SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: Copycat

1.2 Relevant identified uses of the substance or mixture and uses advised against

General use: Resin, for 3D-Printer

1.3 Details of the supplier of the safety data sheet

Company name: Kalman Hafner 3D GmbH
Street/POB-No.: Schillerstrasse 6
Postal Code, city: DE-75175 Pforzheim
WWW: www.hafner-3d.com
E-mail: info@hafner-3d.com
Telephone: +49 (0) 7231 15444 20
Telefax: +49 (0) 7231 15444 15

Department responsible for information:
Telephone: +49 (0) 7231 15444 20
E-mail: info@hafner-3d.com

1.4 Emergency telephone number

National Poisons Information Service
Telephone: +44 844 892 0111

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

Skin Irrit. 2; H315 Causes skin irritation.
Eye Dam. 1; H318 Causes serious eye damage.
Skin Sens. 1; H317 May cause an allergic skin reaction.
STOT SE 3; H335 May cause respiratory irritation.
STOT RE 2; H373 May cause damage to organs through prolonged or repeated exposure.

2.2 Label elements

Labelling (CLP)

Signal word: **Danger**

Hazard statements:
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements:

P102	Keep out of reach of children.
P260	Do not breathe fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P362+P364	Take off contaminated clothing and wash it before reuse.
P501	Dispose of contents/container to hazardous or special waste collection point.

Special labelling

EUH211	Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

Text for labelling:

Contains 2-Oxepanone, polymer with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 2-hydroxyethyl acrylate-blocked,
4-(1-Oxo-2-propenyl)-morpholine,
(Octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate,
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

2.3 Other hazards

No risks worthy of mention.

Results of PBT and vPvB assessment:

No data available

SECTION 3: Composition/information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Hazardous ingredients:

Ingredient	Designation	Content	Classification
EC No. 255-901-3 CAS 42594-17-2	(Octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate	< 30 %	Skin Irrit. 2; H315. Eye Irrit. 2; H319.
CAS 68987-79-1	2-Oxepanone, polymer with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 2-hydroxyethyl acrylate-blocked	< 30 %	Skin Irrit. 2; H315. Eye Dam. 1; H318. Skin Sens. 1; H317. STOT SE 3; H335.
EC No. 254-843-6 CAS 40220-08-4	(2,4,6-Trioxo-1,3,5-triazine-1,3,5(2H,4H,6H)-triyl)tri-2,1-ethanediyl triacrylate	< 30 %	Skin Irrit. 2; H315. Eye Dam. 1; H318. STOT SE 3; H335. Aquatic Chronic 2; H411.
EC No. 418-140-1 CAS 5117-12-4	4-(1-Oxo-2-propenyl)-morpholine	< 20 %	Acute Tox. 4; H302. Eye Dam. 1; H318. Skin Sens. 1; H317. STOT RE 2; H373.
EC No. 423-340-5 CAS 162881-26-7	Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	< 5 %	Skin Sens. 1; H317. Aquatic Chronic 4; H413.

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

Additional information: Contains Titanium dioxide.
The maximum workplace exposure limits are, where necessary, listed in section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: If medical advice is needed, have product container or label at hand.
Take off contaminated clothing and wash it before reuse.

In case of inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical attention if problems persist.

Following skin contact: Immediately clean with water and soap followed by thorough rinsing. In case of skin reactions, consult a physician.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently consult an ophthalmologist.

After swallowing: Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Do not induce vomiting. Immediately get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

May cause an allergic skin reaction. Causes serious eye damage.
Causes skin irritation. May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure.

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:

extinguishing powder, carbon dioxide.
In case of major fire and large quantities: Foam, Water spray jet

Extinguishing media which must not be used for safety reasons:

Full water jet

5.2 Special hazards arising from the substance or mixture

Combustible. Danger of polymerisation (exothermic). The vapours of the product are heavier than air and can accumulate in high concentrations on the ground. Potentially explosive vapour/air mixtures may form. Harmful and/or toxic vapours may be produced in the event of thermal decomposition.
In case of fire may be liberated: Smoke, nitrogen oxides (NOx), toxic gases/vapours, carbon monoxide and carbon dioxide.

5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information: Hazchem-Code: -

Seal off endangered area. Heating causes rise in pressure with risk of bursting. Use fine water spray to cool endangered containers.
Do not allow water used to extinguish fire to enter drains, ground or waterways.
Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe fume/gas/mist/vapours/spray. Avoid contact with the substance.
If possible, eliminate leakage. Provide adequate ventilation.
Wear appropriate protective equipment. Keep unprotected people away.
Take off contaminated clothing and wash it before reuse.

6.2 Environmental precautions

Do not allow to enter into ground-water, surface water or drains.
In case of release, notify competent authorities.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents) and place in closed containers for disposal.
Never return spills in original containers for re-use.

Additional information: Special danger of slipping by leaking/spilling product.

6.4 Reference to other sections

Refer additionally to section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Do not breathe fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wear appropriate protective equipment.
Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Take off contaminated clothing and wash it before reuse.
Work place should be equipped with a shower and an eye rinsing apparatus.

Precautions against fire and explosion:
The product is combustible. Please avoid ignition sources and excessive heat. When handling larger quantities, take precautionary measures against electrostatic charging.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:
Store in a well-ventilated and dry room at temperatures between 10 °C and 35 °C. Keep only in the original container.
Protect from heat and direct sunlight.
Store containers in upright position.

Hints on joint storage: Keep away from strong bases and oxidizing agents.
Keep away from food, drink and animal feedingstuffs.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
13463-67-7	Titanium dioxide	Great Britain: WEL-TWA	10 mg/m³ (inhalable fraction)
		Great Britain: WEL-TWA	4 mg/m³ (respirable fraction)
		Ireland: 8 hours	10 mg/m³ (inhalable fraction)
		Ireland: 8 hours	4 mg/m³ (respirable fraction)

8.2 Exposure controls

Provide for good ventilation or exhaust system or work with completely self-contained equipment.

Personal protection equipment

Occupational exposure controls

Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded. Use combination filter type ABEK according to EN 14387. The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product.

Hand protection: Protective gloves according to EN 374.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to EN 166.

Body protection: Wear suitable protective clothing.

General protection and hygiene measures:

Do not breathe fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Take off contaminated clothing and wash it before reuse.
Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Work place should be equipped with a shower and an eye rinsing apparatus.

Environmental exposure controls

Refer to "6.2 Environmental precautions".

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Physical state at 20 °C and 101.3 kPa: liquid Colour: orange
Odour:	like Acrylate
Odour threshold:	No data available
pH:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	> 100 °C
Flash point/flash point range:	> 100 °C
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	No data available
Vapour pressure:	No data available
Vapour density:	No data available
Density:	1.05 - 1.13 g/mL
Solubility:	soluble in organic solvents
Water solubility:	easily soluble
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity, dynamic:	at 25 °C: 600 - 800 mPa*s
Explosive properties:	No data available
Oxidizing characteristics:	No data available

9.2 Other information

Additional information:	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

refer to 10.3

10.2 Chemical stability

Light-sensitive. Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Danger of polymerisation. Danger of bursting of closed cans.

10.4 Conditions to avoid

Do not store at temperatures above 38 °C. Protect from light. Protect from direct sunlight. Keep away from heat sources, sparks and open flames.

10.5 Incompatible materials

polymerization initiator, strong oxidizing agents, alcohols, peroxides, strong bases, copper, iron, steel, rust.

10.6 Hazardous decomposition products

Hazardous decomposition products such as carbon dioxide, carbon monoxide, fumes, nitrogen oxides may develop with exposure to high temperatures.

Thermal decomposition: No data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Based on available data, the classification criteria are not met. ATEmix (calculated): >2000 mg/kg.

Acute toxicity (dermal): Lack of data.

Acute toxicity (inhalative): Lack of data.

Skin corrosion/irritation: Skin Irrit. 2; H315 = Causes skin irritation.

Serious eye damage/irritation: Eye Dam. 1; H318 = Causes serious eye damage.

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Skin Sens. 1; H317 = May cause an allergic skin reaction.

Germ cell mutagenicity/Genotoxicity: Lack of data.

Carcinogenicity: Lack of data.

Reproductive toxicity: Lack of data.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): STOT SE 3; H335 = May cause respiratory irritation.

Specific target organ toxicity (repeated exposure): STOT RE 2; H373 = May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard: Lack of data.

Other information: Information about 4-(1-Oxo-2-propenyl)-morpholine:
LD50 Rat, oral: 588 mg/kg.

Symptoms

Effects resulting from repeated or prolonged exposure: drowsiness, nausea, Dizziness, headache, weakness.
After eye contact: Upon direct contact with eyes may cause burning, tearing, redness.

SECTION 12: Ecological information

12.1 Toxicity

Further details: No data available

12.2 Persistence and degradability

Further details: Product is not readily biodegradable.

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

General information: Do not allow to penetrate into soil, waterbodies or drains.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 08 03 12* = waste ink containing hazardous substances
* = Evidence for disposal must be provided.

Recommendation: Dispose of waste according to applicable legislation.
Do not dispose of with household waste.

Package

Recommendation: Dispose of waste according to applicable legislation.

SECTION 14: Transport information

14.1 UN number

ADR/RID, IMDG, IATA-DGR:

not applicable

14.2 UN proper shipping name

ADR/RID, IMDG, IATA-DGR:

Not restricted

14.3 Transport hazard class(es)

ADR/RID, IMDG, IATA-DGR:

not applicable

14.4 Packing group

ADR/RID, IMDG, IATA-DGR:

not applicable

14.5 Environmental hazards

Marine pollutant: no

14.6 Special precautions for user

No dangerous good in sense of these transport regulations.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

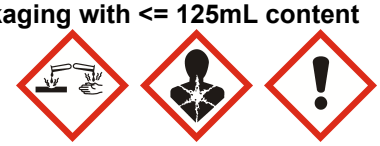
National regulations - Great Britain

Hazchem-Code: -

No data available

National regulations - EC member states

Labelling of packaging with <= 125mL content



Signal word: **Danger**

Hazard statements:

H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
EUH211	Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

Precautionary statements:

P102	Keep out of reach of children.
P260	Do not breathe fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P362+P364	Take off contaminated clothing and wash it before reuse.
P501	Dispose of contents/container to hazardous or special waste collection point.

Further regulations, limitations and legal requirements:

Use restriction according to REACH annex XVII, no.: 3

15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment is not required.

SECTION 16: Other information

Further information

Wording of the H-phrases under paragraph 2 and 3:

H302 = Harmful if swallowed.
H315 = Causes skin irritation.
H317 = May cause an allergic skin reaction.
H318 = Causes serious eye damage.
H319 = Causes serious eye irritation.
H335 = May cause respiratory irritation.
H373 = May cause damage to organs through prolonged or repeated exposure.
H411 = Toxic to aquatic life with long lasting effects.
H413 = May cause long lasting harmful effects to aquatic life.
EUH211 = Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

Abbreviations and acronyms:

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
OEL: Occupational Exposure Limit Value
AS/NZS: Australian Standards/New Zealand Standards
CAS: Chemical Abstracts Service
CFR: Code of Federal Regulations
CLP: Classification, Labelling and Packaging
DMEL: Derived minimal effect level
DNEL: Derived no-effect level
EC: European Community
EN: European Standard
EU: European Union
IATA: International Air Transport Association
IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IMDG Code: International Maritime Dangerous Goods Code
LD50: Lethal dose 50%
MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
OSHA: Occupational Safety and Health Administration
PBT: Persistent, bioaccumulative and toxic
PNEC: Predicted no-effect concentration
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
STOT RE: Specific target organ toxicity - repeated exposure
STOT SE: Specific target organ toxicity - single exposure
TLV: Threshold Limit Value
vPvB: Very persistent and very bioaccumulative
WEL: Workplace Exposure Limit

Reason of change: Changes in section 2: Labelling
Changes in section 1: Details of the supplier of the safety data sheet

Date of first version: 11/9/2019

Department issuing data sheet

Contact person: see section 1: Department responsible for information

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.