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

· 1.1 Product identifier

· Trade name: 4CR 5625 PU-Kunststoffkleber 1,5 Min. Komponente B

- 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 Hardening agent/ Curing agent

1.3 Details of the supplier of the safety data sheet Manufacturer/Supplier: 4CR Vertriebsgesellschaft mbH Oberer Sommerfeldweg 2 D-94469 Deggendorf Tel.: +49 (0) 40 69 60 99 315 Fax: +49 (0) 40 69 60 99 316

E-Mail: Info@4CR.com www.4CR.com

• 1.4 Emergency telephone number: +49(0)700 24112112 (CRM)

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

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

GHS08 health hazard

- Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Carc. 2 H351 Suspected of causing cancer.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

GHS07

Acute Tox. 4 H332 Harmful if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.

· 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



· Signal word Danger

 Hazard-determining components of labelling: methylene diphenyl diisocyanate, modified diphenylmethanediisocyanate, isomeres and homologues 4,4'-methylenediphenyl diisocyanate
 Hazard statements

H332 Harmful if inhaled.

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|--------------------|---|
| H315 Causes skin | irritation. |
| H319 Causes serie | ous eye irritation. |
| H334 May cause a | illergy or asthma symptoms or breathing difficulties if inhaled. |
| H317 May cause d | in allergic skin reaction. |
| H351 Suspected of | f causing cancer. |
| H335 May cause i | respiratory irritation. |
| H373 May cause a | lamage to organs through prolonged or repeated exposure. |
| Precautionary sta | tements |
| P101 | If medical advice is needed, have product container or label at hand. |
| P102 | Keep out of reach of children. |
| P103 | Read label before use. |
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P284 | [In case of inadequate ventilation] wear respiratory protection. |
| P305+P351+P33 | 8 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if |
| | present and easy to do. Continue rinsing. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container in accordance with local/regional/national/international |
| | regulations. |
| Additional inform | ation: |
| EUH204 Contains | s isocyanates. May produce an allergic reaction. |
| Persons already se | ensitised to diisocyanates may develop allergic reactions when using this product. |
| | from asthma, eczema or skin problems should avoid contact, including dermal contact, with |
| this product. | |
| This product sho | uld not be used under conditions of poor ventilation unless a protective mask with an |
| | lter (i.e. type A1 according to standard EN 14387) is used. |
| 2.3 Other hazards | |

- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.

*

· vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

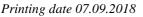
· 3.2 Chemical characterisation: Mixtures

· Description: Mixture of substances listed below with nonhazardous additions.

| CAS: 25686-28-6 NLP: 500-040-3 Reg.nr.: 01-2119457013-49 | methylene diphenyl diisocyanate, modified Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335 | 10-25% |
|---|---|-----------------|
| CAS: 9016-87-9 EINECS: 202-966-0 | diphenylmethanediisocyanate, isomeres and homologues Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335 | 10-25% |
| CAS: 101-68-8 EINECS: 202-966-0 Reg.nr.: 01-2119457014-47 | 4,4'-methylenediphenyl diisocyanate Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335 | ≥ 5-<10% |

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SECTION 4: First aid measures

• 4.1 Description of first aid measures

• General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

In case of irregular breathing or respiratory arrest provide artificial respiration.

• 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: 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: If symptoms persist consult doctor.*

- 4.3 Indication of any immediate medical attention and special treatment needed
- No further relevant information available.
- Information for doctor:

SECTION 5: Firefighting measures

• Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.

• 5.2 Special hazards arising from the substance or mixture In case of fire, the following can be released: Nitrogen oxides (NOx)

Carbon monoxide (CO)

Hydrogen cyanide (HCN)

- · 5.3 Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures Not required.

· 6.2 Environmental precautions: 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 item 13.

Ensure adequate ventilation.

Contain and collect spillages with non-combustible absorbent materials (e.g. sand, earth, diatomaceous earth) and place in a suitable container.

Decontaminate immediately with suitable mixture (flammable):

| - as such usable (inflammatory!): | |
|-------------------------------------|----------|
| water | 45 Vol.% |
| ethanol or isopropanol | 50 Vol.% |
| ammonia solution (Density= 0.88) | 5 Vol.% |
| - alternatively (non-flammable): | |
| sodium carbonate | 5 Vol.% |
| water | 95 Vol.% |

Add the same decontaminant to any residues and allow to stand for several days in an non-sealed container until no further reaction occurs. Once this stage is reached, close the container and dispose of in accordance with the waste regulations (see Section 13).

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

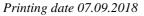
See Section 8 for information on personal protection equipment.

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^{· 5.1} Extinguishing media

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See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

- Ensure good ventilation/exhaustion at the workplace.
- Prevent formation of aerosols.

Persons with a history of asthma, allergies or chronic or recurrent respiratory diseases should only be employed in processes in which this product is used under appropriate medical supervision. • Information about fire - and explosion protection: No special measures required.

- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- Information about storage in one common storage facility:
- Do not store together with reducing agents, heavy-metal compounds, acids and alkalis. Store away from foodstuffs.
- Further information about storage conditions: Keep container tightly sealed. Store separately from oxidising agents, strongly alkaline and strongly acidic materials, amines, alcohol and water.
- Storage class: 12
- 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

• Additional information about design of technical facilities: No further data; see item 7.

· 8.1 Control parameters

 \cdot Ingredients with limit values that require monitoring at the workplace:

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

WEL Short-term value: 0.07 mg/m³ Long-term value: 0.02 mg/m³ Sen; as -NCO

101-68-8 4,4'-methylenediphenyl diisocyanate

WEL Short-term value: 0.07 mg/m³ Long-term value: 0.02 mg/m³

Sen; as -NCO

• Additional information: The lists valid during the making were used as basis.

· 8.2 Exposure controls

· Personal protective equipment:

All personal protective equipment, including respiratory protective equipment, used to control exposure to hazardous substances must be selected to meet the requirements of the COSHH Regulations.

• 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. Avoid contact with the eyes and skin.

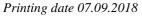
• Respiratory protection:

Filter AX

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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.

· Protection of hands:



Protective gloves (EN 374)

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

Fluorocarbon rubber (Viton)

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.

· Breakthrough 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.

· Eye protection:



Tightly sealed goggles

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

- · General Information

| · Appearance: | |
|--|---|
| Form: | Solid |
| Colour: | According to product specification |
| · Odour: | Characteristic |
| · Odour threshold: | Not determined. |
| · pH-value: | Not determined. |
| · Change in condition | |
| Melting point/freezing point: | Undetermined. |
| Initial boiling point and boiling range: | 208°C |
| · Flash point: | Not applicable. |
| · Flammability (solid, gas): | Not applicable. |
| · Ignition temperature: | 400°C (DIN 51794) |
| · Decomposition temperature: | Not determined. |
| · Auto-ignition temperature: | Product is not selfigniting. |
| · Explosive properties: | Product does not present an explosion hazard. |
| · Explosion limits: | |
| Lower: | 0.4 Vol % |
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| Upper: | Not determined. | |
| Vapour pressure: | Not determined. | |
| Density at 20°C: | 1.279 g/cm ³ (DIN EN ISO 2811-1) | |
| Relative density | Not determined. | |
| Vapour density | Not determined. | |
| Evaporation rate | Not determined. | |
| Solubility in / Miscibility with | | |
| water: | Not miscible or difficult to mix. | |
| Partition coefficient: n-octanol/water: | Not determined. | |
| Viscosity: | | |
| Dynamic: | Not determined. | |
| Kinematic: | Not determined. | |
| Solvent content: | | |
| VOC (EC) | 0.00 % | |
| Solids content (weight-%): | 100.0 % | |
| 9.2 Other information | No further relevant information available. | |

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

- · 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions No dangerous reactions known.
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: Possible in traces. Nitrogen oxides Hydrogen chloride (HCl) Hydrogen cyanide (prussic acid) Carbon monoxide Nitrogen oxides (NOx)

SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity
- Harmful if inhaled.
- · Primary irritant effect:
- · Skin corrosion/irritation
- Causes skin irritation. • Serious eye damage/irritation
- Causes serious eye irritation.
- *Respiratory or skin sensitisation* May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity
- Suspected of causing cancer.

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• *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 through prolonged or repeated exposure.

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

SECTION 12: Ecological information

· 12.1 Toxicity

- Aquatic toxicity: No further relevant information available.
- · 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.
- · Additional ecological information:
- · General notes:

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

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· 12.5 Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- · vPvB: Not applicable.
- · 12.6 Other adverse effects No further relevant information available.

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.

| • . | European | waste | catalogu |
|-----|----------|-------|----------|
|-----|----------|-------|----------|

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

08 05 01* waste isocyanates

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

• Uncleaned packaging:

• *Recommendation: Disposal must be made according to official regulations.*

SECTION 14: Transport information

| · 14.1 UN-Number · ADR, ADN, IMDG, IATA | Void | |
|--|------|--------------------|
| · 14.2 UN proper shipping name · ADR, ADN, IMDG, IATA | Void | |
| · 14.3 Transport hazard class(es) | | |
| · ADR, ADN, IMDG, IATA | | |
| · Class | Void | |
| · 14.4 Packing group | | |
| · ADR, IMDG, IATA | Void | |
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|--|-----------------|--------------------|
| 14.5 Environmental hazards: Marine pollutant: | No | |
| · 14.6 Special precautions for user | Not applicable. | |
| • 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable. | | |
| · 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, 56a

· National regulations:

| Class | Share in % |
|-------|------------|
| Ι | 10-25 |
| - | |

· 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.

· Relevant phrases

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.

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

The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

· Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

ADR: Accord européen sur le transport 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)

- VOC: Volatile Organic Compounds (USA, EU)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative 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

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Resp. Sens. 1: Respiratory sensitisation - Category 1 Skin Sens. 1: Skin sensitisation – Category 1 Carc. 2: Carcinogenicity – Category 2 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 \cdot * Data compared to the previous version altered.