

PU FIX PROFESSIONAL 1

Creation date	12. December 2017	Version	1.0
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

- 1.1. Product identifier**
Substance / mixture PU FIX PROFESSIONAL 1
Number R 34812C
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**
mixture's intended use Glue.
Disapproved uses of mixture 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 (ID) 25018205
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**
Poisoning information centre, Na Bojišti 1, Praha, Czech Republic, Tel.: non-stop +420 224 919 293 or +420 224 915 402, Information on health risks only - acute poisoning of humans and animals.
RETECH, Suchdol 212, 285 02 Suchdol u Kutné Hory, Czech Republic; Telephone number: +420 327 596 128 (7.30-16.00 hour)

SECTION 2: Hazards identification

- 2.1. Substance or mixture classification**
Classification of the mixture in accordance with Regulation (EC) No 1272/2008

The mixture is classified as dangerous.

Resp. Sens. 1, H334

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

Most serious adverse effects on human health and the environment

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

- 2.2. Label elements**
Hazard pictogram



Signal word
Danger

Hazardous substances

hexamethylene diisocyanate, oligomers
4,4'-methylenediphenyl diisocyanate

Hazard statements

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

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- P284 In case of inadequate ventilation wear respiratory protection.
- P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER.
- P501 Dispose of contents/container to in accordance with national regulations.

Supplemental information

EUH 204 Contains isocyanates. May produce an allergic reaction.

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: 28182-81-2 EC: 500-060-2 Registration number: 01-2119485796-17-0000	hexamethylene diisocyanate, oligomers	0,1-1	Skin Sens. 1, H317 Acute Tox. 4, H332 STOT SE 3, H335	
CAS: 101-68-8 EC: 202-966-0 Registration number: 01-2119457014-47	4,4'-methylenediphenyl diisocyanate	0,1-1	Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 Acute Tox. 4, H332 Resp. Sens. 1, H334 STOT SE 3, H335 Carc. 2, H351 STOT RE 2, H373 Specific concentration limit: Eye Irrit. 2, H319: C ≥ 5 % Resp. Sens. 1, H334: C ≥ 0,1 % STOT SE 3, H335: C ≥ 5 % Skin Irrit. 2, H315: C ≥ 5 %	1

Notes

1 Note 2: The concentration of isocyanate stated is the percentage by weight of the free monomer calculated with reference to the total weight of the mixture.

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.

Inhalation

Transfer the affected person to the fresh air and ensure calm environment for body and mind. In the event of issues, find medical advice.

Skin contact

Generally the product does not irritate the skin.

Eye contact

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. In the event of issues, find medical advice.

Ingestion

Provide medical treatment.

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

not available

Skin contact

not available

Eye contact

not available

Ingestion

not available

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

not available

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

Carbon dioxide, powder, water spray jet. Fight larger fires with water spray. Accommodate according to the location of the fire.

Unsuitable extinguishing media

not available

5.2. Special hazards arising from the substance or mixture

not available

5.3. Advice for firefighters

No special requirements. 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**

No special requirements. Provide sufficient ventilation. Use personal protective equipment for work.

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

Provide sufficient ventilation. Place the product mechanically in an appropriate manner.

6.4. Reference to other sections

See the Section 7, 8 and 13.

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

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

Recommended storage temperature is from 0°C až +35°C.

7.3. Specific end use(s)

not available

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

none

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DNEL

4,4'-methylenediphenyl diisocyanate

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Inhalation	0.05 mg/m ³	Local chronic effects	
Workers	Inhalation	0.1 mg/m ³	Local acute effects	

hexamethylene diisocyanate, oligomers

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Inhalation	0.5 mg/m ³	Local chronic effects	
Workers	Inhalation	1 mg/m ³	Local acute effects	

PNEC

4,4'-methylenediphenyl diisocyanate

Route of exposure	Value	Determining method
Freshwater environment	1 mg/l	
Water (occasional leak)	10 mg/l	
Seawater	0.1 mg/l	
Microorganisms in wastewater treatment plants	1 mg/l	
Soil (agricultural)	1 mg/kg of dry substance of soil	

hexamethylene diisocyanate, oligomers

Route of exposure	Value	Determining method
Freshwater environment	0.127 mg/l	
Water (occasional leak)	1.27 mg/l	
Seawater	0.013 mg/l	
Microorganisms in wastewater treatment plants	88 mg/l	
Freshwater sediment	266701 mg/kg of dry substance of sediment	
Sea sediments	26670 mg/kg of dry substance of sediment	
Soil (agricultural)	53183 mg/kg of dry substance of soil	

8.2. Exposure controls

Do not store together with food, drink and animal feed. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

Eye/face protection

Protective goggles.

Skin protection

Protection of hands: Solvent resistant gloves. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation. Material of gloves: Nitrile rubber, NBR. Penetration time of glove material: The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed. Observe other recommendations of the manufacturer. Other protection: protective workwear.

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Respiratory protection

In case of inadequate ventilation wear respiratory protection. Filter A.

Thermal hazard

Not available.

Environmental exposure controls

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

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

Appearance	
Physical state	liquid at 20°C
color	black
Odour	characteristic
Odour threshold	data not available
pH	data not available
Melting point/freezing point	data not available
Initial boiling point and boiling range	270 °C
Flash point	164 °C
Evaporation rate	data not available
Flammability (solid, gas)	data not available
Upper/lower flammability or explosive limits	
flammability limits	data not available
explosive limits	data not available
Vapour pressure	data not available
Vapour density	data not available
Relative density	data not available
Solubility(ies)	
solubility in water	almost insoluble
solubility in fats	data not available
Partition coefficient: n-octanol/water	data not available
Auto-ignition temperature	data not available
Decomposition temperature	data not available
Viscosity	data not available
Explosive properties	The product does not have explosive properties.
Oxidising properties	data not available
data not available	

9.2. Other information

Density	1.21 g/cm ³ at 20 °C
ignition temperature	>300 °C
content of organic solvents (VOC)	0.0 %
Product is not selfigniting.	

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

not available

10.2. Chemical stability

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

10.3. Possibility of hazardous reactions

Unknown.

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10.4. Conditions to avoid

not available

10.5. Incompatible materials

not available

10.6. Hazardous decomposition products

Unknown.

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

No toxicological data is available for the mixture.

Acute toxicity

Based on available data the classification criteria are not met.

4,4'-methylenediphenyl diisocyanate

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD ₅₀	4700 mg/kg		Rat	
Inhalation	LC ₅₀	370 mg/l	4 hour	Rat	

Skin corrosion/irritation

Based on available data the classification criteria are not met.

Serious eye damage/irritation

Based on available data the classification criteria are not met.

Respiratory or skin sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled. 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.

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

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Acute toxicity

Data for the mixture are not available.

4,4'-methylenediphenyl diisocyanate

Parameter	Value	Time of exposure	Species	Environment
LC ₅₀	>100 mg/l		Fishes	
LC ₅₀	>1000 mg/l	96 hour	Fishes	
EC ₅₀	>100 mg/l		Bacteria	
EC ₅₀	>1000 mg/l	24 hour	Daphnia	

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. Other adverse effects

Additional ecological information:

General notes: Water hazard class 1 (german Regulation, self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, 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. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste.

Legislation of waste

Council Directive 75/442/EEC on waste, as amended. Decree No. 383/2001 Coll., on details regarding waste handling as amended. Decree No. 93/2016 Coll., (waste catalogue) as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

Waste type code

08 05 01 08 05 01* waste isocyanates

Packaging waste type code

15 01 10 packaging containing residues of or contaminated by dangerous substances

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

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

Not subject to ADR.

14.2. UN proper shipping name

not available

14.3. Transport hazard class(es)

not available

14.4. Packing group

not available

14.5. Environmental hazards

not available

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14.6. Special precautions for user

Reference in the Sections 4 to 8.

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

not available

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. The Act No. 350/2011 Coll., on Chemical Substances and Chemical Preparations as amended (the Chemical Act). The Act No. 350/2011 Coll., on Chemical Substances and Chemical Preparations as amended. The Act No. 258/2000 Coll., on Protection of Public Health as amended. Decree No. 361/2007 Coll., determining conditions of occupational health protection as amended. Decree No. 415/2012 Coll., on the permissible level of pollution and its determination and implementation of certain other provisions of the Air Protection Act as amended. The Act No. 185/2001 Coll., on Waste and the Amendment of Some Other Acts as amended. The Act No. 201/2012 Coll., on the Protection of Atmosphere – Clean Air Act as amended. Decree No. 432/2003 Coll., laying down conditions for assigning categories to individual jobs, limit values of indices from biological exposure tests, conditions for the sampling of biological materials for biological exposure and the particulars of the reports on work with asbestos and biological agents as amended. REGULATION (EC) No 648/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 March 2004 on detergents, 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.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

Guidelines for safe handling used in the safety data sheet

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER.
P501	Dispose of contents/container to in accordance with national regulations.
P284	In case of inadequate ventilation wear respiratory protection.

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

EUH 204	Contains isocyanates. May produce an allergic reaction.
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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

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CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
DNEL	Derived no-effect level
EC	Identification code for each substance listed in EINECS
EC ₅₀	Concentration of a substance when it is affected 50% of the population
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
EU	European Union
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
IC ₅₀	Concentration causing 50% blockade
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 ₅₀	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD ₅₀	Lethal dose of a substance in which it can be expected death of 50% of the population
LOAEC	Lowest observed adverse effect concentration
LOAEL	Lowest observed adverse effect level
log Kow	Octanol-water partition coefficient
MARPOL	International Convention for the Prevention of Pollution From Ships
NOAEC	No observed adverse effect concentration
NOAEL	No observed adverse effect level
NOEC	No observed effect concentration
NOEL	No observed effect level
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
Acute Tox.	Acute toxicity
Carc.	Carcinogenicity
Eye Irrit.	Eye irritation
Resp. Sens.	Respiratory sensitization
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitization
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure

Training guidelines

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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. The Act No. 350/2011 Coll., on Chemical Substances and Chemical Preparations as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

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.