

**Safety data sheet
according to (EC) Directive no. 1972 / 2008**

Edited on: 01
Revised on: August 12, 2019, SW

1. Product and company name

1.1 Product name (product identifier):

PerfectPrint – for casting

1.2 Relevant identified uses of the substance or mixture and inadvisable uses

Intended use of the product:

Light-curable resin for 3D printer, for casting

Not advisable for use as:

to be used exclusively for 3D printing

1.3 Details of the supplier providing the safety data sheet:

Manufacturer / Supplier

Willmann & Pein GmbH

Street

Schusterring 35

Country / ZIP code / Location

D-25355 Barmstedt

Contact for technical information (safety data sheet)

Dr. Wolfgang Willmann

+49 (0) 41 23 / 9228 0

Telephone / Fax / Email

+49 (0) 4123 / 9228 0 / +49 (0) 4123 / 9228 49 / info@wp-dental.de

1.4 Emergency number

Emergency information (24 hours):

Dr. Wolfgang Willmann

Tel: +49 (0) 170 / 4053052

Safety data sheet according to (EC) Directive no. 1972 / 2008

Edited on: 01

Revised on: August 12, 2019, SW

2. Possible hazards

2.1 Classification of the mixture

according to EC No. 1272 / 2008 Directive:

- | | | |
|-----------------|-------------|--|
| - Eye Irrit. 2 | H319 | causes severe eye irritation |
| - Skin sens. 1 | H317 | may cause allergic skin reactions |
| - Skin Irrit. 2 | H315 | causes skin irritation |

2.2 Labelling elements

GHS labelling according to 1272/2008 (GHS/CLP)



Achtung

H319 P261	causes severe eye irritation avoid inhalation of dust/fumes/gas/mist/vapor/spray
P264 P280	Clean well after handling Wear protective gloves/protective clothing/ eye/face protection
P305+P351+P338	IN CASE OF CONTACT WITH THE EYES: Gently rinse out with water for several minutes. If possible, remove any contact lenses being worn and continue rinsing.
P337+P313	If eye irritation persists: Seek medical attention/advice.
H317 P272	May cause allergic skin reactions Do not wear contaminated work clothing outside the workplace
P333+P313	In case of skin irritation or rash: seek medical attention
P501	Dispose of residues in accordance with local regulations
H315 P302+P352 off with plenty of water	Causes skin irritations IN THE EVENT OF CONTACT WITH THE SKIN: rinse off with plenty of water
P321	Special treatment (see ... on this identification label).
P332+P313	In case of skin irritation: Seek medical attention/advice.
P362+P364	Remove contaminated clothing and wash it before wearing it again.

Safety data sheet
according to (EC) Directive no. 1972 / 2008

Edited on: 01

Revised on: August 12, 2019, SW

3. Composition/information about the components

Chemical characterization:
Dangerous substances in the mixture:

Substance	CAS no./EINECS no./EC no.	Content (%)	Name
Propylene carbonate	CAS no. 108-32-7 EC no. 203-572-1	7-13	Eye irrit. 2/H319 Causes severe eye irritation
TEDMA	CAS no.: 109-16-0	11-18	Skin sens. 1/H317 May cause allergic skin reactions
Vinylester resin	CAS no.: 55818-57-0	12-17	Skin sens. 1/ H317 May cause allergic skin reactions
1,6 hexanediol dimethacrylate	CAS no. 6606-59-3 EC no. 229-551-7	16-23	Skin irrit. 2/H315 causes skin irritations Eye irrit. 2/H319 Causes severe eye irritation
Dipentaerythritolpenta/ hexa- acrylate	CAS no.: 1384855-91-7	2-8	Eye irrit. 2/H319 Causes severe eye irritation Skin sens. 1/H317 May cause allergic skin reactions
(1-Methyl-1,2-ethandiyl) to (oxy(methyl-2,1- ethandiyl))diacrylate	CAS no. 42978-66-5 EC no. 256-032-2	5-10	Skin irrit. 2/H315 Causes skin irritations Skin sens 1/H317 May cause allergic skin reactions Eye irrit. 2/H319 causes severe eye irritation

4. First aid measures**4.1 Description of first aid measures****After inhalation**

Move the affected person to fresh air.
 No further immediate assistance required.

After skin contact

Wash off with soap and water and rinse thoroughly.
 In case of skin irritation, seek medical advice.

After eye contact

Safety data sheet
according to (EC) Directive no. 1972 / 2008

Edited on: 01

Revised on: August 12, 2019, SW

With the eyelids open, rinse the eyes with water thoroughly.
If eye irritation persists, seek medical advice.

After swallowing

Seek medical attention immediately

4.2 Main acute or delayed symptoms/effects

Eye and skin irritation possible

4.3 Information on immediate medical assistance or special treatment

If skin or eye irritation persists, seek medical advice.

5. Fire-fighting measures**5.1 Extinguishing agents**

Suitable extinguishing agents:

Foam, extinguishing powder, carbonic acid, water spray – select the fire extinguishing measures suitable for the environment.

Extinguishing agents unsuitable for safety reasons:
none known

5.2 Special hazards arising from the mixture

There are no known hazards caused by the product itself, its combustion products, or the resulting gases.

5.3 Instructions on fire extinguishing

Apply the usual measures for combating chemical fires, i.e. use a self-contained breathing apparatus (insulating device).

Safety data sheet
according to (EC) Directive no. 1972 / 2008

Edited on: 01

Revised on: August 12, 2019, SW

6. Measures in the event of accidental release**6.1 Personal precautions, protection:**

Ensure adequate ventilation

6.2 Environmental protection measures:

Do not empty into drains.

Disposal in accordance with local regulations.

6.3 Methods and materials for retention and cleaning

Mechanically pick up material, cure in light and dispose of

(Material to be disposed of in accordance with local regulations on special waste).

6.4 Reference to other sections

no references

7. Handling and storage**7.1 Protective measures for safe handling****Recommendations:**

The usual precautions for handling chemicals must be observed.

Make sure to wear a work coat while working.

Information on fire and explosion protection:

No special measures necessary.

7.2 Conditions for safe storage while considering incompatibilities

Cool, dry, closed and shielded from light

Storage period: three years under proper storage conditions.

7.3 Specific end-use applications

Wear disposable gloves when working.

Ensure good suction when grinding the hardened material.

Safety data sheet
according to (EC) Directive no. 1972 / 2008

Edited on: 01

Revised on: August 12, 2019, SW

8. Exposure control and personal protective equipment**8.1 Parameters to be monitored**

none known

PNCE and DNCL values as must be defined in a chemical safety report are not available.

8.2 Exposure limitation and monitoring**Personal protective equipment:**

Observe protective and hygienic measures. Store protective clothing separately. The usual precautions for handling chemicals must be observed.

Respiratory protection:

not necessary

Eye protection:

Wear protective goggles when processing the material

Hand protection:

Sensitization: Wear suitable protective gloves (from past experience/literature) e.g., Ethiparat®-gloves for 5-10 minutes, use of no-touch technology, minimal-contact techniques recommended.

Body protection:

Wear normal work clothing.

Other protective measures:

none

Information on

occupational hygiene:

observe the usual protective and hygienic measures.

Preventive skin protection.

Wash hands and face after work.

Safety data sheet according to (EC) Directive no. 1972 / 2008

Edited on: 01

Revised on: August 12, 2019, SW

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Besides the appearance, the given information applies only to the acrylate resin used.

Appearance:	transparent, blue-colored liquid
Odor:	like acrylates/methacrylates
Odor threshold:	not specified
pH value:	not applicable
Melting point/freezing point:	not specified
Initial boiling point and boiling ranges:	not specified
Flash point:	not determined (approx. > 100°C estimated based on the flash points of the ingredients); no symbol necessary
Evaporation rate:	not specified
Flammability:	not specified
upper / lower flammability or explosion limits:	not specified
Vapor pressure:	not specified
Vapor density:	not specified
Relative density:	1.0911 g/mL
Solubility:	insoluble in water
Partition coefficient n-octanol/water:	not specified
Auto-ignition temperature:	not specified
Decomposition temperature:	not specified
Viscosity:	not specified
Explosive properties:	not known
Oxidizing properties:	not known
9.2 Additional specifications:	none

10. Stability and reactivity

10.1 Reactivity

The material can polymerize slowly when exposed to solar irradiation and light.

10.2 Chemical stability

The material is chemically stable if protected from heat, solar irradiation, and light.

10.3 Possibility of dangerous reactions

Slow polymerization of the material does not lead to excessive heat dissipation.

10.4 Conditions to avoid

Keep away from heat, direct solar irradiation and light to avoid premature slow polymerization.

10.5 Incompatible materials

Protect from radical formers to avoid premature slow polymerization.

10.6 Hazardous decomposition products

None when used as intended

The product can polymerize slowly with low heat generation if the specified storage period and / or storage temperature are exceeded significantly.

Safety data sheet
according to (EC) Directive no. 1972 / 2008

Edited on: 01

Revised on: August 12, 2019, SW

11. Toxicological information**11.1 Information****Acute toxicity**

The mixture has been deemed not acutely toxic based on the ingredients.

Skin irritation

No skin irritation

Eye irritation

No eye irritation

Irritation of respiratory organs

No irritation of respiratory organs

Sensitization

Sensitization of the skin cannot be ruled out based on the ingredients.

Toxicity in the case of repeated exposure

No toxicity in the case of repeated exposure.

Carcinogenicity

Carcinogenicity can be ruled out based on the ingredients.

Mutagenicity

Mutagenicity can be ruled out based on the ingredients.

Reproductive toxicity

Reproductive toxicity can be ruled out based on the concentration of the ingredients.

Toxicokinetics

According to the new safety data sheet under REACH, information about toxicokinetics, metabolism and substance composition in the body must be provided. We have no information in this regard.

Additional specifications

The product must be labelled.

According to our experience and the information available to us, the product has no harmful effects on health if handled and used properly.

The product should be handled with the usual care needed when handling chemicals.
Allergic reactions to methacrylates are possible.

Safety data sheet
according to (EC) Directive no. 1972 / 2008

Edited on: 01

Revised on: August 12, 2019, SW

12. Environment-related information**12.1 Toxicity**

Fish toxicity: no data available for the mixture

Aquatic organisms: not specified

Bacterial toxicity: not specified

12.2 Persistence and degradability

The substances contained in the mixture are not degradable within a sufficient time

12.3 Bioaccumulation potential

No information available

12.4 Mobility in soil

No information available

12.5 Result of the determination of PTB and vPvB assessment

It is not known whether the material triggers or prevents hormonal effects.

12.6 Other adverse effects

No information available

12.7 Water hazard class 2

The water hazard class is not specified because it has no effect on the labelling or transportation of the product.

13. Information on disposal**13.1 Procedure on waste treatment of the preparation**

To be disposed of in accordance with local regulations.

Do not empty into drains.

Waste code according to the Waste Catalogue Ordinance (AVV)

16 03 05 (organic waste containing dangerous substances)

Packaging

Non-contaminated packaging can be recycled.

14. Information on transport**14.1 UN number**

none

14.2 Proper UN shipping label

none

14.3 Transport hazard classes

Not classified as dangerous goods under transport regulations.

14.4 Packaging group

none

14.5 Environmental hazards

none

14.6 Special precautions for traffic

none

14.7 Transportation in bulk according to Annex II of the MARPOL 73/79 Convention under IBC Code

No

Safety data sheet according to (EC) Directive no. 1972 / 2008

Edited on: 01

Revised on: August 12, 2019, SW

15. Legal provisions

15.1 Safety, health and environmental protection/special legal provisions for the mixture

according to EC No. 1272 / 2008 Directive:

- | | | |
|-----------------|-------------|--|
| - Eye Irrit. 2 | H319 | causes severe eye irritation |
| - Skin sens. 1 | H317 | may cause allergic skin reactions |
| - Skin Irrit. 2 | H315 | causes skin irritation |

2.2 Labelling elements

GHS labelling according to 1272/2008 (GHS/CLP)



Achtung

H319 P261	causes severe eye irritation avoid inhalation of dust/fumes/gas/mist/vapor/spray
P264 P280	Clean well after handling Wear protective gloves/protective clothing/ eye/face protection
P305+P351+P338	IN CASE OF CONTACT WITH THE EYES: Gently rinse out with water for several minutes. If possible, remove any contact lenses being worn. Continue rinsing.
P337+P313	If eye irritation persists: Seek medical attention/advice.
H317 P272	May cause allergic skin reactions Do not wear contaminated work clothing outside the workplace
P333+P313	In case of skin irritation or rash: seek medical attention
P501	Dispose of residues in accordance with local regulations
H315 P302+P352	Causes skin irritations IN THE EVENT OF CONTACT WITH THE SKIN: rinse off with plenty of water
P321	Special treatment (see ... on this identification label).
P332+P313	In case of skin irritation: Seek medical attention/advice.
P362+P364	Remove contaminated clothing and wash it before wearing it again.

Safety data sheet
according to (EC) Directive no. 1972 / 2008

Edited on: 01

Revised on: August 12, 2019, SW

15.2 Safety assessments

No safety assessments have been carried out for substances in this mixture.

16. Additional specifications**Other applicable EC Directives**

Preparations Directive (1999/45/EC), last amended by Directive 2006/8/EC
Substances Directive (67/548/EEC), last amended by Directive 2006/121/EC.
REACH Directive (EC) no. 1907/2006, last amended by Directive (EC) no. 1272/2008.

Restriction of use recommended by the manufacturer

For commercial use only – not for the general public.

H-phrases referred to in sections 2 and 3

H317 May cause allergic skin reactions.
H319 Causes severe eye irritation.
H315 Causes skin irritation.

Amendments to the last version

Change labelling according to GHS labelling

Department issuing data sheet

Dr. rer. nat. Wolfgang Willmann (Tel: 0 41 23 – 92 28 0)

Additional specifications:

Sources: ¹ <http://www.baua.de>

² <http://www.arbeitssicherheit.de>

Some of the information provided here and the resulting conclusions are obtained from sources that are not based on direct test results of the product itself.

The contents and formats of this safety data sheet comply with the (EC) No. 1272 / 2008 Directive of the EU Commission.

Warranty limitations

The information in this safety data sheet has been obtained from sources that we believe to be reliable. However, this information is provided without any express or implicit guarantee of its accuracy.

The conditions or methods of treatment, storage, use, or disposal of this product are beyond our control and may be beyond our knowledge.

For this and other reasons, we expressly disclaim any responsibility for loss, damage or other costs associated with the use, storage or disposal of the product.

This Safety Data Sheet has been specifically and explicitly prepared for this product only and should therefore be used expressly for it.

If this product is used as a component of another product, this information shall no longer be applicable.