



Kit Revision Date: 15/04/2025

8820 HIGH TEMPERATURE RIGID URETHANE KIT

MG Chemicals Multipart Product Kit

This product is a kit made up of multiple parts. Each part is an independently packaged chemical component and has independent hazard assessments.

Kit Content

<i>Part</i>	<i>Product Name</i>	<i>Product Use</i>
A	8820-A	Urethane resin for use with hardeners
B	8820-B	Urethane hardener for use with resins

Safety Data Sheets for each part listed above follow this cover sheet.

Transportation Instruction

Before offering this product kit for transport, read Section 14 for all parts listed above.

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

· 1.1 Product identifier

· Trade name: 8820-A

- **Other Means of Identification:** High Temperature Rigid Urethane
- **Related Part Number:** 8820-Part A, 8820-375ML, 8820-2.55L, 8820-10.8L, 8820-60L
- **UFI:** G8N0-A0HU-H00V-HPYN

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

- **Application of the substance / the mixture** Urethane resin
- **Uses advised against** Not applicable

· 1.3 Details of the supplier of the safety data sheet

· **Manufacturer/Supplier:**

MG Chemicals Ltd. (Head Office)
1210 Corporate Drive
Burlington, Ontario L7L 5R6
CANADA
+(1) 905-331-1396
info@mgchemicals.com

MG Chemicals
Heame House, 23 Bliston Street
Sedgely Dudley DY3 1JA.
United Kingdom
+(44) 1663 362888

MG Chemicalst Ltd.
18-20, Msida Road,
Gzira, GZR 1401
MALTA

- **Further information obtainable from:** sds@mgchemicals.com

· 1.4 Emergency telephone number:

Verisk 3E (Access code: 335388)
+(44) 20 3514787
+(1) 760 476 3961
UK Toll free: +(0) 800 680 0425

Members of the public seeking specific information on poisons should contact:
In England and Wales: NHS 111 - dial 111
In Scotland: NHS 24 - dial 111

* SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

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

Skin Sens. 1 H317 May cause an allergic skin reaction.
Repr. 2 H361 Suspected of damaging fertility or the unborn child.
Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

· 2.2 Label elements

· **Labelling according to Regulation (EC) No 1272/2008**

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

Safety data sheet

according to UK REACH

Trade name: 8820-A

(Contd. of page 1)

· **Hazard pictograms**



GHS07 GHS08

· **Signal word** Warning

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

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)
Carbon black
methanol
oxirane, mono[(C12-14-alkyloxy)methyl] derivs

· **Hazard statements**

H317 May cause an allergic skin reaction.
H361 Suspected of damaging fertility or the unborn child.
H412 Harmful to aquatic life with long lasting effects.

· **Precautionary statements**

P102 Keep out of reach of children.
P201 Obtain special instructions before use.
P261 Avoid breathing mist, vapours, or spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

· **Determination of endocrine-disrupting properties** Endocrine Disruptor substance \geq 0.1% = none

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

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

· **Dangerous components:**

CAS: 1318-02-1	zeolites ⚠ STOT RE 1, H372; ⚠ Eye Irrit. 2, H319	7.0%
CAS: 25068-38-6 NLP: 500-033-5 Index number: 603-074-00-8	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700) Alternative CAS number: 1675-54-3 ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317, EUH205 Specific concentration limits: Eye Irrit. 2; H319: C \geq 5 % Skin Irrit. 2; H315: C \geq 5 %	3.0%
CAS: 1333-86-4 EINECS: 215-609-9	Carbon black ⚠ Carc. 2, H351	0.9%
CAS: 68609-97-2 EINECS: 271-846-8 Index number: 603-103-00-4	oxirane, mono[(C12-14-alkyloxy)methyl] derivs ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317	0.7%

(Contd. on page 3)

Safety data sheet according to UK REACH

Trade name: 8820-A

CAS: 67-56-1 EINECS: 200-659-6 Index number: 603-001-00-X	methanol ☠ Flam. Liq. 2, H225; ☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ☠ Repr. 1B, H360; STOT SE 1, H370 Specific concentration limits: STOT SE 1; H370: C ≥ 10 % STOT SE 2; H371: 3 % ≤ C < 10 %	(Contd. of page 2) 0.1%
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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

· After inhalation:

Remove person to fresh air and keep comfortable for breathing.
If feeling unwell: Call a POISON CENTRE or doctor.

· After skin contact:

Wash with plenty water.
If skin irritation or rash occurs: Get medical advice or attention.
Take off contaminated clothing and wash it before reuse.

· After eye contact:

Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If symptoms persist consult doctor.

· After swallowing:

Rinse mouth.
Do NOT induce vomiting.
If symptoms persist consult doctor.

· Information for doctor: Treat symptomatically

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

See section 11 for additional information.

· 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.

· 5.2 Special hazards arising from the substance or mixture

Not flammable or combustible, but burns if involved in a fire. Produces irritating smoke of unknown toxicity in fires.

Prevent fire-fighting wash from entering waterway or sewer system.

· Hazardous combustion products:

Carbon Oxides (COx)
other toxic fumes

· 5.3 Advice for firefighters

· **Protective equipment:** Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

Trade name: 8820-A

(Contd. of page 3)

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Remove or keep away all sources of extreme heat or open flames.
Avoid breathing mist, spray, or vapors.

· 6.2 Environmental precautions:

Avoid release to the environment.
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).
Collect liquid in a sealable, chemical-resistant container.
Wash residue with a paper towel and place dirty towels in container.
Use soap and water to remove the last traces of residue.

· 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

Ensure good ventilation/exhaustion at the workplace.
Wear protective gloves and eye protection.
Wash hands and exposed skin thoroughly after handling.
Take off contaminated clothing and wash it before reuse.
Contaminated work clothing should not be allowed out of the workplace.
Obtain, read and follow all safety instructions before use.
Keep out of reach of children.

· **Information about fire - and explosion protection:** Keep respiratory protective device available.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

- **Requirements to be met by storerooms and receptacles:**
Keep in a dry and clean area, away from incompatible substances
DO NOT FREEZE. Store in a clean and dry area between 5 to 35 °C.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store locked up.

· 7.3 Specific end use(s) See section 1.2

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

1333-86-4 Carbon black

WEL	Short-term value: 7 mg/m ³ Long-term value: 3.5 mg/m ³
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(Contd. on page 5)

Safety data sheet

according to UK REACH

Trade name: 8820-A

(Contd. of page 4)

67-56-1 methanol	
WEL	Short-term value: 333 mg/m ³ , 250 ppm Long-term value: 266 mg/m ³ , 200 ppm Sk

· **Additional information:**

The lists valid during the making were used as basis.

Refer to the national or regional occupational exposure limit regulation for abbreviations and acronyms.

· **8.2 Exposure controls**

· **Appropriate engineering controls** Keep airborne concentrations below exposure limits.

· **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.

Store protective clothing separately.

· **Respiratory protection:**

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.

Advice should be sought from respiratory protection specialists.

If the product is heated or worker has a known allergic reaction, consider using a full mask with organic vapor cartridge or with an independent air supply.

· **Hand protection**

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



Protective gloves: EN374

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**

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.

· **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.

· **Eye/face protection**



Safety glasses or tightly sealed goggles: EN 166

SECTION 9: Physical and chemical properties

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

· **Physical state**

Liquid

(Contd. on page 6)

Safety data sheet

according to UK REACH

Trade name: 8820-A

(Contd. of page 5)

· Form:	Viscous
· Colour:	Black
· Odour:	Mild
· Odour threshold:	Not determined.
· Melting point/freezing point:	Undetermined.
· Boiling point or initial boiling point and boiling range	35 °C
· Flammability	Non flammable
· Lower and upper explosion limit	
· Lower:	Not applicable
· Upper:	Not applicable
· Flash point:	>100 °C
· Auto-ignition temperature:	≥385 °C
· Decomposition temperature:	Not determined.
· pH	Not determined.
· Viscosity:	
· Kinematic viscosity at 20 °C	305 mm ² /s
· Dynamic:	Not determined.
· Solubility	
· water:	Not miscible or difficult to mix.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not available
· Relative density at 20 °C:	1.15
· Vapour density (air=1):	Not determined.
· Particle characteristics	Not applicable.
· 9.2 Other information	
· 9.2.1 Information with regard to physical hazard classes	Not applicable
· 9.2.2 Other safety characteristics	
· Evaporation rate	<1
· Ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· Solvent content:	
· Organic solvents:	0.10 %
· Solids content:	89.2 %

SECTION 10: Stability and reactivity

- **10.1 Reactivity** Reacts exothermically with amines.
- **10.2 Chemical stability** Chemically stable at normal temperatures and pressures.
 - **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**
Direct sunlight
Avoid open flames, excessive heat, sparks, ignition sources, and incompatible substances.

(Contd. on page 7)

Safety data sheet

according to UK REACH

Trade name: 8820-A

(Contd. of page 6)

· **10.5 Incompatible materials:**

Strong acids
Strong oxidizing agents
alkali

· **10.6 Hazardous decomposition products:**

No dangerous decomposition products known.
Hazardous combustion products: see section 5.

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 relevant for classification:		
25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)		
Oral	LD50	11,400 mg/kg (rat)
1333-86-4 Carbon black		
Oral	LD50	>15,400 mg/kg (rat)
Dermal	LD50	>3,000 mg/kg (rabbit)
68609-97-2 oxirane, mono[(C12-14-alkyloxy)methyl] derivs		
Oral	LD50	19,200 mg/kg (rat)
Dermal	LD50	4,500 mg/kg (rat)
67-56-1 methanol		
Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)
Inhalative	LC50/4 h	3 mg/L (ATE)

· **Primary irritant effect:**

· **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 an allergic skin reaction.

· **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** Suspected of damaging fertility or the unborn child.

· **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.

· **Summary of Effects and Symptoms by Routes of Exposure**

· **Eyes:**

may cause redness
pain
blurred vision

· **Skin:**

rash, allergic contact dermatitis
dry skin, redness

· **Inhalation:** Low toxicity:

· **Swallowed:**

Low toxicity:

(Contd. on page 8)

Safety data sheet

according to UK REACH

Trade name: 8820-A

(Contd. of page 7)

abdominal pain
nausea
diarrhea

· **Subacute to chronic toxicity:**

- **Delayed and immediate effects as well as chronic effects from short and long-term exposure**
Prolonged and repeated exposure to uncured epoxy hardener may lead to skin sensitization.

· **11.2 Information on other hazards**

· **Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

1333-86-4 Carbon black

EC50/ 24 h	>5,600 mg/L (aquatic invertebrates)
EC50/ 72 h	>10,000 mg/L (aquatic algae and cyanobacteria)
EC0/ 3 h	>800 mg/L (microorganisms)
LC50	>1,000 mg/L (fish)

- **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**

- **Remark:** Harmful to fish

· **Additional ecological information:**

· **General notes:**

Harmful to aquatic organisms

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

- **Recommendation** This material and its container must be disposed of as hazardous waste.

· **European waste catalogue**

HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
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(Contd. on page 9)

Safety data sheet

according to UK REACH

Printing date 08.04.2025

Version number 3.01 (replaces version 3.00)

Revision: 08.04.2025

Trade name: 8820-A

(Contd. of page 8)

HP14	Ecotoxic
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· **Uncleaned packaging:**

· **Recommendation:**

Containers may still present a chemical hazard/ danger when empty.
 Dispose of contents in accordance with all local, regional, national, and international regulations.
 Where possible retain label warnings and SDS and observe all notices pertaining to the product.

SECTION 14: Transport information

· 14.1 UN number or ID number · ADR, IMDG, IATA	Not regulated
· 14.2 UN proper shipping name · ADR, IMDG, IATA	Not regulated
· 14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class	Not regulated
· 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 Maritime transport in bulk according to IMO instruments	Not applicable.
· UN "Model Regulation":	Not regulated

SECTION 15: Regulatory information

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

· **Poisons Act**

· Regulated explosives precursors (Part 1)
None of the ingredients is listed.

· Regulated poisons (Part 2)
None of the ingredients is listed.

· Reportable explosives precursors (Part 3)
None of the ingredients is listed.

· Reportable poisons (Part 4)
None of the ingredients is listed.

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

(Contd. on page 10)

Safety data sheet

according to UK REACH

Trade name: 8820-A

(Contd. of page 9)

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 69

· **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.

· **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.

· **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**

- H225 Highly flammable liquid and vapour.
- H301 Toxic if swallowed.
- H311 Toxic in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H351 Suspected of causing cancer.
- H360 May damage fertility or the unborn child.
- H370 Causes damage to organs.
- H371 May cause damage to organs.
- H372 Causes damage to organs through prolonged or repeated exposure.
- H411 Toxic to aquatic life with long lasting effects.
- EUH205 EUH205: Contains epoxy constituents. May produce an allergic reaction.

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

Skin sensitisation
 Reproductive toxicity
 Hazardous to the aquatic environment - long-term (chronic) aquatic hazard

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

· **Department issuing SDS:** Regulatory department

· **Contact:** sds@mgchemicals.com

· **Date of previous version:** 17.05.2024

· **Version number of previous version:** 3.00

· **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

(Contd. on page 11)

Safety data sheet according to UK REACH

Page 11/11

Printing date 08.04.2025

Version number 3.01 (replaces version 3.00)

Revision: 08.04.2025

Trade name: 8820-A

(Contd. of page 10)

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
ATE: Acute toxicity estimate values
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 2: Carcinogenicity – Category 2
Repr. 1B: Reproductive toxicity – Category 1B
Repr. 2: Reproductive toxicity – Category 2
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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

— GB —

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

· 1.1 Product identifier

· Trade name: 8820-B

- **Other Means of Identification:** High Temperature Rigid Urethane
- **Related Part Number:** 8820-Part B, 8820-375ML (B), 8820-2.55L (B), 8820-10.8L (B), 8820-60L (B)
- **UFI:** FCN0-U077-U00D-51JQ

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

- **Application of the substance / the mixture** Urethane hardener for use with resins
- **Uses advised against** For industrial use only

· 1.3 Details of the supplier of the safety data sheet

· **Manufacturer/Supplier:**

MG Chemicals Ltd. (Head Office)
1210 Corporate Drive
Burlington, Ontario L7L 5R6
CANADA
+(1) 905-331-1396
info@mgchemicals.com

MG Chemicals
Heame House, 23 Bliston Street
Sedgely Dudley DY3 1JA.
United Kingdom
+(44) 1663 362888

MG Chemicalst Ltd.
18-20, Msida Road,
Gzira, GZR 1401
MALTA

- **Further information obtainable from:** sds@mgchemicals.com

· 1.4 Emergency telephone number:

Verisk 3E (Access code: 335388)
+(44) 20 3514787
+(1) 760 476 3961
UK Toll free: +(0) 800 680 0425

Members of the public seeking specific information on poisons should contact:
In England and Wales: NHS 111 - dial 111
In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

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

- Acute Tox. 4 H332 Harmful if inhaled.
- Skin Irrit. 2 H315 Causes skin irritation.
- Eye Irrit. 2 H319 Causes serious eye irritation.
- Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin Sens. 1 H317 May cause an allergic skin reaction.

(Contd. on page 2)

— GB —

Safety data sheet according to UK REACH

Page 2/12

Printing date 08.04.2025

Version number 3.01 (replaces version 3.00)

Revision: 24.07.2024

Trade name: 8820-B

(Contd. of page 1)

STOT SE 3 H335 May cause respiratory irritation.

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

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

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

Hazard pictograms



GHS07 GHS08

Signal word Danger

Hazard-determining components of labelling:

diphenylmethanediisocyanate, isomers and homologues

4,4'-methylenediphenyl diisocyanate

o-(p-isocyanatobenzyl)phenyl isocyanate

2,2'-methylenediphenyl diisocyanate

Hazard statements

H332 Harmful if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

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

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

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

Precautionary statements

P102 Keep out of reach of children.

P260 Do not breathe mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face 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.

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

2.3 Other hazards

Results of PBT and vPvB assessment

· **PBT:** Not applicable.· **vPvB:** Not applicable.· **Determination of endocrine-disrupting properties** Endocrine Disruptor substance $\geq 0.1\%$ = none

SECTION 3: Composition/information on ingredients

3.2 Mixtures

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

(Contd. on page 3)

—GB—

Trade name: 8820-B

(Contd. of page 2)

· Dangerous components:		
CAS: 9016-87-9	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, 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 %	58.0%
CAS: 101-68-8 EINECS: 202-966-0 Index number: 615-005-00-9	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, 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 %	38.0%
CAS: 5873-54-1 EINECS: 227-534-9 Index number: 615-005-00-9	o-(p-isocyanatobenzyl)phenyl 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 %	4.0%
CAS: 2536-05-2 EINECS: 219-799-4 Index number: 615-005-00-9	2,2'-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, 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 %	0.2%

· **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:**

Remove person to fresh air and keep comfortable for breathing.

If feeling unwell: Call a POISON CENTRE or doctor.

If experiencing respiratory symptoms: Call a POISON CENTER or doctor.

· **After skin contact:**

Wash with plenty water.

If skin irritation or rash occurs: Get medical advice or attention.

Take off contaminated clothing and wash it before reuse.

(Contd. on page 4)

Trade name: 8820-B

(Contd. of page 3)

- **After eye contact:**
Rinse cautiously with water for 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice or attention.
- **After swallowing:**
Rinse mouth.
Do NOT induce vomiting.
If symptoms persist consult doctor.
- **Information for doctor:** Treat symptomatically
- **4.2 Most important symptoms and effects, both acute and delayed**
See section 11 for additional information.
- **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.
- **5.2 Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
Not flammable or combustible, but burns if involved in a fire. Produces irritating smoke of unknown toxicity in fires.
Prevent fire-fighting wash from entering waterway or sewer system.
 - **Hazardous combustion products:**
Carbon Oxides (COx)
cyanates
other toxic fumes
- **5.3 Advice for firefighters**
 - **Protective equipment:** Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Remove or keep away all sources of extreme heat or open flames.
Avoid breathing mist, spray, or vapors.
- **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).
Collect liquid in a sealable, chemical-resistant container.
Wash residue with a paper towel and place dirty towels in container.
Use soap and water to remove the last traces of residue.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

(Contd. on page 5)

Trade name: 8820-B

(Contd. of page 4)

See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.
Wear protective gloves and eye protection.
Wash hands and exposed skin thoroughly after handling.
Take off contaminated clothing and wash it before reuse.
Contaminated work clothing should not be allowed out of the workplace.
Use only outdoors or in a well-ventilated area.
Do not breathe mist, vapours, spray.
In case of inadequate ventilation wear respiratory protection.
Keep out of reach of children.

· **Information about fire - and explosion protection:** Keep respiratory protective device available.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

- **Requirements to be met by storerooms and receptacles:**
Keep in a dry and clean area, away from incompatible substances
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store locked up.

7.3 Specific end use(s) See section 1.2

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues	
WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
101-68-8 4,4'-methylenediphenyl diisocyanate	
WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
5873-54-1 o-(p-isocyanatobenzyl)phenyl isocyanate	
WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
2536-05-2 2,2'-methylenediphenyl diisocyanate	
WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO

(Contd. on page 6)

Safety data sheet

according to UK REACH

Trade name: 8820-B

(Contd. of page 5)

· Ingredients with biological limit values:	
101-68-8 4,4'-methylenediphenyl diisocyanate	
BMGV	1 µmol creatinine/mol Medium: urine Sampling time: At the end of the period od exposure Parameter: isocyanate-derived diamine
5873-54-1 o-(p-isocyanatobenzyl)phenyl isocyanate	
BMGV	1 µmol creatinine/mol Medium: urine Sampling time: At the end of the period od exposure Parameter: isocyanate-derived diamine
2536-05-2 2,2'-methylenediphenyl diisocyanate	
BMGV	1 µmol creatinine/mol Medium: urine Sampling time: At the end of the period od exposure Parameter: isocyanate-derived diamine

· **Additional information:**

The lists valid during the making were used as basis.

Refer to the national or regional occupational exposure limit regulation for abbreviations and acronyms.

· **8.2 Exposure controls**

· **Appropriate engineering controls** Keep airborne concentrations below exposure limits.

· **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.

Store protective clothing separately.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

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.

Advice should be sought from respiratory protection specialists.

If the product is heated or worker has a known allergic reaction, consider using a full mask with organic vapor cartridge or with an independent air supply.

· **Hand protection**

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



Protective gloves: EN374

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**

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.

(Contd. on page 7)

Trade name: 8820-B

(Contd. of page 6)

· **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.

· **Eye/face protection**



Safety glasses or tightly sealed goggles: EN 166

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· Physical state	Liquid
· Form:	Viscous
· Colour:	Brown
· Odour:	Musty
· Odour threshold:	Not determined.
· Melting point/freezing point:	Undetermined.
· Boiling point or initial boiling point and boiling range	208 °C
· Flammability	Non flammable
· Lower and upper explosion limit	
· Lower:	Not applicable
· Upper:	Not applicable
· Flash point:	198 °C
· Auto-ignition temperature:	400 °C (9016-87-9 diphenylmethanediisocyanate, isomeres and homologues)
· Decomposition temperature:	Not determined.
· pH	Not determined.
· Viscosity:	
· Kinematic viscosity at 25 °C	216 cP
· Dynamic:	Not determined.
· Solubility	
· water:	Insoluble.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 40 °C:	0 hPa
· Relative density:	Not determined.
· Vapour density (air=1):	Not determined.
· Particle characteristics	Not applicable.

· 9.2 Other information

· 9.2.1 Information with regard to physical hazard classes	Not applicable
· 9.2.2 Other safety characteristics	
· Evaporation rate	Not determined.
· Ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· Solvent content:	
· Organic solvents:	Not available

(Contd. on page 8)

Safety data sheet

according to UK REACH

Printing date 08.04.2025

Version number 3.01 (replaces version 3.00)

Revision: 24.07.2024

Trade name: 8820-B

(Contd. of page 7)

· VOC (EC)	0.00 %
· Solids content:	96.2 %

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** Chemically stable at normal temperatures and pressures.
 - **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**
Direct sunlight
Avoid open flames, excessive heat, sparks, ignition sources, and incompatible substances.
- **10.5 Incompatible materials:**
Amines
Strong bases
Water
Alcohol
- **10.6 Hazardous decomposition products:**
No dangerous decomposition products known.
Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
 - **Acute toxicity** Harmful if inhaled.

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

ATE (Acute Toxicity Estimates)		
Inhalative	LC50/4 h	1.5 mg/L
9016-87-9 diphenylmethanediisocyanate, isomeres and homologues		
Inhalative	LC50/4 h	1.5 mg/L (ATE)
101-68-8 4,4'-methylenediphenyl diisocyanate		
Oral	LD50	2,200 mg/kg (mouse)
Inhalative	LC50/4 h	1.5 mg/L (ATE)
5873-54-1 o-(p-isocyanatobenzyl)phenyl isocyanate		
Inhalative	LC50/4 h	1.5 mg/L (ATE)
2536-05-2 2,2'-methylenediphenyl diisocyanate		
Inhalative	LC50/4 h	1.5 mg/L (ATE)

- **Primary irritant effect:**
 - **Skin corrosion/irritation** Causes skin irritation.
 - **Serious eye damage/irritation** Causes serious eye irritation.

(Contd. on page 9)

Trade name: 8820-B

(Contd. of page 8)

- **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.
- **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** 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.
- **Summary of Effects and Symptoms by Routes of Exposure**
 - **Eyes:**
redness, serious irritation
pain
 - **Skin:**
dry skin
rash, allergic contact dermatitis
redness, irritation
 - **Inhalation:**
irritation of the respiratory tract
wheezing, shortness of breath, difficulty breathing
mist or vapours may cause breathlessness, chest discomfort, and reduced pulmonary function
 - **Swallowed:** Low toxicity:
- **Subacute to chronic toxicity:**
 - **Delayed and immediate effects as well as chronic effects from short and long-term exposure**
Prolonged or repeated exposure may cause skin allergies.
- **11.2 Information on other hazards**

· Endocrine disrupting properties
None of the ingredients is listed.

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.
- **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

(Contd. on page 10)

Safety data sheet

according to UK REACH

Printing date 08.04.2025

Version number 3.01 (replaces version 3.00)

Revision: 24.07.2024

Trade name: 8820-B

(Contd. of page 9)

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

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

- **Recommendation** This material and its container must be disposed of as hazardous waste.

· European waste catalogue

HP4	Irritant - skin irritation and eye damage
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP7	Carcinogenic
HP13	Sensitising

· Uncleaned packaging:

· Recommendation:

- Containers may still present a chemical hazard/ danger when empty.
- Dispose of contents in accordance with all local, regional, national, and international regulations.
- Where possible retain label warnings and SDS and observe all notices pertaining to the product.

- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

* SECTION 14: Transport information

· 14.1 UN number or ID number	
· ADR, IMDG, IATA	Not regulated
· 14.2 UN proper shipping name	
· ADR, IMDG, IATA	Not regulated
· 14.3 Transport hazard class(es)	
· ADR, ADN, IMDG, IATA	
· Class	Not regulated
· 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 Maritime transport in bulk according to IMO instruments	Not applicable.
· UN "Model Regulation":	Not regulated

Trade name: 8820-B

(Contd. of page 10)

SECTION 15: Regulatory information

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

· Poisons Act

· Regulated explosives precursors (Part 1)
None of the ingredients is listed.
· Regulated poisons (Part 2)
None of the ingredients is listed.
· Reportable explosives precursors (Part 3)
None of the ingredients is listed.
· Reportable poisons (Part 4)
None of the ingredients is listed.

· 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, 56b, 56c, 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.
· 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.

· **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.
- EUH204 EUH204: Contains isocyanates. May produce an allergic reaction.

(Contd. on page 12)

Safety data sheet

according to UK REACH

Printing date 08.04.2025

Version number 3.01 (replaces version 3.00)

Revision: 24.07.2024

Trade name: 8820-B

(Contd. of page 11)

· Classification according to Regulation (EC) No 1272/2008	
Acute toxicity - inhalation Skin corrosion/irritation Serious eye damage/irritation Respiratory sensitisation Skin sensitisation Specific target organ toxicity (single exposure) Specific target organ toxicity (repeated exposure)	The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

· **Department issuing SDS:** Regulatory department

· **Contact:** sds@mgchemicals.com

· **Date of previous version:** 24.07.2024

· **Version number of previous version:** 3.00

· **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)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

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

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