


**POLYFIX R**

Creation date	20th October 2022	Version	2.0
Revision date			

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

- 1.1. Product identifier** POLYFIX R  
Substance / mixture mixture  
Number 1 03.0008  
UFI CTK0-7YUU-U20N-1U6J
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**  
**Mixture's intended use**  
Glue.  
**Mixture uses advised against**  
For professional use only.
- 1.3. Details of the supplier of the safety data sheet**  
**Supplier**  
Name or trade name RETECH, s.r.o.  
Address Vackova 1541/4, Praha 5 - Stodůlky, 155 00  
Czech Republic  
Identification number (CRN) 25018205  
VAT Reg No CZ25018205  
Phone +420327596428  
E-mail info@retech.cz  
Web address www.retech.com
- Competent person responsible for the safety data sheet**  
Name RETECH, s.r.o.  
E-mail 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.
- Skin Irrit. 2, H315  
Eye Irrit. 2, H319  
STOT SE 3, H335
- 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 skin irritation. Causes serious eye irritation. May cause respiratory irritation.
- 2.2. Label elements**  
**Hazard pictogram**
- 
- Signal word**  
Warning
- Hazardous substances**  
ethyl 2-cyanoacrylate
- Hazard statements**  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

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according to Regulation (EC) No 1907/2006 (REACH) as amended

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### Precautionary statements

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352

IF ON SKIN: Wash with plenty of water.

P304+P340

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332+P313

If skin irritation occurs: Get medical advice/attention.

P403+P233

Store in a well-ventilated place. Keep container tightly closed.

P501

Dispose of contents/container to in accordance with national regulations.

### Supplemental information

EUH202

Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.

### 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
Index: 607-236-00-9 CAS: 7085-85-0 EC: 230-391-5 Registration number: 01-2119527766-29-0001	ethyl 2-cyanoacrylate	80-99	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 EUH202 Specific concentration limit: STOT SE 3, H335: C ≥ 10 %	

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

Do not pull bonded skin apart. It may be gently peeled apart using a blunt object such as a spoon, preferably after soaking in warm soapy water. Cyanoacrylates give off heat on solidification. In rare cases a large drop will generate enough heat to cause a burn. Burns should be treated normally after the adhesive has been removed from the skin. If lips are accidentally stuck together apply warm water to the lips and encourage maximum wetting and pressure from saliva inside the mouth. Peel or roll lips apart. Do not try to pull the lips apart with direct opposing action. In the event of issues, find medical advice.

#### If in eyes

If the eye is bonded closed, release eyelashes with warm water by covering with wet pad. Cyanoacrylate will bond to eye protein and will cause periods of weeping which will help to debond the adhesive. Keep eye covered until debonding is complete, usually within 1-3 days. Do not force eye open. Medical advice should be sought in case solid particles of cyanoacrylate trapped behind the eyelid cause any abrasive damage. In the event of issues, find medical advice.

#### If swallowed

Ensure that breathing passages are not obstructed. The product will polymerise immediately in the mouth making it almost impossible to swallow. Saliva will slowly separate the solidified product from the mouth (several hours).

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

Mucous membranes may be irritated. May cause respiratory irritation. The irritant effect in humans has been found in concentrations of 1.6 mg/m<sup>3</sup> or 4.6 mg/m<sup>3</sup>, while 2-cyanoacrylate at a concentration of 0.2 mg/m<sup>3</sup> did not cause adverse health effects. May cause allergy or asthma symptoms if inhaled.

**If on skin**

Causes skin irritation. May cause an allergic skin reaction. Contamination of adhesive can generate enough heat to cause a burn.

**If in eyes**

Causes serious eye irritation.

**If swallowed**

not available

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

Symptomatic treatment. Provide medical treatment, specialized if possible.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Foam, carbon dioxide, powder, water mist.

**Unsuitable extinguishing media**

Water - full jet.

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

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. NO<sub>x</sub>.

**5.3. Advice for firefighters**

Use a self-contained breathing apparatus and full-body protective clothing.

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

Provide sufficient ventilation. Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Do not inhale mist/vapours/spray. Prevent contact with skin and eyes.

**6.2. Environmental precautions**

Do not allow to enter drains.

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

Do not use cloths for mopping up. Flood with water to complete polymerization and scrape off the floor. Cured material can be disposed of as non-hazardous waste.

**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 inhale mist/vapours/spray. Prevent contact with skin and eyes. Wash hands and exposed parts of the body thoroughly after handling. Use only outdoors or in a well-ventilated area. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection.

**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. Keep only in original packaging. Keep container tightly closed.

Storage temperature

min 2 °C, max 8 °C

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

not available

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

The mixture contains substances for which occupational exposure limits are set.

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**DNEL**

ethyl 2-cyanoacrylate

Workers / consumers	Route of exposure	Value	Effect	Value determination	Source
Workers	Inhalation	9.25 mg/m <sup>3</sup>	Systemic chronic effects		
Workers	Inhalation	9.25 mg/m <sup>3</sup>	Local chronic effects		
Consumers	Inhalation	9.25 mg/m <sup>3</sup>	Systemic chronic effects		
Consumers	Inhalation	9.25 mg/m <sup>3</sup>	Local chronic effects		

**Other information of limit values**

 LOAEL: 4,6 mg/m<sup>3</sup>. Irritation of eye tissue layers. May cause respiratory irritation. There may be shortness of breath.

**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. Do not eat, drink and smoke during work. Take off contaminated clothing. And wash it before reuse. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest. Prevent contact with skin and eyes. Regular cleaning of equipment, work area and clothing is recommended.

**Eye/face protection**

Protective goggles.

**Skin protection**

When handling in long-term or repeatedly, use protective gloves. Material of gloves: Nitrile rubber, NBR. Polyethylene or polypropylene gloves are recommended when using large volumes. Do not use PVC, rubber, nylon or cotton gloves. When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Observe other recommendations of the manufacturer. Other protection: protective workwear.

**Respiratory protection**

Use a mask with filter when the exposition limits of the substances are exceeded or at the place with insufficient ventilation. Filter type B - maximum allowed concentration: B1 - less than 0.1% by volume; B2 - 0.1-0.5% by volume; B3 - 0.5-1% by volume. In case of oxygen deficiency (O<sub>2</sub> content ≤ 17%), intensive or longer exposure (concentration of component higher than 1 %) use self-contained respiratory protective device. Self-contained breathing apparatus must be available in case of emergency.

**Thermal hazard**

Not available.

**Environmental exposure controls**

Observe usual measures for protection of the environment, see Section 6.2.

**More information**

Ensure control measures are regularly inspected and maintained.

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

Physical state	liquid
Colour	colourless
Odour	characteristic
Melting point/freezing point	-31 / -71 °C
Boiling point or initial boiling point and boiling range	214 °C (p = 100,3 kPa)
Flammability	non-inflammable
Lower and upper explosion limit	data not available
Flash point	82,5 °C (p = 100,3 kPa)
Auto-ignition temperature	data not available
Decomposition temperature	data not available
pH	non-soluble (in water)
Kinematic viscosity	data not available
Viscosity	2,6 mPa.s at 20 °C
Solubility in water	<0,024 mg/l
Solubility in fats	data not available
Solubility acetone; acetonitril	91,8 %; 96,5 %
Partition coefficient n-octanol/water (log value)	0,776
Vapour pressure	>0,065 at 25 °C
Density and/or relative density	
Density	1,043 g/cm <sup>3</sup> at 20 °C

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Form	liquid: viscous
9.2. Other information	
Evaporation rate	non-applicable
Ignition temperature	480 °C
Explosive properties	The product does not have explosive properties.
Vapour density	≤21 Pa (t = 20 °C)

### SECTION 10: Stability and reactivity

- 10.1. Reactivity**  
not available
- 10.2. Chemical stability**  
The product is stable under normal conditions.
- 10.3. Possibility of hazardous reactions**  
The product will harden into a solid mass in contact with water and moisture.
- 10.4. Conditions to avoid**  
Moisture. Water.
- 10.5. Incompatible materials**  
Water, moisture, soil, amines, alkalis and alcohols.
- 10.6. Hazardous decomposition products**  
Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire. NOx.

### SECTION 11: Toxicological information

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicokinetics, metabolism and distribution: Probably cyanoacrylate may be absorbed in the digestive system. In animal studies, it was found that in the case of polymers of cyanoacrylates both monomers and polymers can be absorbed (the compounds were applied to the nasal mucosa of rats as monomers and the polymerization was carried out there) across mucosal tissue. Cyanoacrylate in vivo are metabolized to formaldehyde, thiocyanates, carbon dioxide and water (NTP).

#### Acute toxicity

Based on available data the classification criteria are not met.

ethyl 2-cyanoacrylate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex	Value determination	Source
Oral	LD <sub>50</sub>	OECD 401	>5000 mg/kg		Rat			
Dermal	LD <sub>50</sub>	OECD 402	>2000 mg/kg		Rabbit			
Inhalation	LC <sub>50</sub>		<21.11 mg/l	1 hour	Rat	F/M	Experimentally	Reps. Irrit., Eye Irrit., Skin Irrit. Mortality 70% within 4 days

#### Skin corrosion/irritation

Causes skin irritation.

#### 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

May cause respiratory irritation.

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**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.

**More information**

A group of five female and five male rats were exposed to the cyanoacrylate at a concentration of 21.11 mg/l for 1 h. The animals were observed irritation of the respiratory tract, eyes and skin during the experiment. Mortality was 70% within four days after exposure (NTP). In dry atmosphere <50% humidity, vapors may irritate the eyes and respiratory tract. Prolonged exposure to high concentrations of vapors may lead in some cases to chronic irritation.

**11.2. Information on other hazards**

not available

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

A small ecotoxicity.

**12.2. Persistence and degradability**

Not applicable (impossible to assess due to the rapid polymerization of cyanoacrylate).

**12.3. Bioaccumulative potential**

Not applicable (impossible to assess due to the rapid polymerization of cyanoacrylate).

**12.4. Mobility in soil**

Not applicable (impossible to assess due to the rapid polymerization of cyanoacrylate).

**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**

Not available.

**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. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification.

**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

**SECTION 14: Transport information****14.1. UN number or ID number**

UN 3334

**14.2. UN proper shipping name**

Aviation regulated liquid, n.o.s.

**14.3. Transport hazard class(es)**

9 Miscellaneous dangerous substances and articles

**14.4. Packing group**

not relevant

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**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

**Additional information**

Primary packs containing less than 500ml are unregulated by this mode of transport and can be delivered without restrictions.

Hazard identification No.

UN number

3334

**Road transport - ADR****Railway transport - RID****Air transport - ICAO/IATA**

Packaging instructions passenger 964

Cargo packaging instructions 964

**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.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

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

P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P302+P352 IF ON SKIN: Wash with plenty of water.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P501 Dispose of contents/container to in accordance with national regulations.

**A list of additional standard phrases used in the safety data sheet**

EUH202 Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.

**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

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EU	European Union
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
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

Eye Irrit.	Eye irritation
Skin Irrit.	Skin irritation
STOT SE	Specific target organ toxicity - single exposure

**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 23 September 2020. Changes were made in sections 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.