

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 07.07.2023

Version number 5 (replaces version 4)

Revision: 07.07.2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Trade name: REDOCOL Kantomelt PUR natur, Granulat****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 Hot melt adhesive**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Ostermann UK Ltd.
Stonebridge Cross Business Park
Unit 104 Poynton Way
Droitwich
WR9 0LW
United Kingdom
Phone (UK): +44 (0) 1905 793 550
Phone (Ireland): +44 (0) 1905 793 552
Fax: +44 (0) 1905 793 559

Informing department:

Customer Service:
Phone: +49 (0) 2871 / 2550-0

1.4 Emergency telephone number:

Gift-Informationszentrum Nord, Göttingen
Poison Information Center, Göttingen
Tel.: +49 (0)551 19240
(German and English only)

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

health hazard

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

Carc. 2 H351 Suspected of causing cancer.



Skin Sens. 1 H317 May cause an allergic skin reaction.

2.2 Label elements**Labelling according to Regulation (EC) No 1272/2008**

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

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- **Hazard pictograms**



GHS08

- **Signal word** Danger

- **Hazard-determining components of labelling:**

diphenylmethane-4,4'-di-isocyanate

diphenylmethane-2,4'-diisocyanate

- **Hazard statements**

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

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

- **Precautionary statements**

P261 Avoid breathing mist/vapours/spray.

P280 Wear protective gloves / eye protection / face protection.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Additional information:**

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

Contains isocyanates. May produce an allergic reaction.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**

- **Description:** PU adhesive: Polyurethane prepolymer

- **Dangerous components:**

CAS: 101-68-8 EINECS: 202-966-0 Reg.nr.: 01-2119457014-47-X	diphenylmethane-4,4'-di-isocyanate ⚠ 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, 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; H335: C ≥ 5%	≥ 2.5 - < 5%
CAS: 5873-54-1 EINECS: 227-534-9 Reg.nr.: 01-2119480143-45-X	diphenylmethane-2,4'-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, 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; H335: C ≥ 5%	≥ 0.1 - < 1%

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- **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

· **General information**

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

· **After inhalation**

Supply fresh air or oxygen; call for doctor.

Delayed effects possible after inhalation.

In case of unconsciousness bring patient into stable side position for transport.

· **After skin contact**

If burned by contact with hot material, cool molten material adhering to skin as quickly as possible with water, and see physician for removal of adhering material and treatment of burn.

· **After eye contact** Cool with water after contact with hot melt, go see doctor.

· **After swallowing**

Rinse out mouth.

Do not induce vomiting.

Consult doctor.

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

Asthma attacks

Allergic reactions

· **After inhalation:**

irritation of respiratory system.

coughing

Breathing difficulty

· **After skin contact:** rash

· 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**

Extinguishing powder, foam or water jet. Fight larger fires with water jet or alcohol-resistant foam.

· **For safety reasons unsuitable extinguishing agents** Water with a full water jet.

· 5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

During incomplete combustion carbon monoxide can be formed.

· 5.3 Advice for firefighters

· **Protective equipment:** Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact to eyes, skin and clothes.

Wear protective equipment. Keep unprotected persons away.

· 6.2 Environmental precautions: Do not allow to enter drainage system, surface or ground water.

· 6.3 Methods and material for containment and cleaning up:

Allow to solidify. Collect mechanically.

Dispose of contaminated material as waste according to 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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See Section 13 for information on disposal.

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SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Do not eat, drink or smoke while working.
Ensure good ventilation/exhaustion at the workplace.
 - **Information about protection against explosions and fires:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
 - **Storage**
 - **Requirements to be met by storerooms and containers:**
Store only in the original container.
Keep container tightly closed.
Protect from moisture.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:**
Store container in a well ventilated position.
Recommended storage temperature: 5 - 25°C
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
 - **Components with limit values that require monitoring at the workplace:**
WEL: workplace exposure limit
OEL: Occupational Exposure Limit

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

WEL (Great Britain)	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
OEL (Ireland)	Long-term value: 0.005 ppm as -NCO; Sens

5873-54-1 diphenylmethane-2,4'-diisocyanate

WEL (Great Britain)	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
OEL (Ireland)	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ as -NCO; Sens.

· DNELs

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

Inhalative	DNEL (worker, short-term, local)	0.1 mg/m ³ (human)
	DNEL (worker, long-term, local)	0.05 mg/m ³ (human)
	DNEL (consumer, short-term, local)	0.05 mg/m ³ (human)
	DNEL (consumer, long-term, local)	0.025 mg/m ³ (human)

5873-54-1 diphenylmethane-2,4'-diisocyanate

Oral	DNEL (consumer, short-term, systemic)	20 mg/kg bw/day (human)
Dermal	DNEL (worker, short-term, systemic)	50 mg/kg bw/day (human)
	DNEL (consumer, short-term, systemic)	25 mg/kg bw/day (human)
	DNEL (worker, short-term, local)	28.7 mg/kg bw/day (human)
	DNEL (consumer, short-term, local)	17.2 mg/kg bw/day (human)

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Inhalative	DNEL (worker, short-term, systemic)	0.1 mg/m ³ (human)
	DNEL (worker, long-term, systemic)	0.05 mg/m ³ (human)
	DNEL (consumer, short-term, systemic)	0.05 mg/m ³ (human)
	DNEL (consumer, long-term, systemic)	0.025 mg/m ³ (human)
	DNEL (worker, short-term, local)	0.1 mg/m ³ (human)
	DNEL (worker, long-term, local)	0.05 mg/m ³ (human)
	DNEL (consumer, short-term, local)	0.05 mg/m ³ (human)
	DNEL (consumer, long-term, local)	0.025 mg/m ³ (human)

- **PNECs**

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

PNEC aqua (freshwater)	0.0037 mg/L (.)
PNEC aqua (marine water)	0.00037 mg/L (.)
PNEC soil	1 mg/kg soil dw (.)
PNEC sediment (freshwater)	11.7 mg/kg sedim. dw (.)
PNEC sediment (marine water)	1.17 mg/kg sedim. dw (.)
PNEC aqua (intermittent releases)	0.037 mg/L (.)

5873-54-1 diphenylmethane-2,4'-diisocyanate

PNEC aqua (freshwater)	1 mg/L (.)
PNEC aqua (marine water)	0.1 mg/L (.)
PNEC STP - Sewage Treatment Plant	1 mg/L (.)
PNEC soil	1 mg/kg soil dw (.)
PNEC aqua (intermittent releases)	10 mg/L (.)

- **Ingredients with biological limit values:**

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

BMGV (Great Britain)	1 µmol creatinine/mol Medium: urine Sampling time: At the end of the period od exposure Parameter: isocyanate-derived diamine
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5873-54-1 diphenylmethane-2,4'-diisocyanate

BMGV (Great Britain)	1 µmol creatinine/mol Medium: urine Sampling time: At the end of the period od exposure Parameter: isocyanate-derived diamine
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- **Additional information:** The lists that were valid during the compilation were used as basis.

- **8.2 Exposure controls**

- **Appropriate engineering controls**

Draw off vapors and fumes directly at the point of generation or release.

In the case of regular work use bench-mounted extraction equipment.

- **Individual protection measures, such as personal protective equipment**

- **General protective and hygienic measures**

Do not eat, drink or smoke while working.

Wash hands during breaks and at the end of the work.

- **Breathing equipment:**

Approved dust respirators must be used for dusty conditions or if dust levels exceed established standards.

- **Hand protection** Heat protection gloves

- **Material of gloves**

Heat protection gloves

Nitrile rubber, NBR

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- **Penetration time of glove material**

With solid dry substances permeation is not to be expected. Therefore the breakthrough-time for this protective glove has not been measured.

In case of a layer thickness of 0.4 mm the penetration time is longer than 480 minutes.

- **Eye/face protection**



Safety glasses

- **Body protection:**



Protective work clothing.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

· Physical state	Solid
· Colour:	Whitish
· Odour:	Characteristic
· Odour threshold:	Not determined.
· Flammability	Not determined.
· Flash point:	> 200 °C
	Not determined
· Auto-ignition temperature:	> 500 °C
· Decomposition temperature:	Not determined.
· SADT	
· pH	Not applicable.
· Viscosity:	
· dynamic at 120 °C:	35000 - 55000 mPas
· Solubility	
· Water:	Insoluble
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not applicable.
· Density and/or relative density	
· Density at 20 °C	1.25 - 1.35 g/cm ³

- **9.2 Other information**

· Appearance:	
· Form:	Granulate
· Important information on protection of health and environment, and on safety.	
· Self-inflammability:	Product is not selfigniting.
· Explosive properties:	Product is not explosive.
· VOC EU	0 %
· Change in condition	
· Fusion temperature / range:	58 - 62 °C

- **Information with regard to physical hazard classes**

· Explosives	Void
· Flammable gases	Void
· Aerosols	Void

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

SECTION 10: Stability and reactivity

- **10.1 Reactivity** Reacts with water: Pressure built up in closed vessel (CO₂).
- **10.2 Chemical stability**
 - **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
Carbon dioxide is generated under contact with moisture, leading to pressure in the cans. Danger of cans bursting!
- **10.4 Conditions to avoid** Protect from moisture.
- **10.5 Incompatible materials:**
Water
Alcohols
Amines
- **10.6 Hazardous decomposition products:** At higher temperatures isocyanate may be released.

SECTION 11: Toxicological information

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

· **LD/LC50 values that are relevant for classification:**

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

Oral	LDL0	> 2,000 mg/kg (rat)
Inhalative	LC50	0.368 mg/l/4h (rat) (OECD 403) Dust or Mist

5873-54-1 diphenylmethane-2,4'-diisocyanate

Oral	LD50	> 2,000 mg/kg (rat)
Dermal	LD50	> 9,400 mg/kg (rabbit) (OECD 402)
Inhalative	LC50	0.49 mg/l/4h (rat) (OECD 403) Dust or Mist

- **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.
May cause an allergic skin reaction.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

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- **Carcinogenicity**
Suspected of causing cancer.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**

- **Repeated dose toxicity**

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

Inhalative	NOAEC (2y)	0.19 mg/m ³ (rat) (OECD 453)
		Dust or Mist
	LOAEC (2y)	0.23 mg/m ³ (rat)
		Dust or Mist

5873-54-1 diphenylmethane-2,4'-diisocyanate

Inhalative	NOAEC (2y)	0.19 mg/m ³ (rat)
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- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

Carc. 2

- **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 (static)	> 1,000 mg/l/24h (Daphnia magna) (OECD 202)
EC50 (static)	9 mg/l/48h (Daphnia magna) (OECD 202)
EC50 (static)	> 100 mg/l/72h (Desmodesmus subspicatus) (OECD 201)
LC0 (static)	> 100 mg/l/96h (Danio rerio) (OECD 203)

5873-54-1 diphenylmethane-2,4'-diisocyanate

EC50 (static)	129.7 mg/l/24h (Daphnia magna) (OECD 202)
EC0	1,620 mg/l/72h (Desmodesmus subspicatus) (OECD 201)
LC0	> 3,000 mg/l/96h (Oryzias latipes)

- **12.2 Persistence and degradability**

Based on previous experience, this product is inert and non-degradable.

- **Other information:** There are no data available about the preparation.

- **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.

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· **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.

· **National regulations**

- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they 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.
- EUH204 Contains isocyanates. May produce an allergic reaction.

· **Department issuing data specification sheet:**

- ▶ **DEKRA** This Safety Data Sheet has been drawn up in cooperation with:
DEKRA Assurance Services GmbH, Hanomagstr. 12, D-30449 Hanover, Germany,
phone: (+49) 511 42079 - 0, reach@dekra.com.

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· **Abbreviations and acronyms:**

- 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 (UK REACH)
- PNEC: Predicted No-Effect Concentration (UK REACH)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- 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
- 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

- *** Data compared to the previous version altered.**