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UV repair resin, extra-low viscosity

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

1.1. Product identifier

UV repair resin, extra-low viscosity

Further trade names

UV-Reparaturharz, extra dünnflüssig
 Résine de réparation UV, très liquide
 Resina de reparación UV, baja viscosidad

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

Use of the substance/mixture

Adhesives, sealants

Uses advised against

No information available.

1.3. Details of the supplier of the safety data sheet

Company name:	PMA/TOOLS AG	
Street:	Siemensring 42	
Place:	D-47877 Willich	
Telephone:	+49 2154 922230	Telefax: +49 2154 922255
e-mail:	info@pma-tools.de	
Contact person:	Michael Münter	
e-mail:	msds@pma-tools.de	- Please DO NOT use for requesting Safety Data Sheets.
Internet:	www.pma-tools.de	
Responsible Department:	Laboratory	

1.4. Emergency telephone number: Telephone number of the company in case of emergencies:
 +49 2154 922230 (Mon - Fri 8.00h - 17.00h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazard categories:

Skin corrosion/irritation: Skin Irrit. 2
 Serious eye damage/eye irritation: Eye Irrit. 2
 Respiratory or skin sensitisation: Skin Sens. 1
 Specific target organ toxicity - single exposure: STOT SE 3
 Hazardous to the aquatic environment: Aquatic Chronic 3
 Hazard Statements:
 Causes skin irritation.
 Causes serious eye irritation.
 May cause an allergic skin reaction.
 May cause respiratory irritation.
 Harmful to aquatic life with long lasting effects.

2.2. Label elements

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazard components for labelling

2-hydroxyethyl methacrylate
 Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-ylacrylate
 acrylic acid, prop-2-enoic acid

Signal word: Warning

Pictograms:



Hazard statements

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

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Suitable extinguishing media

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

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon monoxide. Carbon dioxide (CO₂)

5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Co-ordinate fire-fighting measures to the fire surroundings. Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Avoid contact with skin, eyes and clothes. Do not breathe gas/vapour/aerosol.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Wear personal protection equipment (refer to section 8).

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers).

6.3. Methods and material for containment and cleaning up

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal. Clear contaminated areas thoroughly. Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

SECTION 7: Handling and storage

See section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Wear suitable protective clothing. See section 8.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Further information on handling

Avoid contact with skin, eyes and clothes.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place. Keep container dry.

Advice on storage compatibility

Do not store together with: P8 Oxidising liquids and solids. Explosives. Radioactive substances. Infectious substances.

Food and feedingstuffs. Peroxides

Further information on storage conditions

Protect against: Light. UV-radiation/sunlight. Heat. Cold. Humidity

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Additional advice on limit values

To date, no national critical limit values exist.

8.2. Exposure controls



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Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation should be used if possible. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

Protective and hygiene measures

Always close containers tightly after the removal of product. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Take off contaminated clothing and wash it before reuse. Used working clothes should not be worn outside the work area. Street clothing should be stored separately from work clothing.

Eye/face protection

Suitable eye protection: goggles. DIN EN 166

Hand protection

Wear suitable gloves. DIN EN 374

Suitable material: Butyl caoutchouc (butyl rubber) (0,5 mm) (< 120 min.)

Check leak tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. Use protective skin cream before handling the product.

Skin protection

Protective clothing.

Respiratory protection

Respiratory protection necessary at: exceeding exposure limit values. generation/formation of aerosols.

Generation/formation of mist

Suitable respiratory protection apparatus: gas filtering equipment (EN 141). Filtering device (full mask or mouthpiece) with filter: A / P2-3

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.

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	colourless
Odour:	characteristic

Test method

pH-Value:	n.a.
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Changes in the physical state

Melting point:	not determined
Initial boiling point and boiling range:	not determined
Flash point:	not determined

Flammability

Solid:	not determined
Gas:	not determined

Explosive properties

nicht bestimmt

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Ignition temperature:	not determined

Auto-ignition temperature

Solid:	not determined
Gas:	not determined

Decomposition temperature:	not determined
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Oxidizing properties

nicht bestimmt

Vapour pressure:	not determined
Density (at 20 °C):	not determined
Water solubility:	practically insoluble

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Solubility in other solvents

nicht bestimmt
Partition coefficient: not determined
Viscosity / dynamic: 20 mPa·s
Vapour density: not determined
Evaporation rate: not determined

9.2. Other information

No information available.

SECTION 10: Stability and reactivity**10.1. Reactivity**

Warning: Hydrolysis -> Formation of: Methanol
Hazardous polymerisation: Protect against direct sunlight. Can polymerise exothermically if heated, exposed to air, sunlight or by addition of free radical initiators.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

Protect against: Light. UV-radiation/sunlight. heat. (> 60 °C). Cold. Humidity

10.5. Incompatible materials

Materials to avoid: Oxidising agent, strong. Alkali (lye). Amines

10.6. Hazardous decomposition productsIn case of fire may be liberated: Carbon monoxide. Carbon dioxide (CO₂)**SECTION 11: Toxicological information****11.1. Information on toxicological effects****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
868-77-9	2-hydroxyethyl methacrylate	oral	LD50 5050 mg/kg	Rat		
5888-33-5	Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-ylacrylate	oral	LD50 4890 mg/kg	Rat		Gestis
		dermal	LD50 5000 mg/kg	Rabbit		Gestis
79-10-7	acrylic acid, prop-2-enoic acid	oral	LD50 > 192 mg/kg	Rat		
		dermal	LD50 > 290 mg/kg	Rabbit		
		inhalative (4 h) vapour	LC50 3,6 mg/l	Rat		
		inhalative aerosol	ATE 1,5 mg/l			

Irritation and corrosivity

Causes skin irritation.
Causes serious eye irritation.

Sensitising effects

May cause an allergic skin reaction. (2-hydroxyethyl methacrylate)
sensitising
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

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Based on available data, the classification criteria are not met.
No experimental indications of mutagenicity in-vitro exist.
The statement is derived from the properties of the single components.

STOT-single exposure

May cause respiratory irritation. (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-ylacrylate; acrylic acid, prop-2-enoic acid)

STOT-repeated exposure

Based on available data, the classification criteria are not met.
Acrylic acid:
NOAEL(C): 40 mg/kg (90 d) Rat. Subchronic oral toxicity
LOAEL(C): 0,015 mg/ L (90 d) Rat. subchronic inhalation toxicity
2-Hydroxyethylmethacrylat: NOAEL(C): 30 mg/ kg (90 d, Rat)
Subchronic oral toxicity

Aspiration hazard

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

Specific effects in experiment on an animal

No information available.

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

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
868-77-9	2-hydroxyethyl methacrylate					
	Acute fish toxicity	LC50	227 mg/l	96 h	Pimephales promelas	
79-10-7	acrylic acid, prop-2-enoic acid					
	Acute fish toxicity	LC50	27 mg/l	96 h	Onchorhynchus mykiss	
	Acute crustacea toxicity	EC50	95 mg/l	48 h	Daphnia magna	

12.2. Persistence and degradability

Readily biodegradable (according to OECD criteria).

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
868-77-9	2-hydroxyethyl methacrylate	0,47
79-10-7	acrylic acid, prop-2-enoic acid	0,35

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available.

Further information

No information available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Advice on disposal**

Consult the appropriate local waste disposal expert about waste disposal. Non-contaminated packages may be recycled.

Waste disposal number of waste from residues/unused products

080409 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other hazardous substances; hazardous waste

Waste disposal number of used product

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Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

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

14.1. UN 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: 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: 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: 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

SECTION 6: Accidental release measures
 SECTION 7: Handling and storage
 SECTION 8: Exposure controls/personal protection

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

not relevant

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 3: 2-hydroxyethyl methacrylate; acrylic acid, prop-2-enoic acid
 2010/75/EU (VOC): No information available.

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils 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. Observe employment restrictions for women of child-bearing age.
 Water contaminating class (D): 2 - clearly water contaminating

15.2. Chemical safety assessment

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

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SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,2,3,6,8,9,10,11,12,15,16.

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)

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Further Information

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)