

**PM – TPO, FLEX, RIGID, CLEAR – Part A**

Creation date	14th April 2022	Version	2.0
Revision date			

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

- 1.1. Product identifier**  
Substance / mixture  
Number
- PM – TPO, FLEX, RIGID, CLEAR – Part A  
mixture  
R 34374/72/76/79
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**  
**Mixture's intended use**  
Barrier (Sealant). For professional use only.  
**Mixture uses advised against**  
not available
- 1.3. Details of the supplier of the safety data sheet**  
**Supplier**  
Name or trade name  
Address  
  
Identification number (CRN)  
VAT Reg No  
Phone  
E-mail  
Web address
- RETECH, s.r.o.  
Vackova 1541/4, Praha 5 - Stodůlky, 155 00  
Czech Republic  
25018205  
CZ25018205  
+420327596428  
info@retech.cz  
www.retech.com
- Competent person responsible for the safety data sheet**  
Name  
E-mail
- RETECH, s.r.o.  
info@retech.cz
- 1.4. Emergency telephone number**  
European emergency number: 112

**SECTION 2: Hazards identification**

- 2.1. Classification of the substance or mixture**  
**Classification of the mixture in accordance with Regulation (EC) No 1272/2008**  
The mixture is classified as dangerous.
- Eye Irrit. 2, H319
- Full text of all classifications and hazard statements is given in the section 16.
- Most serious adverse effects on human health and the environment**  
Causes serious eye irritation.

- 2.2. Label elements**  
**Hazard pictogram**



**Signal word**  
Warning

**Hazard statements**

H319 Causes serious eye irritation.

**Precautionary statements**

P264 Wash exposed parts of the body thoroughly after handling.  
P280 Wear 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.  
P337+P313 If eye irritation persists: Get medical advice/attention.

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**2.3. Other hazards**

Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures****Chemical characterization**

Mixture of substances and additives specified below.

**Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment**

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
CAS: 102-60-3 EC: 203-041-4 Registration number: 01-2119552434-41	1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol	20-<50	Eye Irrit. 2, H319	
CAS: 64852-22-8	Glyceryl poly(oxypropylene)triamine	1-<3	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 3, H412	

Full text of all classifications and hazard statements is given in the section 16.

**SECTION 4: First aid measures****4.1. Description of first aid measures**

If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet.

**If inhaled**

Terminate the exposure immediately; move the affected person to fresh air. In the event of issues, find medical advice.

**If on skin**

Remove contaminated clothes. Wash the affected area with plenty of water, lukewarm if possible. Provide medical treatment if skin irritation persists. Wash contaminated clothing before reuse.

**If in eyes**

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. Rinsing should continue at least for 10 minutes. Provide medical treatment, specialized if possible.

**If swallowed**

Provide medical treatment. Do not induce vomiting unless directed to do so by medical personnel. Do not provide anything by mouth if the person is unconscious or if having cramps.

**4.2. Most important symptoms and effects, both acute and delayed****If inhaled**

not available

**If on skin**

not available

**If in eyes**

Causes serious eye irritation.

**If swallowed**

not available

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

not available

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**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media**

Foam. Carbon dioxide. Powder. Water mist.

**Unsuitable extinguishing media**

not available

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

Do not breathe smoke.

**5.3. Advice for firefighters**

Use a self-contained breathing apparatus and full-body protective clothing. Closed containers with the product near the fire should be cooled with water. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water. Dispose of contaminated extinguishing water and remains after the fire in accordance with the official regulations. EN137 - Respiratory protective devices – Self-contained open-circuit compressed air breathing apparatus with full face mask. EN 469 - Protective clothing for firefighters - Performance requirements for protective clothing for firefighting. EN 659+A1: - Protective gloves for firefighters.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Stop leak if safe to do so. Do not get in eyes, on skin, or on clothing. Follow the instructions in the Sections 7 and 8.

**6.2. Environmental precautions**

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

**6.3. Methods and material for containment and cleaning up**

Ventilate the room. Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13.

**6.4. Reference to other sections**

See the Section 7, 8 and 13.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

Do not handle until all safety precautions have been read and understood. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection. Do not eat, drink or smoke when using this product. Avoid release to the environment.

**7.2. Conditions for safe storage, including any incompatibilities**

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Store away from incompatible materials.

**7.3. Specific end use(s)**

not available

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

The mixture contains no substances for which occupational exposure limits are set.

**DNEL**

1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol

Workers / consumers	Route of exposure	Value	Effect	Determining method
Consumers	Oral	2.5 mg/kg/24hour	Systemic chronic effects	
Consumers	Inhalation	8.7 mg/m <sup>3</sup>	Systemic chronic effects	
Consumers	Dermal	2.5 mg/kg/24hour	Systemic chronic effects	
Workers	Inhalation	29.4 mg/m <sup>3</sup>	Systemic chronic effects	
Workers	Dermal	4.2 mg/kg/24hour	Systemic chronic effects	

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**PNEC**

1,1',1",1'''-ethylenedinitrilotetrapropan-2-ol

Route of exposure	Value	Determining method
Freshwater environment	0.085 mg/l	
Seawater	0.0085 mg/l	
Freshwater sediment	0.193 mg/kg	
Sea sediments	0.0193 mg/kg	
Seawater (intermittent release)	1.51 mg/l	
Microorganisms in wastewater treatment plants	70 mg/l	
Soil (agricultural)	0.0183 mg/kg	

**8.2. Exposure controls**

Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. If exposure limits cannot be observed in this mode, suitable protection of airways must be used. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Observe any occupational exposure limits for the product or ingredients. Use personal protective equipment for work. Ensure workplace is equipped with a safety shower and eye wash station.

**Eye/face protection**

Tightly sealed goggles. EN166 - Personal Eye Protection Standard.

**Skin protection**

Hand protection: Protective gloves resistant to the product. Category III. EN ISO 374-1. Material of gloves: Nitrile rubber, NBR. Penetration time of glove material: 240 min. Recommended thickness of the material: 0.5 mm. When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Observe other recommendations of the manufacturer. Other protection: Wear category I professional long-sleeved overalls and safety footwear (see Regulation (EU) 2016/425 and standard EN ISO 20344). Contaminated skin should be washed thoroughly.

**Respiratory protection**

Use a mask with filter when the exposition limits of the substances are exceeded or at the place with insufficient ventilation. Filter A. EN143 - Respiratory protective devices - Gas filter(s) and combined filter(s). The protection provided by masks is in any case limited. Use insulating breathing apparatus in case of an accident, fire or high concentration. EN137 - Respiratory protective devices — Self-contained open-circuit compressed air breathing apparatus with full face mask. EN138 - Respiratory protective devices. Specification for fresh air hose breathing apparatus for use with full face mask, half mask or mouthpiece assembly. EN 529 - Respiratory protective devices. Recommendations for selection, use, care and maintenance. Guidance document.

**Thermal hazard**

Not available.

**Environmental exposure controls**

Observe usual measures for protection of the environment, see Section 6.2. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

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

Physical state	liquid
Colour	colourless, black, brown
Odour	characteristic
Melting point/freezing point	data not available
Boiling point or initial boiling point and boiling range	>200 °C
Flammability	data not available
Lower and upper explosion limit	data not available
Flash point	182 °C
Auto-ignition temperature	data not available
Decomposition temperature	data not available
pH	data not available
Kinematic viscosity	data not available
Viscosity	3000 mPa.s

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Solubility in water	insoluble
Solubility in fats	data not available
Partition coefficient n-octanol/water (log value)	data not available
Vapour pressure	0,1 Pa
Density and/or relative density	
Density	1,0 g/cm <sup>3</sup>
data not available	

**9.2. Other information**

Evaporation rate	data not available
Max. VOC content in the product in its ready to use condition	0 g/l
Product is not selfigniting.	

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

When used in the standard way, there is not any dangerous reaction with other substances.

**10.2. Chemical stability**

The product is stable under normal conditions.

**10.3. Possibility of hazardous reactions**

Unknown.

**10.4. Conditions to avoid**

No special requirements.

**10.5. Incompatible materials**

not available

**10.6. Hazardous decomposition products**

not available

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

**Acute toxicity**

Based on available data the classification criteria are not met.

Glyceryl poly(oxypropylene)triamine

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD <sub>50</sub>	2690 mg/kg		Rat	
Dermal	LD <sub>50</sub>	12500 mg/kg		Rabbit	

**Skin corrosion/irritation**

Based on available data the classification criteria are not met.

**Serious eye damage/irritation**

Causes serious eye irritation.

**Respiratory or skin sensitisation**

Based on available data the classification criteria are not met.

**Germ cell mutagenicity**

Based on available data the classification criteria are not met.

**Carcinogenicity**

Based on available data the classification criteria are not met.

**Reproductive toxicity**

Based on available data the classification criteria are not met.

**Toxicity for specific target organ - single exposure**

Based on available data the classification criteria are not met.

**Toxicity for specific target organ - repeated exposure**

Based on available data the classification criteria are not met.

**Aspiration hazard**

Based on available data the classification criteria are not met.

**11.2. Information on other hazards**

not available

**SECTION 12: Ecological information**

**12.1. Toxicity**

**Acute toxicity**

Data for the mixture are not available.

Glyceryl poly(oxypropylene)triamine

Parameter	Value	Time of exposure	Species	Environment
LC50	68 mg/l		Fishes	

**12.2. Persistence and degradability**

Data not available.

**12.3. Bioaccumulative potential**

Not available.

**12.4. Mobility in soil**

Not available.

**12.5. Results of PBT and vPvB assessment**

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

**12.6. Endocrine disrupting properties**

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

**12.7. Other adverse effects**

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

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Dispose unused product as hazardous waste. Perfectly cleaned containers can be submitted for recycling.

**Waste management legislation**

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

**Waste type code**

08 04 09 waste adhesives and sealants containing organic solvents or other hazardous substances \*

**Packaging waste type code**

15 01 10 packaging containing residues of or contaminated by hazardous substances \*

(\* ) - Hazardous waste according to Directive 2008/98/EC on hazardous waste

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**SECTION 14: Transport information**

- 14.1. UN number or ID number**  
not subject to transport regulations
- 14.2. UN proper shipping name**  
not relevant
- 14.3. Transport hazard class(es)**  
not relevant
- 14.4. Packing group**  
not relevant
- 14.5. Environmental hazards**  
No
- 14.6. Special precautions for user**  
Reference in the Sections 4 to 8.
- 14.7. Maritime transport in bulk according to IMO instruments**  
not relevant

**SECTION 15: Regulatory information**

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**  
Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006, as amended.
- 15.2. Chemical safety assessment**  
not available

**SECTION 16: Other information****A list of standard risk phrases used in the safety data sheet**

H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H412	Harmful to aquatic life with long lasting effects.

**Guidelines for safe handling used in the safety data sheet**

P280	Wear eye protection/face protection.
P264	Wash exposed parts of the body thoroughly after handling.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.

**Other important information about human health protection**

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

**Key to abbreviations and acronyms used in the safety data sheet**

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
DNEL	Derived no-effect level
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
ES	Identification code for each substance listed in EINECS
EU	European Union

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EuPCS	European Product Categorisation System
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC <sub>50</sub>	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD <sub>50</sub>	Lethal dose of a substance in which it can be expected death of 50% of the population
log K <sub>ow</sub>	Octanol-water partition coefficient
MARPOL	International Convention for the Prevention of Pollution from Ships
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted no-effect concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bioaccumulative
Aquatic Chronic	Hazardous to the aquatic environment (chronic)
Eye Dam.	Serious eye damage
Eye Irrit.	Eye irritation
Skin Irrit.	Skin irritation

**Training guidelines**

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

**Recommended restrictions of use**

not available

**Information about data sources used to compile the Safety Data Sheet**

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended.  
REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

**The changes (which information has been added, deleted or modified)**

The version 2.0 replaces the SDS version from 15 May 2018. Changes were made in sections 2, 3, 8, 9, 11, 12, 13, 15 and 16.

**Statement**

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.