

Safety data sheet

according to UK REACH Regulation

Printing date 30.09.2022

Version number 13

Revision: 30.09.2022

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

- **1.1 Product identifier**
 - Trade name **Jowatherm Reaktant MR 607.91**
- **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**
 - Adhesives
 - Additive
- **1.3 Details of the supplier of the safety data sheet**
 - **Manufacturer/Supplier:**
Jowat SE
Ernst-Hilker-Str. 10 - 14; D - 32758 Detmold
Fon +49 (0)5231 749 0
e-mail: info@jowat.de
www.jowat.de
 - **Department issuing data specification sheet:**
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Tel. +49 5231 749 -218 / -211 / -5460 / -5374
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 - **Department providing the information:**
Jowat UK Ltd.
Lymedale Business Centre
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Hooters Hall Road
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Staffordshire
ST5 9QF
Phone: +44 1782 565265
E-mail: nick.orton@jowat.co.uk
- **1.4 Emergency telephone number:**
-
InfraServ Hoechst - Gefahrenabwehrmeldezentrale
D - 65926 Frankfurt
Fon: +49 (0)69-305-6418

* SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
 - **Classification according to Regulation (EC) No 1272/2008**
The product is not classified, according to the GB CLP regulation.
- **2.2 Label elements**
 - **Labelling according to Regulation (EC) No 1272/2008** not applicable
 - **Hazard pictograms** not applicable
 - **Signal word** not applicable
 - **Hazard statements** not applicable
 - **Additional information:**
Safety data sheet available on request.
Contains isocyanates. May produce an allergic reaction.
Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.
- **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:**
Hot melt adhesive

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Polyurethane resin

· Dangerous components:		
CAS: 13463-67-7 EINECS: 236-675-5 registration number: 01-2119489379-17	titanium dioxide substance with a Community workplace exposure limit	2.5-<5%
CAS: 5873-54-1 EINECS: 227-534-9 registration number: 01-2119480143-45	diphenylmethane 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 Specific concentration limits: Skin Irrit. 2; H315: C ≥ 5 % Eye Irrit. 2; H319: C ≥ 5 % Resp. Sens. 1; H334: C ≥ 0.1 % STOT SE 3; H335: C ≥ 5 %	<0.1%

· **Additional information**

If any R-phrases (risk-phrases) are listed, please refer for the exact wording to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**· **General information** Instantly remove any clothing soiled by the product.· **After inhalation** Supply fresh air; consult physician in case of symptoms.· **After skin contact**

After contact with the molten product, cool rapidly with cold water.

Do not pull solidified product away from the skin.

Seek medical treatment.

· **After eye contact** Rinse opened eye for several minutes under running water.· **After swallowing** In case of persistent symptoms consult physician.· **4.2 Most important symptoms and effects, both acute and delayed** Asthma attacks· **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**CO₂, extinguishing powder 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**

Can be released in case of fire

Nitrogen oxides (NO_x)

Carbon monoxide (CO)

Hydrogen cyanide (HCN)

· **5.3 Advice for firefighters**· **Protective equipment:** Do not inhale explosion gases or combustion gases.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective clothing.

· **6.2 Environmental precautions:** No special measures required.· **6.3 Methods and material for containment and cleaning up:**

Collect mechanically.

Allow to solidify. Collect mechanically.

· **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 information on disposal.

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SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Store in cool, dry place in tightly closed containers.

Ensure that suitable extractors are available on processing machines. In the context of the risk assessment, it is necessary to evaluate whether and to what extent protective measures are required. If necessary, a workplace measurement has to be carried out.

Use only in well ventilated areas.

- **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:** No special requirements.

- **Information about storage in one common storage facility:** Not required.

- **Further information about storage conditions:**

Store under dry conditions.

Protect from humidity and keep away from water.

- **Storage class** 11

· 7.3 Specific end use(s) No further relevant information available.

* SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

- **Components with critical values that require monitoring in the workplace:**

13463-67-7 titanium dioxide

WEL	Long-term value: 10* 4** mg/m ³ *total inhalable **respirable
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5873-54-1 diphenylmethane diisocyanate

WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
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- **Regulatory information WEL:** EH40/2020

- **Ingredients with biological limit values:**

5873-54-1 diphenylmethane diisocyanate

BMGV	1 µmol creatinine/mol Medium: urine Sampling time: At the end of the period of exposure Parameter: isocyanate-derived diamine
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- **Regulatory information BMGV:** EH40/2011

- **Additional information:** The lists that were valid during the compilation were used as basis.

· 8.2 Exposure controls

- **Additional information about design of technical systems:** No further data; see item 7.

· Personal protective equipment

· General protective and hygienic measures

Standard precautionary measures for handling chemicals are to be observed.

Keep away from food, beverages and animal feed.

Instantly remove any soiled and impregnated garments.

Wash hands during breaks and at the end of work.

Vacuum clean contaminated clothing. Do not blow or brush off contamination.

Avoid skin contact with the liquefied material.

Do not eat or drink while working.

· Breathing equipment:

Use breathing protection in case of insufficient ventilation (EN 149).

Filter A/B/P2.

- **Protection of hands:** Heat resistant gloves

· Material of gloves

Leather gloves

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Strong gloves

- **Penetration time of glove material** No special requirements.
- **Eye protection:** Safety glasses

* 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
- **Smell:** Characteristic
- **Odour threshold:** Not determined.

· **pH-value:** Not applicable.

· Change in condition

- **Melting point/freezing point:** 70 °C
- **Initial boiling point and boiling range:** >230 °C

· **Flash point:** >200 °C

· **Inflammability (solid, gaseous)** Product is not inflammable.

· **Ignition temperature:** 407 °C

- **Decomposition temperature:** > 250 °C

· **Spontaneous combustion:** Product does not undergo spontaneous combustion.

· **Explosive properties:** Product is not explosive.

· Critical values for explosion:

- **Lower:** Not determined.
- **Upper:** Not determined.

· **Vapour pressure at 20 °C:** 1 hPa
< 0,01 hPa

- **Density at 20 °C** 1.28 g/cm³
- **Relative density** Not determined.
- **Vapour density** Not applicable.
- **Evaporation rate** Not applicable.

· Solubility in / Miscibility with

- **Water:** Insoluble

· **distribution ratio (n-octanol/water):** Not determined.

· Viscosity:

- **dynamic:** Not applicable.
- **kinematic:** Not applicable.

· Solvent content:

- **Organic solvents:** 0.0 %
- **Solid content:** 100.0 %

· 9.2 Other information

· VOC - Volatile Organic Compounds

- **European Union** 0.00 %
- **Switzerland** 0.00 %
- **U.S.A (less water and less exempts)** 0.0 g/l / 0.00 lb/gal

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.

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- **10.2 Chemical stability**
 - **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
To avoid thermal decomposition do not overheat.
- **10.3 Possibility of hazardous reactions**
Toxic fumes may be released if heated above the decomposition point
Reacts with water
Reacts with moist air
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
Nitrous vitriol gases
Hydrogen cyanide (prussic acid)
Isocyanate
Inflammable gases/vapours
Carbon monoxide and carbon dioxide
Danger of toxic pyrolysis products
Nitrogen oxides (NOx)

* SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
 - **Acute toxicity** Based on available data, the classification criteria are not met.

· LD/LC50 values that are relevant for classification:

13463-67-7 titanium dioxide

Oral	LD50 oral	>6,000 mg/kg (rat)
Dermal	LD50 dermal	>10,000 mg/kg (rabbit)

5873-54-1 diphenylmethane diisocyanate

Oral	LD50 oral	>2,500 mg/kg (rat)
Dermal	LD50 dermal	9,400 mg/kg (rabbit) (OECD 404)
Inhalative	LC50 / 4 h	1.5 mg/l (rat)

- **Primary irritant effect:**
 - **to the skin:** Based on available data, the classification criteria are not met.
 - **to the eye:** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
 - **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
 - **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.
 - **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.

* SECTION 12: Ecological information

- **12.1 Toxicity**

· Aquatic toxicity:

13463-67-7 titanium dioxide

LC0	>1,000 mg/l (orfe (ide))
EC0	>3 mg/l (water flea)
	>10,000 mg/l (pseudomonas putida)

5873-54-1 diphenylmethane diisocyanate

LC50 / 96 h	>1,000 mg/l (zebrafish)
LC0	>1,000 mg/l (zebrafish)

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EC50 / 24 h	>1,000 mg/l (water flea) (OECD 202)
EC50 / 3 h	>100 mg/l (activated sludge) (OECD 209)
EC50 / 72 h	>1,640 mg/l (scenedesmus subspicatus) (OECD 201)

- **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 (Self-assessment): slightly hazardous for water.
 - Do not allow the product to reach ground water, open water or the sewer system, undiluted or in large quantities.
- **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** Smaller quantities can be disposed with household garbage.
- **Uncleaned containers/packaging material:**
 - **Recommendation:**
 - Non contaminated packagings can be reused.
 - Non contaminated packagings can be used for recycling.
 - Packaging with cured adhesive residues can be recycled.
 - Packaging with cured adhesive residues can be treated as household waste.

SECTION 14: Transport information

· 14.1 UN-Number	
· ADR, ADN, IMDG, IATA	not applicable
· 14.2 UN proper shipping name	
· ADR	not applicable
	not applicable
· ADN, IMDG, IATA	not applicable
· 14.3 Transport hazard class(es)	
· ADR, ADN, IMDG, IATA	
· Class	not applicable
· 14.4 Packing group	
· ADR, IMDG, IATA	not applicable
· 14.5 Environmental hazards:	Not applicable.
· 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":	not applicable

* SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture** No further relevant information available.
- **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. They shall, however, not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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All standard industrial precautions apply, concerning protection of health, and safe handling. The recommendations have to be examined in the context of the application for which the product is intended, and observed as necessary.

· 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.

· 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)

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 modified in comparison to the previous version.