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

1.1. Product identifier

Trade name/designation:

PU Plast black 1 min. 50ml (Comp. B)

Article No.:

T910006

UFI:

KQYD-Y3AS-Y11V-A97D

1.2. Relevant identified uses of the substance or mixture and uses advised against Use of the substance/mixture:

2K PU adhesive

1.3. Details of the supplier of the safety data sheet

Supplier:

KANDO Service GmbH

Hartleitnerstraße 3 4653 Eberstalzell

Austria

Telephone: +43 (0) 7241 213 79

E-mail: msds@kando.eu

1.4. Emergency telephone number

Vergiftungsinformationszentrale (VIZ), Stubenring 6, 1010 Wien, 24h: 01 406 43 43, Montag - Freitag: 8 bis 16 Uhr, Tel.: 01 406 68 98 (keine medizinische Auskunft) (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (Skin Irrit. 2)	H315: Causes skin irritation.	
Respiratory or skin sensitisation (Skin Sens. 1A)	H317: May cause an allergic skin reaction.	
Serious eye damage/eye irritation (Eye Irrit. 2)	H319: Causes serious eye irritation.	
Acute toxicity (inhalative) (Acute Tox. 4)	H332: Harmful if inhaled.	
Respiratory or skin sensitisation (Resp. Sens. 1)	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.	
STOT-single exposure (STOT SE 3)	H335: May cause respiratory irritation.	
Carcinogenicity (Carc. 2)	H351: Suspected of causing cancer.	
STOT-repeated exposure (STOT RE 2)	H373: May cause damage to organs through prolonged or repeated exposure.	

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP] Hazard pictograms:





Exclamation mark

Health hazard

Signal word: Danger Hazard components for labelling:

4,4` diphenylmethanediisocyanate, isomere, homologe and mixtures

Hazard statements for health hazards	
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.

Supplemental hazard information		
EUH204	Contains isocyanates. May produce an allergic reaction.	

Precautionary statements Prevention		
P201	Obtain special instructions before use.	
P280	Wear protective gloves/protective clothing and eye protection/face protection.	
P284 [In case of inadequate ventilation] wear respiratory protection.		

Precautionary statements Response		
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.	
P308 + P313 IF exposed or concerned: Get medical advice/attention.		

Precautionary statements Storage		
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.	

Additional information:

As from 24 August 2023 adequate training is required before industrial or professional use.

2.3. Other hazards

Other adverse effects:

Based on the available information, the product does not contain any PBT or vPvB substances in content percentages $\geq 0.1\%$.

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SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 9016-87-9 EC No.: 618-498-9	4,4` diphenylmethanediisocyanate, isomere, homologe and mixtures Acute Tox. 4 (H332), Carc. 2 (H351), Eye Irrit. 2 (H319), Resp. Sens. 1 (H334), STOT RE 2 (H373), STOT SE 3 (H335), Skin Irrit. 2 (H315), Skin Sens. 1A (H317) Danger	55 - ≤ 100 Vol-%

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Following inhalation:

The affected person must be carried outside. If breathing is labored, consult a doctor.

In case of skin contact:

Remove contaminated, saturated clothing. Rinse skin with water. In case of skin reactions, consult a physician. Wash contaminated clothing before reuse.

After eye contact:

Any contact lenses must be removed. One must immediately and extensively wash with water for at least 30 / 60 minutes, opening the eyelids well. Consult a doctor if symptoms persist.

Following ingestion:

A doctor must be consulted immediately. Vomiting may only be induced on the doctor's orders. Nothing may be administered orally without the doctor's order or if the person concerned is unconscious.

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

Causes skin irritation.

May cause allergic reactions.

Causes serious eye irritation.

Harmful if inhaled.

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

Irritation to respiratory tract.

Suspected cancer.

May cause damage to organs through prolonged or repeated exposure.

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 media:

Carbon dioxide, Foam, Water mist

Unsuitable extinguishing media:

Nothing special.

5.2. Special hazards arising from the substance or mixture

Avoid inhalation of combustion products.

5.3. Advice for firefighters

The containers shall be cooled with water jets to prevent the decomposition of the product and the formation of potentially harmful substances. Complete fire protective clothing shall be worn at all times. Extinguishing water that is not allowed to enter the sewage pipes shall be collected. The water used for extinguishing and the fire residues shall be taken up in accordance with the regulations in force. Personal protection: Normal firefighting clothing, e.g. an open-circuit compressed air respirator (EN 137) firefighting kit (EN469), firefighting gloves (EN 659) and firefighting boots (HO A 29 or A30)

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

The leakage may be blocked if there is no danger. Appropriate protective devices (including personal protective devices as per para. 8 from the safety instructions) shall be put on to prevent contamination of skin, eyes and personal clothing. These instructions apply to both reprocessing supervisors and emergency stop interventions.

6.1.2. For emergency responders

No data available

6.2. Environmental precautions

Prevent the product from entering waste water, surface water, ground water.

6.3. Methods and material for containment and cleaning up

For cleaning up:

The spilled product must be sucked into a suitable container. The container to be used shall be tested for compatibility with the product, subject to section 10. The residual product shall be absorbed with inert absorbent material. Adequate ventilation of the affected area shall be provided. Contaminated material must be disposed of in accordance with the regulations in section 13.

6.4. Reference to other sections

See section 7 for further information on safe handling.

For further information on personal protective equipment: see section 8.

For further information on disposal: see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Do not handle the product until you have read all other sections of this safety sheet. Avoid dispersal of the product in the environment. Do not eat, drink or smoke while using the product. Before entering the eating area, remove wetted clothing and protective devices.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels:

Store the product in clearly labelled containers. Keep containers away from incompatible materials, referring to section 10.

Storage class (TRGS 510, Germany): 10 - Combustible liquids that cannot be assigned to any of the above storage classes

7.3. Specific end use(s)

Recommendation:

No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

No data available

8.1.2. Biological limit values

No data available

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8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
4,4` diphenylmethanediisocyanate,	0.05 mg/m ³	① DNEL worker
isomere, homologe and mixtures CAS No.: 9016-87-9 EC No.: 618-498-9	0.03 mg/m	② Long-term – inhalation, systemic effects
4,4` diphenylmethanediisocyanate,	0.1 mg/m ³	① DNEL worker
isomere, homologe and mixtures CAS No.: 9016-87-9 EC No.: 618-498-9		② Acute - inhalation, systemic effects
4,4` diphenylmethanediisocyanate,	0.05 mg/m ³	① DNEL worker
isomere, homologe and mixtures CAS No.: 9016-87-9 EC No.: 618-498-9		② Long-term – inhalation, local effects
4,4` diphenylmethanediisocyanate,	0.025 mg/m ³	① DNEL Consumer
isomere, homologe and mixtures CAS No.: 9016-87-9 EC No.: 618-498-9		② Long-term – inhalation, local effects
4,4` diphenylmethanediisocyanate,	0.1 mg/m ³	① DNEL worker
isomere, homologe and mixtures CAS No.: 9016-87-9 EC No.: 618-498-9		② Acute - inhalation, local effects
4,4` diphenylmethanediisocyanate,	0.05 mg/m ³	① DNEL Consumer
isomere, homologe and mixtures CAS No.: 9016-87-9 EC No.: 618-498-9		② Acute - inhalation, local effects
4,4` diphenylmethanediisocyanate,	50 mg/kg bw/	① DNEL worker
isomere, homologe and mixtures CAS No.: 9016-87-9 EC No.: 618-498-9	day	② Acute – dermal, systemic effects
4,4` diphenylmethanediisocyanate,	25 mg/kg bw/	① DNEL Consumer
isomere, homologe and mixtures CAS No.: 9016-87-9 EC No.: 618-498-9	day	② Acute – dermal, systemic effects
4,4` diphenylmethanediisocyanate,	28.7 mg/cm ²	① DNEL worker
isomere, homologe and mixtures CAS No.: 9016-87-9 EC No.: 618-498-9		② Acute - dermal, local effects
4,4` diphenylmethanediisocyanate,	17.2 mg/cm ²	① DNEL Consumer
isomere, homologe and mixtures CAS No.: 9016-87-9 EC No.: 618-498-9		② Acute - dermal, local effects
4,4` diphenylmethanediisocyanate,	20 mg/kg bw/	① DNEL Consumer
isomere, homologe and mixtures CAS No.: 9016-87-9 EC No.: 618-498-9	day	② Acute – oral, systemic effects
Substance name	PNEC Value	① PNEC type
4,4 ` diphenylmethanediisocyanate, isomere, homologe and mixtures CAS No.: 9016-87-9 EC No.: 618-498-9	1 mg/L	① PNEC aquatic, freshwater
4,4` diphenylmethanediisocyanate, isomere, homologe and mixtures CAS No.: 9016-87-9 EC No.: 618-498-9	0.1 mg/L	① PNEC aquatic, marine water
4,4 ` diphenylmethanediisocyanate, isomere, homologe and mixtures CAS No.: 9016-87-9 EC No.: 618-498-9	1 mg/L	① PNEC sewage treatment plant

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Substance name	PNEC Value	① PNEC type
4,4` diphenylmethanediisocyanate, isomere, homologe and mixtures CAS No.: 9016-87-9 EC No.: 618-498-9	1 mg/kg	① PNEC soil

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Considering that appropriate protective measures should always take precedence over personal protective clothing, ensure that the workplace is well ventilated by effective local exhaust ventilation. For the selection of personal protective equipment, the trusted chemical manufacturers may need to be consulted. The personal protective equipment must be CE marked to indicate its suitability for the applicable regulations.

Emergency stop showers with face-eye-rinsing are to be provided.

Exposure levels must be kept as low as possible to avoid heavy deposition in the body. Personal protective devices shall be handled in such a way that the highest possible protection is assured (e.g. reduction of replacement times).

8.2.2. Personal protection equipment

Eye/face protection:

The use of penetration-proof goggles is recommended (ref. standard EN 166).

Skin protection:

Hand protection:

The hands must be protected with category III work gloves (ref. standard EN 374). For the final choice of material for the work gloves, the following aspects must be included: Compatibility, degradation, breaking time and permeability. In the case of preparations, the work glove resistance to chemical agents must be tested before use, as it is unpredictable. Glove wear time is conditioned by exposure time and modes of use.

Glove material: NBR (Nitrile rubber)
Thickness of the glove material: 0,5mm

Breakthrough time: 240 min.

Skin protection:

Work clothing with long sleeves and category I accident protection shoes must be worn (see Regulation 2016/425 and standard EN ISO 20344). After taking off the protective clothing, one must wash with soap and water

Respiratory protection:

If the threshold value (e.g. TLV-TWA) of the substance or one or more substances contained in the product is exceeded, it is advisable to wear a mask with a type A filter, the class of which (1, 2 or 3) should be selected according to the highest concentration used. (Ref. standard EN 14387). In the presence of gases or vapours of a different nature and/or gases or vapours containing particles (aerosol, smoke, mist, etc.), use combined filters.

If the technical measures taken are not sufficient to reduce the exposure of the worker to the thresholds considered, the use of respiratory protective devices is necessary. The protection provided by the mask is limited in any case. If the substance under consideration is odourless or its odour threshold exceeds the corresponding TLV-TWA, or in case of emergency, an open-circuit self-operated compressed air respirator (ref. standard EN137) or an external air intake respirator (ref. standard EN138) must be worn. For the correct selection of the respiratory protective device, refer to standard EN 529.

8.2.3. Environmental exposure controls

Emissions from manufacturing processes, including those from ventilation equipment, should be checked for compliance with environmental legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid Colour: copper

Odour: characteristic

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Safety relevant basis data

Parameter	Value	① Method
		② Remark
рН	No data available	
Melting point	No data available	
Freezing point	No data available	
Initial boiling point and boiling range	> 300 °C	
Flash point	205 °C	
Evaporation rate	No data available	
Auto-ignition temperature	No data available	
Upper/lower flammability or explosive limits	No data available	
Vapour pressure	0.01 Pa	
Vapour density	No data available	
Density	1.2 g/cm³	
Bulk density	not applicable	
Water solubility	No data available	
Dynamic viscosity	4,000 mPa* s	
Kinematic viscosity	No data available	
Self ignition temperature	> 600 °C	

9.2. Other information

No further relevant information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No special reaction hazards with other substances under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions of use and storage.

10.3. Possibility of hazardous reactions

Under normal conditions of use and storage, no hazardous reactions are foreseen.

10.4. Conditions to avoid

None in particular. However, the usual caution with chemical products must be observed.

10.5. Incompatible materials

No further relevant information available.

10.6. Hazardous decomposition products

No further relevant information available.

SECTION 11: Toxicological information

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

4,4` diphenylmethanediisocyanate, isomere, homologe and mixtures	CAS No.: 9016-87-9	EC No.: 618-498-
LD₅₀ oral: >5,000 mg/kg		
LD₅₀ dermal: >94,000 mg/kg		
LC ₅₀ Acute inhalation toxicity (dust/mist): 0.49 mg/L 4 h		

Acute oral toxicity:

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

Acute dermal toxicity:

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

Acute inhalation toxicity:

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

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Skin corrosion/irritation:

Causes skin irritation.

Serious eye damage/irritation:

Causes serious eye damage.

Respiratory or skin sensitisation:

Sensitising to the respiratory tract. Sensitising to the skin.

Germ cell mutagenicity:

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

Carcinogenicity:

Suspected of causing cancer.

Reproductive toxicity:

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

STOT-single exposure:

May cause respiratory irritation.

STOT-repeated exposure:

May cause damage to organs.

Aspiration hazard:

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

11.2. Information on other hazards

Endocrine disrupting properties:

None of the ingredients are included.

SECTION 12: Ecological information

12.1. Toxicity

Assessment/classification:

No further relevant information available.

12.2. Persistence and degradability

Abiotic degradation:

No further relevant information available.

Biodegradation:

No further relevant information available.

12.3. Bioaccumulative potential

Accumulation / Evaluation:

No further relevant information available.

12.4. Mobility in soil

No further relevant information available.

12.5. Results of PBT and vPvB assessment

4,4` diphenylmethanediisocyanate, isomere, homologe and mixtures CAS No.: 9016-87-9 EC No.: 618-498-9 Results of PBT and vPvB assessment: —

Based on the available information, the product does not contain any PBT or vPvB substances in content percentages $\geq 0.1\%$.

12.6. Endocrine disrupting properties

No further relevant information available.

12.7. Other adverse effects

No further relevant information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Reuse if possible. Product residues are to be considered as hazardous waste. The hazardousness of the waste partially containing this product must be evaluated on the basis of the legal provisions in

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force. Disposal must be entrusted to a company authorised for waste management, taking into account national and, where applicable, local regulations.

Waste treatment options

Appropriate disposal / Package:

Uncleaned packaging: Contaminated packaging material must be sent for recycling or disposal in accordance with the country's waste management regulations.

SECTION 14: Transport information

Land transport (ADR/RID)	(ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)			
14.1. UN number or	L4.1. UN number or ID number					
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.			
14.2. UN proper ship	ping name	^				
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.			
14.3. Transport haza	rd class(es)					
not relevant	not relevant	not relevant	not relevant			
14.4. Packing group						
not relevant	not relevant	not relevant	not relevant			
14.5. Environmental hazards						
not relevant	not relevant	not relevant	not relevant			
14.6. Special precautions for user						
not relevant	not relevant	not relevant	not relevant			

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU legislation

Restrictions on use:

Restrictions on the product or substances according to Annex XVII Regulation (EC) 1907/2006 Product: point 3

Substances contained:

point 56 (4,4` diphenylmethanediisocyanate, isomere, homologe and mixtures)

point 74 (DIISOCYANATE)

Substances according to Candidate List (Art. 59 REACH): Based on the available information, the product does not contain SVHC substances in percentages $\geq 0.1\%$.

15.1.2. National regulations

No data available

15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

16.1. Indication of changes

No data available

16.2. Abbreviations and acronyms

ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

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ADR European Agreement concerning the International Carriage of Dangerous Goods by Road

CAS Chemical Abstracts Service

CLP Classification, Labelling and Packaging

DNEL derived no-effect level EN European Standard

ICAO International Civil Aviation Organization
IMDG International Maritime Dangerous Goods
IMO International Maritime Organization

KG body weight

LC₅₀ Lethal (fatal) Concentration 50%

LD₅₀ Lethal (fatal) Dose 50%

NFPA National Fire Protection Association

NIOSH National Institute for Occupational Safety & Health

PBT persistent and bioaccumulative and toxic

PNEC Predicted No Effect Concentration

REACH Registration, Evaluation and Authorization of Chemicals RID Dangerous goods regulations for transport by rail

TRGS Technische Regeln für Gefahrstoffe

UN United Nations

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (Skin Irrit. 2)	H315: Causes skin irritation.	
Respiratory or skin sensitisation (Skin Sens. 1A)	H317: May cause an allergic skin reaction.	
Serious eye damage/eye irritation (Eye Irrit. 2)	H319: Causes serious eye irritation.	
Acute toxicity (inhalative) (Acute Tox. 4)	H332: Harmful if inhaled.	
Respiratory or skin sensitisation (Resp. Sens. 1)	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.	
STOT-single exposure (STOT SE 3)	H335: May cause respiratory irritation.	
Carcinogenicity (Carc. 2)	H351: Suspected of causing cancer.	
STOT-repeated exposure (STOT RE 2)	H373: May cause damage to organs through prolonged or repeated exposure.	

16.5. List of relevant hazard statements and/or precautionary statements from sections 2 to 15

Hazard statements	
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.

16.6. Training advice

No data available

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16.7. Additional information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-mentioned supplier nor its subsidiaries assume any liability with regard to the correctness or completeness of the information provided. A final determination of the suitability of individual materials is the sole responsibility of the user. All materials may involve unknown risks and should be used with caution. While certain risks are described herein, we cannot guarantee that these are the only possible risks.