Resin Pack 14C Hardener

Safety Data Sheet

according to Regulation (EU) 2015/830

Issue date: 3/2/2021 Revision date: 12/15/2023 Supersedes version of: 3/2/2021 Version: 4.1

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

1.1. Product identifier

Product form	:	Mixture
Product name	:	Resin Pack 14C Hardener
Type of product	:	Adhesives, Sealants
Synonyms	:	Resin Pack 14B Hardener

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

1.2.1. Relevant identified uses

Main use category	:	Industrial use,Professional use

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

ALH Systems Ltd
1 Kingdom Avenue
Northacre Industrial Park
BA13 4WE Westbury, Wiltshire
UK
T 01373 858234
sales@alh-systems.co.uk, alh-systems.co.uk

1.4. Emergency telephone number

Emergency number	:	+44 1865 407333 24 hours (reference: ALH29003)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Respiratory sensitisation, Category 1	H334
Skin sensitisation, Category 1	H317
Carcinogenicity, Category 2	H351
Reproductive toxicity, Additional category, Effects on or via lactation	H362
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335
Specific target organ toxicity – Repeated exposure, Category 2	H373
Hazardous to the aquatic environment – Acute Hazard, Category 1	H400
Hazardous to the aquatic environment – Chronic Hazard, Category 1	H410

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

May cause damage to organs. Suspected of causing cancer. May cause harm to breast-fed children. May cause damage to organs through prolonged or repeated exposure. May cause respiratory irritation. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Very toxic to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS07 GHS08 GHS09

Signal word (CLP) : Danger

Contains : Diphenylmethane diisocyanate, isomers and homologues; 4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate; o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate; alkanes, C14-17, chloro; chlorinated paraffins, C14-17; 2,2'-methylenediphenyl diisocyanate; diphenylmethane-2,2'-diisocyanate

Hazard statements (CLP) : H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 - May cause respiratory irritation.
H351 - Suspected of causing cancer.
H362 - May cause harm to breast-fed children.
H373 - May cause damage to organs through prolonged or repeated exposure.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) : P260 - Do not breathe dust, gas, fume, mist, spray, vapours.
P263 - Avoid contact during pregnancy and while nursing.
P264 - Wash hands thoroughly after handling.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

EUH-statements : EUH204 - Contains isocyanates. May produce an allergic reaction.

2.3. Other hazards

Contains PBTvPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
alkanes, C14-17, chloro; chlorinated paraffins, C14-17 substance listed as REACH Candidate (Medium-chain chlorinated paraffins (MCCP)) PBT substance; vPvB substance	CAS-No.: 85535-85-9 EC-No.: 287-477-0 EC Index-No.: 602-095-00-X REACH-no: 01-2119519269-33	20-40	Lact., H362 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Diphenylmethane diisocyanate, isomers and homologues substance with national workplace exposure limit(s) (GB)	CAS-No.: 9016-87-9 EC-No.: 618-498-9	10-30	Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:vapour), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate substance with national workplace exposure limit(s) (DE, GB)	CAS-No.: 101-68-8 EC-No.: 202-966-0 EC Index-No.: 615-005-00-9	1-10	Carc. 2, H351 Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317
o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate substance with national workplace exposure limit(s) (DE, GB)	CAS-No.: 5873-54-1 EC-No.: 227-534-9 EC Index-No.: 615-005-00-9	1-10	Carc. 2, H351 Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317
2,2'-methylenediphenyl diisocyanate; diphenylmethane-2,2'-diisocyanate	CAS-No.: 2536-05-2 EC-No.: 219-799-4 EC Index-No.: 615-005-00-9	1-5	Carc. 2, H351 Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317

Specific concentration limits:		
Name	**Product identifier**	**Specific concentration limits (%)**
4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate	CAS-No.: 101-68-8 EC-No.: 202-966-0 EC Index-No.: 615-005-00-9	(0.1 ≤ C < 100) Resp. Sens. 1, H334 (5 ≤ C < 100) STOT SE 3, H335 (5 ≤ C < 100) Skin Irrit. 2, H315 (5 ≤ C < 100) Eye Irrit. 2, H319
o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate	CAS-No.: 5873-54-1 EC-No.: 227-534-9 EC Index-No.: 615-005-00-9	(0.1 ≤ C < 100) Resp. Sens. 1, H334 (5 ≤ C < 100) STOT SE 3, H335 (5 ≤ C < 100) Skin Irrit. 2, H315 (5 ≤ C < 100) Eye Irrit. 2, H319
2,2'-methylenediphenyl diisocyanate; diphenylmethane-2,2'-diisocyanate	CAS-No.: 2536-05-2 EC-No.: 219-799-4 EC Index-No.: 615-005-00-9	(0.1 ≤ C < 100) Resp. Sens. 1, H334 (5 ≤ C < 100) Eye Irrit. 2, H319 (5 ≤ C < 100) Skin Irrit. 2, H315 (5 ≤ C < 100) STOT SE 3, H335

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If medical advice is needed, have product container or label at hand. IF exposed or concerned: Get medical advice/attention. Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. When symptoms occur: go into open air and ventilate suspected area. If you feel unwell, seek medical advice. Call a poison center or a doctor if you feel unwell.

First-aid measures after skin contact : After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Rinse skin with water/shower. Wash contaminated clothing before reuse. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Obtain medical attention if pain, blinking or redness persists. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting. Drink plenty of water. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects : Harmful if inhaled. May cause damage to organs through prolonged or repeated exposure. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. If you feel unwell, seek medical advice (show the label where possible).

Symptoms/effects after inhalation : Inhalation may cause irritation (cough, short breathing, difficulty in breathing). May cause headache, nausea and irritation of respiratory tract. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Symptoms/effects after skin contact : Causes skin irritation. Irritation. May cause an allergic skin reaction. Repeated exposure may cause skin dryness or cracking.

Symptoms/effects after eye contact : Causes serious eye irritation. Eye irritation.

Symptoms/effects after ingestion : May cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Dry chemical, CO2, dry sand, or alcohol-resistant foam. Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Water.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not flammable.

Explosion hazard : No direct explosion hazard.

Reactivity in case of fire : Product is not explosive.

Hazardous decomposition products in case of fire : Thermal decomposition generates : Carbon dioxide. Carbon monoxide. Toxic fumes may be released.

5.3. Advice for firefighters

Precautionary measures fire : Keep container tightly closed and away from heat, sparks and flame. Stop leak if safe to do so.

Firefighting instructions : Contain the extinguishing fluids by bunding. Do not enter fire area without proper protective equipment, including respiratory protection. Prevent fire fighting water from entering the environment.

Protection during firefighting : Use self-contained breathing apparatus and chemically protective clothing. Wear fire/flame resistant/retardant clothing. Wear recommended personal protective equipment. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

Other information : High temperature decomposition products are harmful by inhalation.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid contact with skin and eyes. Clean up any spills as soon as possible, using an absorbent material to collect it. Do not allow contact with water. Do not handle until all safety precautions have been read and understood. Notify authorities if product enters sewers or public waters. Stop leak if safe to do so. Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Use suitable eye protection and gloves.

Emergency procedures : Ventilate spillage area. See section 8 of the SDS for more information on personal protective equipment. Avoid contact with skin, eyes and clothing. Evacuate unnecessary personnel. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Protective gloves. Safety glasses. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Stop leak if safe to do so. Evacuate unnecessary personnel.

6.2. Environmental precautions

Avoid release to the environment. Very toxic to aquatic life with long lasting effects. Do not allow water (or moist air) contact with this material. Prevent liquid from entering sewers, watercourses, underground or low areas. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible. Using a clean shovel, put the material in a dry container and cover without compressing it. Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material. Clean up any spills as soon as possible, using an absorbent material to collect it. Collect leaking and spilled liquid in sealable containers as far as possible. This material and its container must be disposed of in a safe way, and as per local legislation. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Do not allow contact with water.

Precautions for safe handling : Avoid contact with skin, eyes and clothing. Contaminated work clothing should not be allowed out of the workplace. Ensure good ventilation of the work station. Protect from moisture. Provide good ventilation in process area to prevent formation of vapour. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact during pregnancy/while nursing. Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.

Hygiene measures : Take off immediately all contaminated clothing and wash it before reuse. Wear personal protective equipment. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ensure adequate ventilation, especially in confined areas. Keep in a cool, well-ventilated place away from heat. Store in tightly closed, leak-proof containers.

Storage conditions	:	Keep cool. Protect from sunlight. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in a well-ventilated place. Keep container tightly closed.
Incompatible products	:	Humid air, water. Oxidizing agent. Strong acids. Strong bases.
Incompatible materials	:	Do not allow contact with water.
Maximum storage period	:	12 months
Storage temperature	:	5 – 30 °C
Storage area	:	Store away from heat. Store in a well-ventilated place.
Special rules on packaging	:	Store in a closed container.
Packaging materials	:	Store always product in container of same material as original container.

Switzerland

Storage class (LK)	:	LK 6.1 - Toxic materials

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Resin Pack 14C Hardener	
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	o-(p-Isocyanatobenzyl)phenylisocyanat
AGW (OEL TWA)	0.05 mg/m³
Peak exposure limitation factor	1;=2=(I)
Remark	AGS - Ausschuss für Gefahrstoffe; 11 - Summe aus Dampf und Aerosolen; 12 - Der Arbeitsplatzgrenzwert gilt in der Regel nur für die Monomeren. Zur Beurteilung von Oligomeren oder Polymeren siehe TRGS 430 "Isocyanate"
Regulatory reference	TRGS900

Diphenylmethane diisocyanate, isomers and homologues (9016-87-9)	
United Kingdom - Occupational Exposure Limits	
Local name	Iscocyanates, all (as-NCO) Except methyl isocyanate
WEL TWA (OEL TWA)	0.02 mg/m³ 8 h

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)	
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	4,4'-Methylendiphenyldiisocyanat
AGW (OEL TWA)	0.05 mg/m³
Remark	DFG,11,12,Sa,Y
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	0.02 mg/m³
WEL STEL (OEL STEL)	0.07 mg/m³
Remark	measured as NCO
USA - ACGIH - Occupational Exposure Limits	
Local name	Methylene Bisphenyl isocyanate (MDI)
ACGIH OEL TWA	0.005 ppm

o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate (5873-54-1)	
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	o-(p-Isocyanatobenzyl)phenylisocyanat
AGW (OEL TWA)	0.05 mg/m³
Remark	AGS,11,12
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	0.02 mg/m³
WEL STEL (OEL STEL)	0.07 mg/m³

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure that there is a suitable ventilation system. Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:
Gloves. Protective clothing. Safety glasses.

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Chemical goggles or safety glasses. Safety glasses

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Nitrile rubber gloves

8.2.2.3. Respiratory protection

Respiratory protection:
In case of inadequate ventilation wear respiratory protection. [In case of inadequate ventilation] wear respiratory protection.

Respiratory protection			
Device	**Filter type**	**Condition**	**Standard**
Reusable half mask	Type A - High-boiling (>65 °C) organic compounds, Filter AX (brown)	If conc. in air > exposure limit	

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:
Do not exceed the occupational exposure limits (OEL). Avoid release to the environment.

Consumer exposure controls:
Avoid contact during pregnancy/while nursing.

Other information:
Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Viscous liquid.
Colour	:	brown.
Odour	:	characteristic.
Odour threshold	:	No data available
pH	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Not applicable
Vapour pressure	:	No data available
Relative vapour density at 20°C	:	No data available
Relative density	:	1.18
Solubility	:	Reacts with water.
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	500 mPa·s
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Do not allow contact with water. The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Moisture. Water, humidity.

10.5. Incompatible materials

Amines. Incompatible with water, humid air. Oxidizing agent. Strong acids. Strong bases.

10.6. Hazardous decomposition products

No hazardous decomposition products known at room temperature. Thermal decomposition generates : Carbon dioxide. Carbon monoxide. May liberate toxic gases.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Diphenylmethane diisocyanate, isomers and homologues (9016-87-9)	
LD50 oral rat	> 10000 mg/kg
LD50 dermal rabbit	> 9400 mg/kg
LC50 Inhalation - Rat [ppm]	4500 ppm
LC50 Inhalation - Rat (Dust/Mist)	0.49 mg/l/4h
LC50 Inhalation - Rat (Vapours)	11 mg/l/4h

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	9400 mg/kg

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.
Germ cell mutagenicity : Not classified
Carcinogenicity : Suspected of causing cancer.
Reproductive toxicity : May cause harm to breast-fed children.
STOT-single exposure : May cause respiratory irritation.

Diphenylmethane diisocyanate, isomers and homologues (9016-87-9)	
STOT-single exposure	May cause respiratory irritation.

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)	
STOT-single exposure	May cause respiratory irritation.

o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate (5873-54-1)	
STOT-single exposure	May cause respiratory irritation.

2,2'-methylenediphenyl diisocyanate; diphenylmethane-2,2'-diisocyanate (2536-05-2)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

Diphenylmethane diisocyanate, isomers and homologues (9016-87-9)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate (5873-54-1)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

2,2'-methylenediphenyl diisocyanate; diphenylmethane-2,2'-diisocyanate (2536-05-2)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
Ecology - water : Very toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short–term (acute) : Very toxic to aquatic life.
Hazardous to the aquatic environment, long–term (chronic) : Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

Resin Pack 14C Hardener	
Persistence and degradability	Not established.

Diphenylmethane diisocyanate, isomers and homologues (9016-87-9)	
Persistence and degradability	Rapidly degradable

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)	
Persistence and degradability	Rapidly degradable

o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate (5873-54-1)	
Persistence and degradability	Rapidly degradable

alkanes, C14-17, chloro; chlorinated paraffins, C14-17 (85535-85-9)	
Persistence and degradability	Rapidly degradable

2,2'-methylenediphenyl diisocyanate; diphenylmethane-2,2'-diisocyanate (2536-05-2)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

Resin Pack 14C Hardener	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component	
alkanes, C14-17, chloro; chlorinated paraffins, C14-17 (85535-85-9)	This substance meets the PBT criteria of REACH regulation, annex XIII This substance meets the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

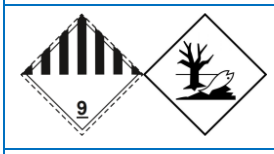
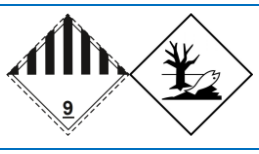
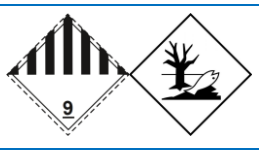
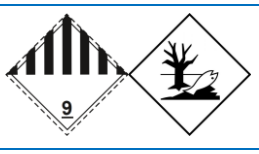
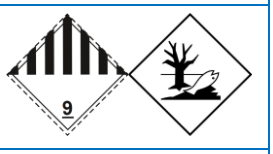
SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste. Dispose in a safe manner in accordance with local/national regulations. Disposal must be done according to official regulations.
Additional information : Clean up even minor leaks or spills if possible without unnecessary risk. Do not allow water (or moist air) contact with this material. Do not re-use empty containers.
Ecological information : Avoid release to the environment.
European List of Waste (LoW, EC 2000/532) : 08 04 09* - waste adhesives and sealants containing organic solvents or other dangerous substances

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082
14.2. UN proper shipping name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	Environmentally hazardous substance, liquid, n.o.s.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Transport document description				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s., 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III
14.3. Transport hazard class(es)				
9	9	9	9	9
				
14.4. Packing group				
III	III	III	III	III

ADR	IMDG	IATA	ADN	RID
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	:	M6
Special provisions (ADR)	:	274, 335, 375, 601
Limited quantities (ADR)	:	5l
Excepted quantities (ADR)	:	E1
Packing instructions (ADR)	:	P001, IBC03, LP01, R001
Special packing provisions (ADR)	:	PP1
Mixed packing provisions (ADR)	:	MP19
Portable tank and bulk container instructions (ADR)	:	T4
Portable tank and bulk container special provisions (ADR)	:	TP1, TP29
Tank code (ADR)	:	LGBV
Vehicle for tank carriage	:	AT
Transport category (ADR)	:	3
Special provisions for carriage - Packages (ADR)	:	V12
Special provisions for carriage - Loading, unloading and handling (ADR)	:	CV13
Hazard identification number (Kemler No.)	:	90
Orange plates	:	
Tunnel restriction code (ADR)	:	-
EAC code	:	•3Z

Transport by sea

Special provisions (IMDG)	:	274, 335, 969
Limited quantities (IMDG)	:	5 L
Excepted quantities (IMDG)	:	E1
Packing instructions (IMDG)	:	LP01, P001
Special packing provisions (IMDG)	:	PP1
IBC packing instructions (IMDG)	:	IBC03
Tank instructions (IMDG)	:	T4
Tank special provisions (IMDG)	:	TP1, TP29
EmS-No. (Fire)	:	F-A
EmS-No. (Spillage)	:	S-F
Stowage category (IMDG)	:	A

Air transport

PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Y964
PCA limited quantity max net quantity (IATA)	:	30kgG
PCA packing instructions (IATA)	:	964
PCA max net quantity (IATA)	:	450L
CAO packing instructions (IATA)	:	964
CAO max net quantity (IATA)	:	450L
Special provisions (IATA)	:	A97, A158, A197
ERG code (IATA)	:	9L

Inland waterway transport

Classification code (ADN)	:	M6

Special provisions (ADN)	:	274, 335, 375, 601
Limited quantities (ADN)	:	5 L
Excepted quantities (ADN)	:	E1
Equipment required (ADN)	:	PP
Number of blue cones/lights (ADN)	:	0

Rail transport

Classification code (RID)	:	M6
Special provisions (RID)	:	274, 335, 375, 601
Limited quantities (RID)	:	5L
Excepted quantities (RID)	:	E1
Packing instructions (RID)	:	P001, IBC03, LP01, R001
Special packing provisions (RID)	:	PP1
Mixed packing provisions (RID)	:	MP19
Portable tank and bulk container instructions (RID)	:	T4
Portable tank and bulk container special provisions (RID)	:	TP1, TP29
Tank codes for RID tanks (RID)	:	LGBV
Transport category (RID)	:	3
Special provisions for carriage – Packages (RID)	:	W12
Special provisions for carriage - Loading, unloading and handling (RID)	:	CW13, CW31
Colis express (express parcels) (RID)	:	CE8
Hazard identification number (RID)	:	90

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains substance(s) listed on the REACH Candidate List in concentrations ≥ 0.1 % or SCL: Medium-chain chlorinated paraffins (MCCP) (EC 287-477-0, CAS 85535-85-9)

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Germany

Employment restrictions	:	Observe restrictions according Act on the Protection of Working Mothers (MuSchG). Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).
Water hazard class (WGK)	:	WGK 2, Significantly hazardous to water (Classification according to AwSV, Annex 1).
Hazardous Incident Ordinance (12. BImSchV)	:	Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen	:	alkanes, C14-17, chloro; chlorinated paraffins, C14-17 is listed
SZW-lijst van mutagene stoffen	:	alkanes, C14-17, chloro; chlorinated paraffins, C14-17 is listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	:	alkanes, C14-17, chloro; chlorinated paraffins, C14-17 is listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	:	None of the components are listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	:	None of the components are listed

Denmark

Danish National Regulations	:	Young people below the age of 18 years are not allowed to use the product Pregnant/breastfeeding women working with the product must not be in direct contact with the product Persons suffering from asthma or eczema and persons who have chronic lung diseases, skin or respiratory allergies to isocyanates should not work with the material The requirements from the Danish Working Environment Authorities regarding work with epoxy resins and isocyanates must be observed during use and disposal The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose

Abbreviations and acronyms:	
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
EUH204	Contains isocyanates. May produce an allergic reaction.
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
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.
H362	May cause harm to breast-fed children.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Full text of H- and EUH-statements:	
Lact.	Reproductive toxicity, Additional category, Effects on or via lactation
Resp. Sens. 1	Respiratory sensitisation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.