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

1.1. Product identifier

Adhesive

Further trade names

Klebstoff, Colle, Adhesivo

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:	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

Hazard Statements:

Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.

2.2. Label elements

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

Hazard components for labelling

Hydroxypropyl methacrylate (isomers mixture)
2-hydroxyethyl methacrylate

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.

Precautionary statements

P102	Keep out of reach of children.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor if you feel unwell.

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Unsuitable extinguishing media

High power water jet

5.2. Special hazards arising from the substance or mixtureIn case of fire may be liberated: Sulphur oxides, Nitrogen oxides (NOx), CO, Carbon dioxide (CO₂)**5.3. Advice for firefighters**

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

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

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). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Provide adequate ventilation. If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. When using do not eat, drink, smoke, sniff.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep only in the original container at temperature not exceeding 25 °C. Keep container tightly closed and dry. Always close containers tightly after the removal of product.

Advice on storage compatibility

Do not store together with: Oxidising agent

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
27813-02-1	Hydroxypropyl methacrylate (isomers mixture)			
	Worker DNEL, long-term	dermal	systemic	4,2 mg/kg bw/day
	Worker DNEL, long-term	inhalation	systemic	14,7 mg/m ³
	Consumer DNEL, long-term	dermal	systemic	2,5 mg/kg bw/day
	Consumer DNEL, long-term	inhalation	systemic	8,3 mg/m ³
	Consumer DNEL, long-term	oral	systemic	2,5 mg/kg bw/day
	Worker DNEL, acute	inhalation	systemic	30 mg/m ³
	Worker DNEL, acute	inhalation	local	30 mg/m ³
	Worker DNEL, acute	dermal	local	1 mg/cm ²

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PNEC values

CAS No	Substance	Value
Environmental compartment		Value
27813-02-1	Hydroxypropyl methacrylate (isomers mixture)	
Freshwater		0,904 mg/l
Freshwater (intermittent releases)		0,972 mg/l
Marine water		0,904 mg/l
Freshwater sediment		6,28 mg/kg
Marine sediment		6,28 mg/kg
Micro-organisms in sewage treatment plants (STP)		10,00 mg/l
Soil		0,727 mg/kg

Additional advice on limit values

To date, no national critical limit values exist.

8.2. Exposure controls**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Eye/face protection

Suitable eye protection: goggles. (EN 166)

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. (EN 374).

Skin protection

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Filter A (EN 14387)

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state: liquid
Colour: transparent
Odour: characteristic

Test method

pH-Value: not applicable

Changes in the physical state

Melting point: not determined
Initial boiling point and boiling range: not determined
Sublimation point: not determined
Softening point: not determined
Pour point: not determined
Flash point: > 100 °C
Sustaining combustion: No data available

Flammability

Solid: not applicable
Gas: not applicable

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Explosive properties

negative, no explosion

Lower explosion limits:

not determined

Upper explosion limits:

not determined

Ignition temperature:

not determined

Auto-ignition temperature

Solid:

not applicable

Gas:

not applicable

Decomposition temperature:

not determined

Oxidizing properties

No

Vapour pressure:

not determined

Density:

1,06 g/cm³

Water solubility:

Immiscible

Solubility in other solvents

not determined

Partition coefficient:

not determined

Viscosity / dynamic:

not determined

Vapour density:

not determined

Evaporation rate:

not determined

9.2. Other information

Solid content:

not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Materials to avoid: Acid, Oxidising agent, strong Reducing agent, strong

10.4. Conditions to avoid

Keep away from heat.

10.5. Incompatible materials

Materials to avoid: Acid, Oxidising agent, strong Reducing agent, strong

10.6. Hazardous decomposition products

No hazardous reaction when handled and stored according to provisions.

In case of fire may be liberated: Sulphur oxides, Nitrogen oxides (NOx), CO, Carbon dioxide (CO₂)

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

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

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
27813-02-1	Hydroxypropyl methacrylate (isomers mixture)				
	oral	LD50 <5000 mg/kg	Rat		
	dermal	LD50 >5000 mg/kg	Rabbit		
	inhalative	Data lacking			
868-77-9	2-hydroxyethyl methacrylate				
	oral	LD50 5050 mg/kg	Rat		
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			
80-15-9	cumene hydroperoxide, alpha,alpha-dimethylbenzyl hydroperoxide				
	oral	LD50 382 mg/kg	Rat	IUCLID	
	dermal	LD50 500 mg/kg	Rat	RTECS	
	inhalative (4 h) vapour	LC50 1,4 mg/l	Rat	IUCLID	
	inhalative aerosol	ATE 0,5 mg/l			
114-83-0	1-Acetyl-2-phenylhydrazine				
	oral	LD50 270 mg/kg	Mouse		
	dermal	Data lacking			
	inhalative	Data lacking			

Irritation and corrosivity

Causes skin irritation.
Causes serious eye irritation.

Sensitising effects

May cause an allergic skin reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure

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

Aspiration hazard

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

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

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

The product is not: Ecotoxic.

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

The product has not been tested.

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12.3. Bioaccumulative potential

The product has not been tested.

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

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Avoid release to the environment.

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

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

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
Classified as hazardous waste.

Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

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

14.1. UN number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

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

No dangerous good in sense of this transport regulation.

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; cumene hydroperoxide, alpha,alpha-dimethylbenzyl hydroperoxide

2010/75/EU (VOC): < 3 %

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment

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

SECTION 16: Other information

Changes

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

Abbreviations and acronyms

ADN: Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways).

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road).

CAS: Chemical Abstracts Service

CLP: Classification, Labelling and Packaging of substances and mixtures (REGULATION (EC) No 1272/2008)

DIN: Deutsches Institut für Normung (German institute for standardization)

DMEL: Derived Minimum Effect Level

DNEL: Derived No Effect Level

EC: European Community

EG: Europäische Gemeinschaft (European Community)

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

EN: European Norms

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

IATA: International Air Transport Association

IATA-DGR: International Air Transport Association - Dangerous Goods Regulations

IBC: Intermediate Bulk Container

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air

IMDG: International Maritime Code for Dangerous Goods

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

MARPOL: International Convention for the Prevention of Marine Pollution from Ships

PBT: persistent, bioaccumulative and toxic

PNEC: Predicted No Effect Concentration

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006)

RID: Règlement concernant le transport International ferroviaire de marchandises Dangereuses (Regulation concerning the International Carriage of Dangerous Goods by Rail).

UN: Untitled Nations

VOC: Volatile organic compounds

vPvB: very persistent and very bioaccumulative

WKG Wassergefährdungsklasse (water hazard class)

Relevant H and EUH statements (number and full text)

H226	Flammable liquid and vapour.
H242	Heating may cause a fire.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.

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H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H411	Toxic 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 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.)