

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 15.11.2023

Version number 9 (replaces version 8)

Revision: 15.11.2023

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

1.1 Product identifier

- Trade name: **PU Flex Fast**
- Article number: 87830, 87831
- UFI: E8G3-E04N-J00D-Y49G

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

No further relevant information available.

Application of the substance / the mixture

Polyurethane-sealant

1.3 Details of the supplier of the safety data sheet

- Manufacturer/Supplier: AKEMI chemisch technische Spezialfabrik GmbH
Lechstrasse 28
D 90451 Nürnberg
- Tel. +49(0)911-642960
Fax. +49(0)911-644456
e-mail info@akemi.de

Further information obtainable from:

Laboratory

1.4 Emergency telephone number:

Product Safety Department AKEMI chemisch technische Spezialfabrik GmbH
Tel. +49(0)911-64296-59
Reachable during the following office hours:
Monday – Thursday from 07:30 a.m. to 16:30 p.m.
Friday from 07:30 a.m. to 13:30 p.m.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

- Classification according to Regulation (EC) No 1272/2008

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2.2 Label elements

- Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

- Hazard pictograms



GHS08

- Signal word

Danger

- Hazard-determining components of labelling:

diphenylmethane-4,4'-di-isocyanate

- Hazard statements

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

- Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 P103 Read carefully and follow all instructions.
 P261 Avoid breathing vapours.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 P284 [In case of inadequate ventilation] wear respiratory protection.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Additional information:

Contains isocyanates. May produce an allergic reaction.
 As from 24 August 2023 adequate training is required before industrial or professional use.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 15.11.2023

Version number 9 (replaces version 8)

Revision: 15.11.2023

Trade name: PU Flex Fast

(Contd. of page 1)

· 2.3 Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

· Determination of endocrine-disrupting properties

For information on endocrine disrupting properties see section 11.

SECTION 3: Composition/information on ingredients**· 3.2 Mixtures**

· Description: Mixture: consisting of the following components.

· Dangerous components:

CAS: 101-68-8	diphenylmethane-4,4'-di-isocyanate	<1%
EINECS: 202-966-0	Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373	
Index number: 615-005-00-9	Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317;	
Reg.nr.: 01-2119457014-47	STOT SE 3, H335	
	EUH204	
	Specific concentration limits: Eye Irrit. 2; H319: C ≥ 5 %	
	Skin Irrit. 2; H315: C ≥ 5 %	
	Resp. Sens. 1; H334: C ≥ 0.1 %	
	STOT SE 3; C ≥ 5 %	

· Additional information:

For the wording of the listed hazard phrases refer to section 16.

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

· After inhalation: Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.

· After skin contact: If skin irritation continues, consult a doctor.

· After eye contact: Immediately wash with water and soap and rinse thoroughly.

· After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· After swallowing: Do not induce vomiting; call for medical help immediately.

· After swallowing: Rinse out mouth and then drink plenty of water.

· 4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

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

No further relevant information available.

SECTION 5: Firefighting measures**· 5.1 Extinguishing media**

· Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
CO₂, powder or water spray. Fight larger fires with water spray.

· 5.2 Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

· 5.3 Advice for firefighters

· Protective equipment: Wear self-contained respiratory protective device.

· Protective equipment: Wear fully protective suit.

· Additional information: Cool endangered receptacles with water spray.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 15.11.2023

Version number 9 (replaces version 8)

Revision: 15.11.2023

Trade name: PU Flex Fast

(Contd. of page 2)

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections** See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Keep away from heat and direct sunlight.
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:** Protect from heat.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Protect from frost.
Store in cool, dry conditions in well sealed receptacles.
- **Storage class:** 10
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **DNELs****101-68-8 diphenylmethane-4,4'-di-isocyanate**

Oral	DNEL (Kurzzeit-akut)	20 mg/kg bw/day (BEV)
Dermal	DNEL (Kurzzeit-akut)	28.7-50 mg/kg bw/day (ARB)

(Contd. on page 4)

EU

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 15.11.2023

Version number 9 (replaces version 8)

Revision: 15.11.2023

Trade name: PU Flex Fast

(Contd. of page 3)

Inhalative	DNEL (Kurzzeit-akut)	17.2-25 mg/kg bw/day (BEV)
		0.1 mg/m ³ Air (ARB)
	DNEL (Langzeit-wiederholt)	0.05 mg/m ³ Air (BEV)
		0.05 mg/m ³ Air (ARB)
		0.025 mg/m ³ Air (BEV)

· PNECs

101-68-8 diphenylmethane-4,4'-di-isocyanate

PNEC (wässrig)	>1 mg/l (KA)
	0.00037 mg/l (MW)
	0.0037 mg/l (SW)
PNEC (fest)	10 mg/l (WAS)
	2.33 mg/kg Trockengew (BO)
	1.17 mg/kg Trockengew (MWS)
	11.7 mg/kg Trockengew (SWS)

· Additional information: The lists valid during the making were used as basis.· **8.2 Exposure controls**

- Appropriate engineering controls No further data; see section 7.
- Individual protection measures, such as personal protective equipment
- General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.

· Respiratory protection:

Short term filter device:
Filter AX
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· Hand protection

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Nitrile rubber, NBR

Butyl rubber, BR

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· For the permanent contact gloves made of the following materials are suitable:

Butyl rubber, BR

Nitrile rubber, NBR

· As protection from splashes gloves made of the following materials are suitable:

Butyl rubber, BR

Nitrile rubber, NBR

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 15.11.2023

Version number 9 (replaces version 8)

Revision: 15.11.2023

Trade name: PU Flex Fast

(Contd. of page 4)

· Not suitable are gloves made of the following materials:

Leather gloves
Strong material gloves

· Eye/face protection



Tightly sealed goggles

· Body protection:

Protective work clothing

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

· <u>Colour:</u>	Black
· <u>Odour:</u>	Specific type
· <u>Odour threshold:</u>	Not determined.
· <u>Melting point/freezing point:</u>	Undetermined.
· <u>Boiling point or initial boiling point and boiling range</u>	270 °C
· <u>Flammability</u>	Not applicable.
· <u>Lower and upper explosion limit</u>	
· <u>Lower:</u>	Not determined.
· <u>Upper:</u>	Not determined.
· <u>Flash point:</u>	>100 °C
· <u>Auto-ignition temperature:</u>	300 °C
· <u>Decomposition temperature:</u>	Not determined.
· <u>pH</u>	Not determined.
· <u>Viscosity:</u>	
· <u>Kinematic viscosity</u>	Not determined.
· <u>Dynamic at 20 °C:</u>	250,000 mPas
· <u>Solubility</u>	
· <u>water:</u>	Not miscible or difficult to mix.
· <u>Partition coefficient n-octanol/water (log value)</u>	Not determined.
· <u>Vapour pressure:</u>	Not determined.
· <u>Density and/or relative density</u>	
· <u>Density at 20 °C:</u>	1.2-1.24 g/cm ³
· <u>Relative density</u>	Not determined.
· <u>Vapour density</u>	Not determined.

9.2 Other information

· <u>Appearance:</u>	
· <u>Form:</u>	Pasty
· <u>Important information on protection of health and environment, and on safety.</u>	
· <u>Ignition temperature:</u>	Product is not selfigniting.
· <u>Explosive properties:</u>	Product does not present an explosion hazard.
· <u>Solvent content:</u>	
· <u>Solids content:</u>	95.1 %
· <u>Change in condition</u>	
· <u>Evaporation rate</u>	Not determined.

Information with regard to physical hazard classes

· <u>Explosives</u>	Void
· <u>Flammable gases</u>	Void
· <u>Aerosols</u>	Void
· <u>Oxidising gases</u>	Void
· <u>Gases under pressure</u>	Void
· <u>Flammable liquids</u>	Void

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 15.11.2023

Version number 9 (replaces version 8)

Revision: 15.11.2023

Trade name: PU Flex Fast

(Contd. of page 5)

· <u>Flammable solids</u>	Void
· <u>Self-reactive substances and mixtures</u>	Void
· <u>Pyrophoric liquids</u>	Void
· <u>Pyrophoric solids</u>	Void
· <u>Self-heating substances and mixtures</u>	Void
· <u>Substances and mixtures, which emit flammable gases in contact with water</u>	Void
· <u>Oxidising liquids</u>	Void
· <u>Oxidising solids</u>	Void
· <u>Organic peroxides</u>	Void
· <u>Corrosive to metals</u>	Void
· <u>Desensitised explosives</u>	Void

SECTION 10: Stability and reactivity

· 10.1 Reactivity	No further relevant information available.
· 10.2 Chemical stability	
· <u>Thermal decomposition / conditions to be avoided:</u>	No decomposition if used according to specifications.
· 10.3 Possibility of hazardous reactions	Reacts with alcohols, amines, aqueous acids and alkalis.
· 10.4 Conditions to avoid	No further relevant information available.
· 10.5 Incompatible materials:	No further relevant information available.
· 10.6 Hazardous decomposition products:	Carbon monoxide Nitrogen oxides Hydrogen cyanide (prussic acid)

SECTION 11: Toxicological information

· 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008	
· <u>Acute toxicity</u>	Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

101-68-8 diphenylmethane-4,4'-di-isocyanate

Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	>9,400 mg/kg (rabbit) (OECD 402)
Inhalative	LC50	2.24 mg/l (rat)
	LC50/4 h	0.368 mg/l (rat) (OECD 403)
	LC50/1h	>2.24 mg/l (rat)

· <u>Skin corrosion/irritation</u>	Based on available data, the classification criteria are not met.
· <u>Serious eye damage/irritation</u>	Based on available data, the classification criteria are not met.
· <u>Respiratory or skin sensitisation</u>	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
· <u>Germ cell mutagenicity</u>	Based on available data, the classification criteria are not met.
· <u>Carcinogenicity</u>	Based on available data, the classification criteria are not met.
· <u>Reproductive toxicity</u>	Based on available data, the classification criteria are not met.
· <u>STOT-single exposure</u>	Based on available data, the classification criteria are not met.
· <u>STOT-repeated exposure</u>	Based on available data, the classification criteria are not met.
· <u>Aspiration hazard</u>	Based on available data, the classification criteria are not met.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 15.11.2023

Version number 9 (replaces version 8)

Revision: 15.11.2023

Trade name: PU Flex Fast

(Contd. of page 6)

· 11.2 Information on other hazards**· Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information**· 12.1 Toxicity****· Aquatic toxicity:****101-68-8 diphenylmethane-4,4'-di-isocyanate**

EC50/24h >1,000 mg/l (daphnia magna)

EC50 >100 mg/l (BES)

ErC50/72h >1,640 mg/l (Scenedesmus subspicatus) (OECD 201)

NOEC/21d >10 mg/l (daphnia magna)

LC50/96h >1,000 mg/l (Danio rerio.) (OECD 203)

· 12.2 Persistence and degradability

No further relevant information available.

· 12.3 Bioaccumulative potential

No further relevant information available.

· 12.4 Mobility in soil

No further relevant information available.

· 12.5 Results of PBT and vPvB assessment**· PBT:** Not applicable.**· vPvB:** Not applicable.**· 12.6 Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

· 12.7 Other adverse effects**· Additional ecological information:****· General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

SECTION 13: Disposal considerations**· 13.1 Waste treatment methods****· Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packaging:**· Recommendation:**

Disposal must be made according to official regulations.

SECTION 14: Transport information**· 14.1 UN number or ID number****· ADR, IMDG, IATA**

Void

· 14.2 UN proper shipping name**· ADR, IMDG, IATA**

Void

· 14.3 Transport hazard class(es)**· ADR, ADN, IMDG, IATA****· Class**

Void

· 14.4 Packing group**· ADR, IMDG, IATA**

Void

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 15.11.2023

Version number 9 (replaces version 8)

Revision: 15.11.2023

Trade name: PU Flex Fast

(Contd. of page 7)

· 14.5 Environmental hazards:

· Marine pollutant: No

· 14.6 Special precautions for user

Not applicable.

· 14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

· Transport/Additional information:

Not dangerous according to the above specifications.

· UN "Model Regulation":

Void

SECTION 15: Regulatory information**· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· Directive 2012/18/EU

· Named dangerous substances -
ANNEX I

None of the ingredients is listed.

· REGULATION (EC) No 1907/2006
ANNEX XVII

Conditions of restriction: 3, 52a, 56a, 74

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

· REGULATION (EU) 2019/1148

· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

· National regulations:

· Information about limitation of use: Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.

· Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

· Substances of very high concern (SVHC) according to REACH, Article 57

None of the ingredients is listed.

· VOC EU 0.0 g/l

· 15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

· Department issuing SDS: Laboratory

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 15.11.2023

Version number 9 (replaces version 8)

Revision: 15.11.2023

Trade name: PU Flex Fast

(Contd. of page 8)

<ul style="list-style-type: none"> · <u>Date of previous version:</u> · <u>Version number of previous version:</u> · <u>Abbreviations and acronyms:</u> 	<p>03.03.2022</p> <p>8</p> <p>ADR: Accord relatif au transport international 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 Harmonised 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 (division of the American Chemical Society) DNEL: Derived No-Effect Level (REACH) PNEC: Predicted No-Effect Concentration (REACH) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic SVHC: Substances of Very High Concern vPvB: very Persistent and very Bioaccumulative ATE: Acute toxicity estimate values Acute Tox. 4: Acute toxicity – Category 4 Skin Irrit. 2: Skin corrosion/irritation – Category 2 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2 Resp. Sens. 1: Respiratory sensitisation – Category 1 Skin Sens. 1: Skin sensitisation – Category 1 Carc. 2: Carcinogenicity – Category 2 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2</p>
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