

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

- **1.1 Product identifier**
- **Creation date version 1** 10.06.2003
- **Trade name** NEUKADUR hardener ISO 1
- **Article number:** P1012
- **Utilization of the substance of the formulation:**
Hardener for polyols for the production of polyurethanes
- **UFI:** 5MWC-6F9G-K00C-DW2J
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
ALTROPOL KUNSTSTOFF GmbH
Rudolf-Diesel-Str 9 - 13
D-23617 Stockelsdorf
Tel. +49 (0)451-49960-0
Fax. +49 (0)451-49960-20
e-mail: info@altropol.de
- **Further information obtainable from:** environment protection department
- **1.4 Emergency telephone number:**
During normal opening times (7 am - 5 pm)
phone : +49 (0)451-49960-0
National Poisons Information Centre: +353 (1) 809 2166 (8.00 a.m. to 10.00 p.m. 7 days a week)
Healthcare Professionals: +353 (1) 809 2566 (24 hour service)

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS08 health hazard

- Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Carc. 2 H351 Suspected of causing cancer.
- STOT RE 2 H373 May cause damage to the lung and the respiratory tract through prolonged or repeated exposure.



GHS09 environment

- Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

- Acute Tox. 4 H332 Harmful if inhaled.
- Skin Irrit. 2 H315 Causes skin irritation.

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Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.

· **2.2 Label elements**

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

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

· **Hazard pictograms**



GHS07 GHS08 GHS09

· **Signal word** Danger

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

4,4'-diphenyl-methane diisocyanate. oligomeric

· **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.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.
H373 May cause damage to the lung and the respiratory tract through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P284 [In case of inadequate ventilation] wear respiratory protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**

EUH204 Contains isocyanates. May produce an allergic reaction.
As from 24 August 2023 adequate training is required before industrial or professional use.

· **2.3 Other hazards**

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 25686-28-6 NLP: 500-040-3	4,4'-diphenyl-methane diisocyanate. oligomeric ⚠ 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	75-100%
CAS: 38640-62-9 EINECS: 254-052-6	alkylated aromatic hydrocarbon ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 1, H410	2.5-5%
CAS: 126-73-8 EINECS: 204-800-2	tributyl phosphate ⚠ Carc. 2, H351; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Aquatic Chronic 3, H412	≥0.25-<1%

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:

Immediately remove any clothing soiled by the product.

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

Involve doctor immediately.

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

After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact:

In contact with the skin preferably with cleaners based

Polyethylene wash or clean with plenty of hot water and soap. In reactions of Skin doctor immediately.

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

After eye contact:

Protect unharmed eye.

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing:

Do not induce vomiting; call for medical help immediately.

Seek immediate medical advice.

If swallowed, rinse mouth with water (only if the person is conscious).

4.2 Most important symptoms and effects, both acute and delayed

The product is irritating to the respiratory tract and may trigger skin and

Respiratory sensitization. Treatment of acute irritation or bronchial

is primarily symptomatic. Depending on the degree of exposure and the

Complaints may be necessary long-term medical care.

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- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
 - **Suitable extinguishing agents:** Extinguishing powder. Do not use water.
 - **For safety reasons unsuitable extinguishing agents:** Water
- **5.2 Special hazards arising from the substance or mixture**

In case of fire, formation of carbon monoxide, nitrogen oxide, isocyanate vapour, and traces of hydrogen cyanide is possible. Fireman have to wear self-contained breathing apparatus. Do not let enter contaminated extinguishing water into the soil, groundwater or surface waters.
- **5.3 Advice for firefighters**
 - **Protective equipment:**

Do not inhale explosion gases or combustion gases.
Wear self-contained respiratory protective device.
Wear fully protective suit.
 - **Additional information**

Cool endangered receptacles with water spray.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

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

Avoid contact with eyes and skin.
Wear protective equipment. Keep unprotected persons away.
Keep people at a distance and stay on the windward side.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**

Remove mechanically; remainder with wet, absorbent material (eg sawdust, chemical binder based on Calcium silicate hydrate, sand). After approx 1 hour transfer to waste container and do not seal (evolution of CO₂).
Keep damp in a safe ventilated area for several days.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
- **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**

At workplaces or system parts where isocyanate aerosols and / or vapors in higher concentrations can arise (e.g. pressure relief, mold ventilation, Blowing through mixing heads with compressed air), the occupational hygiene limit values are prevented. The air movement must be carried out by the people

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- be done away. The effectiveness of the systems must be checked at regular intervals.
Air limit values mentioned in Chapter 8 must be monitored.
The personal protective measures described in Chapter 8 must be observed. Contact with the skin and eyes as well as the inhalation of the vapors absolutely avoid.
Keep away from food and luxury items. Hands before breaks and at the end of work wash and apply protective skin ointment. Store work clothes separately. Soiled, Take off soaked clothing immediately.
The protective measures necessary when dealing with isocyanates must be observed. Avoid contact with skin and eyes and inhalation of vapors.
Open and handle receptacle with care.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Protect against electrostatic charges.
Keep ignition sources away - Do not smoke.
 - **7.2 Conditions for safe storage, including any incompatibilities**
 - **Storage:**
 - **Requirements to be met by storerooms and receptacles:**
Keep container tightly closed and dry and storage in a good ventilated room.
- Storage temperature: 20 - 25 °C.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from water.
 - **Further information about storage conditions:**
Protect from humidity and water.
Protect from frost.
Keep container tightly sealed.
 - **Storage class: 10**
 - **7.3 Denomination of Origin** Made in Germany
 - **Processing information** Homogenize content before use
 - **General remark** For processing instructions see data sheet

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

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

126-73-8 tributyl phosphate

OEL (Ireland)	Long-term value: 5 mg/m ³
WEL (Great Britain)	Short-term value: 5 mg/m ³
	Long-term value: 5 mg/m ³

· **DNELs**

25686-28-6 4,4'-diphenyl-methane diisocyanate. oligomeric

Inhalative	DNEL Acute - local effects	0.05 mg/m ³ (General population)
		0.1 mg/m ³ (workers)
	DNEL Long-term - local effects	0.025 mg/m ³ (General population)
		0.05 mg/m ³ (workers)

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38640-62-9 alkylated aromatic hydrocarbon

Oral	DNEL Long-term	2.1 mg/kg bw/day (General population)
Dermal	DNEL Long-term	2.1 mg/kg bw/day (General population)
		4.3 mg/kg bw/day (workers)
Inhalative	DNEL Long-term	7.4 mg/m ³ (General population)
		30 mg/m ³ (workers)

126-73-8 tributyl phosphate

Oral	DNEL systemic effects - long term exposure	0.22 mg/kg bw/d (General population)
	DNEL Short term - systemic effects	0.88 mg/kg bw/d (General population)
Dermal	DNEL Acute - systemic effects	0.88 mg/kg bw/day (General population)
		1.78 mg/kg bw/day (workers)
	DNEL Long-term - systemic effects	0.22 mg/kg bw/day (General population)
		0.44 mg/kg bw/day (workers)
Inhalative	DNEL Short term - local effects	0.88 mg/kg bw/d (General population)
		1.78 mg/kg bw/d (workers)
	DNEL Long-term exposure - local effects	0.22 mg/kg bw/d (General population)
		0.44 mg/kg bw/d (workers)
	DNEL Long-term exposure - systemic effects	0.77 mg/m ³ (General population)
		3.13 mg/m ³ (workers)
	DNEL Long-term exposure - local effects	0.77 mg/m ³ (General population)
		3.13 mg/m ³ (workers)
Inhalative	DNEL Acute - local effects	3.08 mg/m ³ (General population)
		12.52 mg/m ³ (workers)
	DNEL Short-term exposure - systemic effects	3.08 mg/m ³ (General population)
		12.52 mg/m ³ (workers)

· PNECs

25686-28-6 4,4'-diphenyl-methane diisocyanate. oligomeric

	PNEC STP	1 mg/L (sewage plant)
	PNEC soil	1 mg/kg (soil (Boden))
	PNEC	1 mg/l (freshwater)
		0.1 mg/l (marine water)
		10 mg/l (intermittent releases)

38640-62-9 alkylated aromatic hydrocarbon

Oral	PNEC	25 mg/kg (food)
	PNEC STP	0.15 mg/L (sewage plant)
PNEC aqua		0.236 ug/L (freshwater)
		0.0236 ug/L (marine water)
	PNEC sediment	0.853 mg/kg (freshwater)
		0.085 mg/kg (marine water)

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	PNEC soil	0.19 mg/kg (soil (Boden))
126-73-8 tributyl phosphate		
	PNEC STP	1 mg/L (sewage plant)
	PNEC	0.082 mg/l (freshwater)

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

· **8.2 Exposure controls**

· **Appropriate engineering controls** No further data; see section 7.

· **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.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

Full-contained breathing apparatus with a gas mask. The respirators used for protection can be used with Type A filter against organic vapors, where powder or aerosol is present at least with the A / P2 filter.

In case of hypersensitivity of the respiratory tract and skin (asthma, chronic bronchitis, chronic skin disease)

is inadvisable to work with the product. Symptoms in the respiratory tract can also occur several hours after overexposure ..

· **Hand protection**

Preventive skin protection (3-point program) required



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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

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.

· **Penetration time of glove material**

Suitable materials for protective gloves, EN 374-3:

Polychloroprene - CR: thickness > = 0.5 mm, breakthrough time > = 480 min.

NBR - NBR: thickness > = 0,35 mm, Breakthrough time > = 480 min.

Butyl rubber - IIR: thickness > = 0.5 mm, breakthrough time > = 480 min.

Fluorine rubber - FKM: thickness > = 0.4 mm; breakthrough time > = 480 min.

Recommendation: Dispose of contaminated gloves ..

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· Eye/face protection



Tightly sealed goggles

· Body protection: Protective work clothing

* SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Physical state	Fluid
· Colour:	Yellow
· Odour:	Characteristic
· Odour threshold:	Not determined.
· Melting point/freezing point:	41 °C
· Boiling point or initial boiling point and boiling range	290 °C
· Flammability	Not applicable.
· Lower and upper explosion limit	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	250 °C
· Auto-ignition temperature:	400 °C
· Decomposition temperature:	Not determined.
· pH	Not determined.
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic at 20 °C:	100 mPas
· Solubility	
· water:	Insoluble.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not determined.
· Density and/or relative density	
· Density at 20 °C:	1.2 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.

· 9.2 Other information

· Appearance:

· Form: Fluid

· Important information on protection of health and environment, and on safety.

· Ignition temperature: Product is not selfigniting.

· Explosive properties: Product does not present an explosion hazard.

· Solvent content:

· Organic solvents: 0.9 %

· VOC (EC) 11.3 g/l

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· Change in condition	
· Evaporation rate	Not determined.
· Information with regard to physical hazard classes	
· Explosives	Void
	Void
· Flammable gases	Void
	Void
· Aerosols	Void
	Void
· Oxidising gases	Void
	Void
· Gases under pressure	Void
	Void
· Flammable liquids	Void
	Void
· Flammable solids	Void
	Void
· Self-reactive substances and mixtures	Void
	Void
· Pyrophoric liquids	Void
	Void
· Pyrophoric solids	Void
	Void
· Self-heating substances and mixtures	Void
	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
	Void
· Oxidising liquids	Void
	Void
· Oxidising solids	Void
	Void
· Organic peroxides	Void
	Void
· Corrosive to metals	Void
	Void
· Desensitised explosives	Void
	Void

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
Exothermic reaction with amines and alcohols; reacts with water forming CO₂, in closed containers risk of bursting owing to increase of pressure.

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Trade name NEUKADUR hardener ISO 1

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· **10.4 Conditions to avoid***Heat, flames and sparks.**Moisture. Heat, open flames and other ignition sources. With contaminated pipes and tanks or corroded or rusty containers may lead to increased formation of hydrogen. Detail in section 7.*· **10.5 Incompatible materials:***water, alcohol, amine, base and acid**Incompatible with oxidizing agents, acids*· **10.6 Hazardous decomposition products:** *At the air > 300 °C: acrolein***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:****25686-28-6 4,4'-diphenyl-methane diisocyanate, oligomeric**

Oral	LD50	>2,000 mg/kg (rat) (OECD 425 Acute Oral Toxicity: Up-and-Down Procedure)
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Dermal	LD50	>9,400 mg/kg (rat) (OECD 402 Acute Dermal Toxicity)
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38640-62-9 alkylated aromatic hydrocarbon

Oral	LD50	>4,000 mg/kg (rat) (OECD 401 Acute Oral Toxicity)
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	NOAEL	~170 mg/kg (rat)
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Dermal	LD50	>4,000 mg/kg (rat) (OECD 402 Acute Dermal Toxicity)
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126-73-8 tributyl phosphate

Oral	LD50	1,552 mg/kg (rat)
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· **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** Based on available data, the classification criteria are not met.· **Carcinogenicity** Suspected of causing cancer.· **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 the lung and the respiratory tract through prolonged or repeated exposure.*· **Aspiration hazard** Based on available data, the classification criteria are not met.· **11.2 Information on other hazards**· **Endocrine disrupting properties***None of the ingredients is listed.*

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Trade name NEUKADUR hardener ISO 1

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SECTION 12: Ecological information**12.1 Toxicity****Aquatic toxicity:****25686-28-6 4,4'-diphenyl-methane diisocyanate. oligomeric**

LC50 (96 h)	>1,000 mg/l (Danio Rerio)
EC50 (72 h)	>1,640 mg/l (Desmodesmus subspicatus)
EC50 (24h)	>1,000 mg/l (Daphnia Magna)
EC50(3h)	>100 mg/l (sludge)
NOEC / 21d	>10 mg/l (Daphnia Magna)
LC50 (14d)	>1,000 mg/kg (Eisenia fetida (Regenwurm)) (OECD 207 Earthworm, Acute Toxicity Tests)
EC50 (14d)	>1,000 mg/kg (Avena sativa (Hafer)) (OECD 208 Terrestrial Plant Test) >1,000 mg/kg (Lactuca Sativa (Kopfsalat)) (OECD 208 Terrestrial Plant Test)

38640-62-9 alkylated aromatic hydrocarbon

LC0(96h)	0.5 mg/l (fish)
EC0 (48h)	0.16 mg/l (D)
LL50 (48h)	1.7 mg/L (D)
EC0 (72h)	0.15 mg/l (A)
NOEC / 21d	0.013 mg/l (D) (OECD 202 Daphnia sp. Acute Immobilisation Test)

126-73-8 tributyl phosphate

NOEC / 21d	1.3 mg/l (Daphnia Magna)
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· **12.2 Persistence and degradability** No further relevant information available.

· **Other information:** Elimination by adsorption onto activated sludge

· **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.

WGK 3 stark wassergefährdend

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SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Must be specially treated adhering to official regulations.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

No disposal via the sewage

· European waste catalogue

08 05 01*	waste isocyanates
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· Uncleaned packaging:

· Recommendation:

The empty containers may only be disposed of after the residues stuck to the container walls have been removed.

Disposal according to official regulations.

SECTION 14: Transport information

· 14.1 UN number or ID number

· ADR, IMDG, IATA

UN3082

· 14.2 UN proper shipping name

· ADR

3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (alkylated aromatic hydrocarbon)

· IMDG

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (alkylated aromatic hydrocarbon), MARINE POLLUTANT

· IATA

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (alkylated aromatic hydrocarbon)

· 14.3 Transport hazard class(es)

· ADR



· Class

9 (M6) Miscellaneous dangerous substances and articles.

· Label

9

· IMDG, IATA



· Class

9 Miscellaneous dangerous substances and articles.

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· Label	9
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards: · Marine pollutant: · Special marking (ADR): · Special marking (IATA):	Symbol (fish and tree) Symbol (fish and tree) Symbol (fish and tree)
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category	Warning: Miscellaneous dangerous substances and articles. 90 F-A,S-F A
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category · Tunnel restriction code	3 (-)
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ALKYLATED AROMATIC HYDROCARBON), 9, III

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SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

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· Hazard pictograms



GHS07 GHS08 GHS09

· Signal word Danger

· Hazard-determining components of labelling:

4,4'-diphenyl-methane diisocyanate. oligomeric

· 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.

H351 Suspected of causing cancer.

H335 May cause respiratory irritation.

H373 May cause damage to the lung and the respiratory tract through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

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

P284 [In case of inadequate ventilation] wear respiratory protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

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

· Directive 2012/18/EU

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

· Seveso category E2 Hazardous to the Aquatic Environment

· Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t

· Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t

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

· 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.

· REGULATION (EU) 2019/1148

· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

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· **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.

· **National regulations:**

· **Technical instructions (air):**

Class	Share in %
NK	0.25-1

· **Waterhazard class:** Water hazard class 3 (Self-assessment): extremely hazardous for water.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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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**

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

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.

H410 Very toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

EUH204 Contains isocyanates. May produce an allergic reaction.

· **Recommended restriction of use**

The information in this safety data sheet corresponds to the best of our knowledge at the time of the revision. The information should give you clues for the safe handling of the product mentioned in this safety data sheet during storage, processing, transport and disposal. The details are not transferable to other products. Insofar as the product mentioned in this safety data sheet is mixed with other materials, mixed or processed, or subjected to processing, the information in this safety data sheet, unless expressly stated otherwise, can not be transferred to the new material produced in this way.

UFI code is valid in:

Germany

Poland

Belgium

Austria

Netherlands

France

Lithuania

Greece

Romania

Liechtenstein

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IE

Trade name NEUKADUR hardener ISO 1

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Czech Republic

Estonia

Portugal

· **Department issuing SDS:** environment protection department

· **Contact:** Herr Ottensmann Tel. +49 (0)2056-25863-7

· **Date of previous version:** 14.09.2023

· **Version number of previous version:** 83

· **Abbreviations and acronyms:**

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

ICAO: International Civil Aviation Organisation

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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 2: Carcinogenicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Asp. Tox. 1: Aspiration hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – 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.**