4 Packing group**

ADR, IMDG, IATA II

**14.5 Environmental hazards:**

Marine pollutant: No

**14.6 Special precautions for user** Warning: Flammable liquids.**Danger code (Kemler):** 33**EMS Number:** F-E,S-E**14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.**Transport/Additional information:****ADR****Limited quantities (LQ)** 5L**Excepted quantities (EQ)** Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

**Transport category** 2**Tunnel restriction code** D/E**IMDG****Limited quantities (LQ)** 5L**Excepted quantities (EQ)** Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

**UN "Model Regulation":** UN1866, RESIN SOLUTION, 3, II**15. Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations:****Technical instructions (air):**

Class	Share in %
NK	50-100

**Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**16. Other information****Relevant phrases**

H225 Highly flammable liquid and vapour.

H301 Toxic if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects.

R11 Highly flammable.

R25 Toxic if swallowed.

R37/38 Irritating to respiratory system and skin.

R43 May cause sensitisation by skin contact.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Abbreviations and acronyms:**



Flam. Liq. 2: Flammable liquids, Hazard Category 2

Acute Tox. 3: Acute toxicity, Hazard Category 3

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

### Further information

Other information :

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.