

CARAPAX TAR 21

Moisture curing tar-free polyurethane coating

Article number	SIS CP 00 430TC	Printing date:	29.01.2016
Version number:	2	Revision:	29.01.2016

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- **Date of compilation:** 15.07.2014
- **1.1 Product identifier**
- **Trade name:** CARAPAX Tar 21
- **Article number(s):** SIS CP 00 430TC
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation:** Paint
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer / Supplier:**
SISTEC Coatings GmbH
Mausersstraße 6/1
71640 Ludwigsburg
GERMANY
- **E-mail address of the competent person responsible for the Safety Data Sheet:**
info@sistec-coatings.de
- **Informing department:** Laboratory
- **1.4 Emergency telephone number:**
As above or next toxicological information centre.
+49 (0)30 - 45 05 35 55

SECTION 2: HAZARDS IDENTIFICATION

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



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 health hazard

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

Muta. 1B H340 May cause genetic defects.

Carc. 1B H350 May cause cancer.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

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

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- Classification according to Directive 67/548/EEC or Directive 1999/45/EC



T; Toxic

R45-46: May cause cancer. May cause heritable genetic damage.



Xn; Sensitising

R42/43: May cause sensitisation by inhalation and skin contact.

R10-52/53: Flammable. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- Information concerning particular hazards for human and environment:

Vapours of the product are heavier than air and may accumulate on the ground, in mines, drains or cellars with higher concentration.

Heightened risk of fire and danger of explosion at accumulation in lower-lying or closed rooms.

- Classification system:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- 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



GHS02 GHS08

- Signal word Danger

- Hazard-determining components of labelling:

Hydrocarbons, C9-unsatd., polymers with phenol
Naphtha (petroleum), steam-cracked middle arom.
p-toluenesulphonyl isocyanate

- Hazard statements

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H340 May cause genetic defects.
H350 May cause cancer.
H412 Harmful to aquatic life with long lasting effects.

- Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P273 Avoid release to the environment.
P264 Wash thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P405 Store locked up.

- Additional information:

Contains isocyanates. May produce an allergic reaction.
Restricted to professional users.

- 2.3 Other hazards

- Results of PBT and vPvB assessment









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

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- 3.2 Chemical characterization: Mixtures

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

- Dangerous components:

<p>CAS: 1330-20-7 EINECS: 215-535-7 Index number: 601-022-00-9</p>	<p>Xylene, mixture of isomers  Xn R20/21;  Xi R38 R10  Flam. Liq. 3, H226;  Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315</p>	<p>3-<10%</p>
<p>CAS: 68512-30-1 EINECS: 270-966-8 Reg.nr.: 01-2119555274-38-xxxx</p>	<p>Hydrocarbons, C9-unsatd., polymers with phenol  Xi R38;  Xi R43 R52/53  Skin Irrit. 2, H315; Skin Sens. 1, H317; Aquatic Chronic 3, H412</p>	<p>3-<10%</p>
<p>CAS: 64742-82-1 EINECS: 265-185-4</p>	<p>Naphtha (petroleum), hydrodesulfurized heavy  Xn R65  N R51/53 R10-66-67</p>	<p>3-<10%</p>

Index number: 649-330-00-2

 Flam. Liq. 3, H226;  Asp. Tox. 1, H304;
 Aquatic Chronic 1, H411;  STOT SE 3, H336





CAS: 108-65-6
EINECS: 203-603-9

1-Methoxy-2-propyl acetate 3-<10%
R10

Index number: 607-195-00-7

 Flam. Liq. 3, H226

CAS: 68516-20-1
EINECS: 271-138-9



Naphtha (petroleum), steam-cracked middle arom ≤ 2.5%
 T Carc. Cat. 2, Muta. Cat. 2 R45-46;  Xn R65;  Xi R38;
 N R51/53
R10

Index number: 649-367-00-4

Reg.nr.: 01-2119485811-33-xxxx

 Flam. Liq. 3, H226;  Muta. 1B, H340; Carc. 1B.
H350;  Asp. Tox. 1, H304;  Aquatic Chronic 2, H411;
 Skin Irrit. 2, H315

CAS: 4083-64-1
EINECS: 223-810-8

p-toluenesulphonyl isocyanat < 2.5%
 Xi R36/37/38;  Xn R42
R14

Index number: 615-012-00-7

 Resp. Sens. 1, H334;  Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

SECTION 4: FIRST AID MEASURES

- 4.1 Description of first aid measures

- General information:

Immediately remove any clothing contaminated by the product.

Personal protection for the person providing first aid.

Symptoms of poisoning may occur after several hours. Medical observation for at least 48 hours after the accident is recommended.

IF exposed or concerned: Get medical advice/attention.

- After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor.

Do not use mouth to mouth or mouth to nose resuscitation.

Use a respiration bag or breathing device.

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

- After skin contact:

Wash with soap and water.

If skin irritation continues, consult a doctor.

Take off contaminated clothing and wash before reuse.

- After eye contact:

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

Remove contact lenses, if present and easy to do.

- **After swallowing:**
Rinse mouth.
Do NOT induce vomiting.
Call a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed** symptomatic treatment

SECTION 5: FIREFIGHTING MEASURES

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**
Carbon dioxide (CO₂), extinguishing powder or water spray/fog. Fight larger fires with water spray/fog or alcohol-resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture**
Can form explosive vapour-air mixtures.
Can be released in case of fire:
Nitrogen oxides (NO_x)
Sulphur oxides (SO_x)
Carbon monoxide (CO) and Carbon dioxide (CO₂)
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.
- **Additional information**
Cool endangered containers with water spray jet. Dispose of fire debris and contaminated fire fighting water in accordance with official regulations. If without risk possible, move drums with material away from dangerous area.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
Remove all ignition sources.
Use breathing protection against the effects of fumes/dust/aerosol.
Avoid contact with skin, eyes and clothes.
- **6.2 Environmental precautions:**
Do not allow to enter drainage system, surface or ground water.
Inform respective authorities in case product reaches water or sewage system.
Prevent material from reaching sewage system, holes and cellars.
- **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Send for recovery or disposal in suitable containers.
Dispose of the material collected according to regulations.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: HANDLING AND STORAGE

- 7.1 Precautions for safe handling

- Ensure good ventilation/exhaustion at the workplace.
- Ensure good interior ventilation, especially at floor level (fumes are heavier than air).
- Open and handle container with care.
- Do not breathe vapour/spray.
- Avoid contact with skin and eyes.
- Make sure that all applicable workplace limits are observed.

- Information about protection against explosions and fires:

- Fumes can combine with air to form an explosive mixture.
- Flammable fume/air mixtures may be formed in empty containers.
- Keep ignition sources away - Do not smoke.
- Protect against electrostatic charges.
- Keep breathing equipment ready.

- 7.2 Conditions for safe storage, including any incompatibilities

- Storage

- Requirements to be met by storerooms and containers:

- Observe regulations for storage of flammable liquids.
- Observe all local and national regulations for storage of water polluting products.

- Information about storage in one common storage facility: Store away from foodstuffs.

- Further information about storage conditions:

- Store container in a well ventilated position.
- Store in cool, dry conditions in well sealed containers.
- Store in a locked cabinet or with access restricted to specifically instructed persons.

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

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

- 8.1 Control parameters

- Components with critical values that require monitoring at the workplace:

Applicable PEL/OEL for hydrocarbons to be observed.

1330-20-7 Xylene, mixture of isomers

WEL (Great Britain)	Short-term value: 441 mg/m ³ , 100 ppm Long-term value: 220 mg/m ³ , 50 ppm Sk; BMGV
IOELV (European Union)	Short-term value: 442 mg/m ³ , 100 ml/m ³ Long-term value: 221 mg/m ³ , 50 ml/m ³ Skin

108-65-6 1-Methoxy-2-propyl acetate

WEL (Great Britain)	Short-term value: 548 mg/m ³ , 100 ppm Long-term value: 274 mg/m ³ , 50 ppm Sk
---------------------	------------------------------------------------------------------------------------------------------------

IOELV (European Union)	Short-term value: 550 mg/m ³ , 100 ppm Long-term value: 275 mg/m ³ , 50 ppm
------------------------	------------------------------------------------------------------------------------------------------

Skin

4083-64-1 p-toluenesulphonyl isocyanate

WEL (Great Britain)

Short-term value: 0.07 mg/m³

Long-term value: 0.02 mg/m³

Sen; as -NCO

DNELs

108-65-6 1-Methoxy-2-propyl acetate

Oral	DNEL long-term exposure - systemic effects	1.67 mg/kg bw/d (general population)
Dermal	DNEL long-term exposure - systemic effects	54.8 mg/kg bw/d (general population) 153.5 mg/kg bw/d (worker)
Inhalative	DNEL long-term exposure - systemic effects	33 mg/m ³ (general population) 275 mg/m ³ (worker)

- PNECs

108-65-6 1-Methoxy-2-propyl acetate

PNEC	0.635 mg/l (aqua (freshwater))
	6.35 mg/l (aqua (intermittent releases))
	0.0635 mg/l (aqua (marine water))
	3.29 mg/kg (sediment (freshwater))
	0.329 mg/kg (sediment (marine water))
	0.29 mg/kg (soil)
	100 mg/l (STP (sewage treatment plant))

- Ingredients with biological limit values:

1330-20-7 Xylene, mixture of isomers

BMGV (Great Britain)	650 mmol/mol creatinine
Medium:	urine
Sampling time:	post shift
Parameter:	methyl hippuric acid

- 8.2 Exposure controls

- Personal protective equipment

- General protective and hygienic measures

- Keep away from foodstuffs, beverages and food.
- Do not eat, drink or smoke while working.
- Instantly remove any contaminated garments.
- Store protective clothing separately.
- Do not inhale gases / fumes / aerosols.
- Avoid contact with the eyes and skin.
- Be sure to clean skin thoroughly after work and before breaks.
- Do not carry cleaning cloths impregnated with the product in trouser pockets

- Breathing equipment:

In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

- Protection of hands:

- Protective gloves
- To avoid skin problems reduce the wearing of gloves to the required minimum.
- Sensibilization by the components in the glove materials is possible.
- Check the permeability prior to each renewed use of the glove.

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. 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**

Protective gloves should be replaced at first signs of wear.
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• **Eye protection:** Safety glasses with side-shields (frame goggles) (e.g. EN 166)

• **Body protection:**

Protective work clothing
Body protection must be chosen depending on activity and possible exposure.

• **Limitation and supervision of exposure into the environment**

Do not allow to enter drainage system, surface or ground water.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

• **General Information**

• **Appearance:**

Form: liquid
Colour: grey

• **Smell:** solvent-like

• **Odour threshold:** not determined

• **pH-value:** not determined

• **Change in condition**

Melting point/Melting range: not determined
Boiling point/Boiling range: not determined

• **Flash point:** > 23 °C

• **Inflammability (solid, gaseous)** not applicable

• **Ignition temperature:** not determined

• **Decomposition temperature:** Not determined.

• **Self-inflammability:** Product is not selfigniting.

• **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures is possible.

• **Critical values for explosion:**

Lower: 1,1 Vol %
Upper: 7.0 Vol %

• **Oxidizing properties** none

- **Vapor pressure:** Not determined.
- **Density at 20 °C:** ~ 1.3 g/cm³
- **Relative density at 20 °C** ~ 1.3 g/cm³ (H₂O = 1)
- **Vapour density (AIR = 1):** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with Water:** not miscible or difficult to mix
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - dynamic:** not determined
 - kinematic at 20 °C:** > 40 s (ISO 6 mm)
- **9.2 Other information** No further relevant information available.

SECTION 10: STABILITY AND REACTIVITY

- **10.1 Reactivity** see 10.3
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
Avoid impact, friction, heat, sparks, electrostatic charges.
- **10.3 Possibility of hazardous reactions**
Flammable vapour-air mixtures may develop.
Used empty containers may contain product gases which form explosive mixtures with air.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** Strong oxidizing agents
- **10.6 Hazardous decomposition products:**
Nitrogen oxides (NO_x)
Sulphur oxides (SO_x)
Carbon monoxide (CO) and Carbon dioxide (CO₂)

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**
 - 1330-20-7 Xylene, mixture of isomers**

Oral	LD50	8700 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rabbit)
Inhalativ	LC50/4 h	6350 mg/l (rat)
 - 64742-82-1 Naphtha (petroleum), hydrodesulfurized heavy**

Oral	LD50	> 2000 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rat)
Inhalativ	LC50/4 h	> 5 mg/l (rat)
 - 68512-30-1 Hydrocarbons, C9-unsatd., polymers with phenol**

Oral	LD50	> 2000 mg/kg (rat) (OECD 423)
Dermal	LD50	> 2000 mg/kg (rat) (OECD 402)

Inhalativ	LC50/4 h	4,92 mg/l (rat) (OECD 403)
108-65-6 1-Methoxy-2-propyl acetate		
Oral	LD50	8532 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rabbit)
Inhalative	LC50/4 h	35.7 mg/l (rat)

- **Primary irritant effect:**

- **on the skin:** Causes skin irritation.
- **on the eye:** Short time, reversible irritating effect.
- **Subacute to chronic toxicity:** not classified

- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:

Harmful

Irritant

Danger by skin resorption.

Carcinogenic

The product can cause inheritable damage.

Sensitising

- **Sensitisation** May cause sensitisation by inhalation and skin contact.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
Muta. 1B, Carc. 1B
- **carcinogenicity** May cause cancer.
- **mutagenicity** May cause genetic defects.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

- **Aquatic toxicity:**

1330-20-7 Xylene, mixture of isomers

EC50	1 - 10 mg/l (bacteria)
EC50/24 h	165 mg/l (water flea (daphnia magna))
IC50/72 h	1 - 10 mg/l (algae)
LC50/48 h	86 mg/l (Leuciscus idus)
LC50/96 h	14 mg/l (rainbow trout (oncorhynchus mykiss))

68512-30-1 Hydrocarbons, C9-unsatd., polymers with phenol

EC50/48 h	14 - 51 mg/l (daphnia) (OECD TG 202)
EC50/72 h	15 mg/l (algae) (OECD TG 201)
LC50/96 h	25.8 mg/l (fish) (OECD TG 203)

108-65-6 1-Methoxy-2-propyl acetate

IC50/96 h	100 - 180 mg/l (rainbow trout (oncorhynchus mykiss)) (OECD 203)
IUCLID	
LC50/96 h	100-180 mg/l (red killifish (Oryzias latipes)) (OECD 203)
ECHA-Reg.-Dossier (1987-09-21)	

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.

- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Harmful to aquatic life with long lasting effects.
Water danger class 3 (Self-assessment): extremely hazardous for water.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: DISPOSAL CONSIDERATIONS

- **13.1 Waste treatment methods**
- **Recommendation** Disposal must be made according to official regulations.
- **European waste catalogue:**
Waste disposal key numbers from EWC have to be assigned depending on origin and processing.
- **Uncleaned packagings:**
- **Recommendation:**
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.
Packagings that cannot be cleaned are to be disposed of in the same manner as the product.

SECTION 14: TRANSPORT INFORMATION

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN1263
- **14.2 UN proper shipping name**
- **ADR** UN1263 PAINT,
SPECIAL PROVISION 640E
- **IMDG, IATA** PAINT
- **14.3 Transport hazard class(es)**
- **ADR**



- **Class** 3 (F1) Flammable liquids
- **Label** 3
- **IMDG, IATA**



- Class	3 Flammable liquids
- Label	3
- 14.4 Packing group	
- ADR, IMDG, IATA	III
- 14.5 Environmental hazards:	
- Marine pollutant:	NO
- 14.6 Special precautions for user	Warning: Flammable liquids.
- Kemler Number:	30
- EMS Number:	F-E,S-E
- 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.
- Transport/Additional information:	Transport by post may be prohibited or restricted.
- ADR	
- Excepted quantities (EQ):	E1
- Limited quantities (LQ):	5L
- Transport category:	3
- Tunnel restriction code:	D/E
- UN "Model Regulation":	UN1263, PAINT, SPECIAL PROVISION 640E, 3,III

SECTION 15: REGULATORY INFORMATION

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

- National regulations

- Information about limitation of use:

Workers should not be exposed to the hazardous materials contained in this preparation. Exceptions can be made by the authorities in certain exceptional cases.

Employment restrictions concerning young persons must be observed.

Employment restrictions concerning women of child-bearing age must be observed.

- Decree to be applied in case of technical fault:

Quantity limits according to "EC Seveso directive" should be observed.

- Water hazard class: Water danger class 3 (Self-assessment): extremely hazardous for water.

- Other regulations, limitations and prohibitive regulations

Observe restrictions on the marketing and use according to Annex XVII of Regulation (EC) No 1907/2006.

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

SECTION 16: OTHER INFORMATION

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

• **Relevant phrases**

The(se) R- resp. H-phrase(s) are those of the ingredient(s) and do(es) not necessarily represent the classification of the preparation/mixture.

H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H312 Harmful in contact with skin.

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.

H336 May cause drowsiness or dizziness.

H340 May cause genetic defects.

H350 May cause cancer.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

R10 Flammable.

R14 Reacts violently with water.

R20/21 Harmful by inhalation and in contact with skin.

R36/37/38 Irritating to eyes, respiratory system and skin.

R38 Irritating to skin.

R42 May cause sensitisation by inhalation.

R43 May cause sensitisation by skin contact.

R45 May cause cancer.

R46 May cause heritable genetic damage.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R65 Harmful: may cause lung damage if swallowed.

R66 Repeated exposure may cause skin dryness or cracking.

R67 Vapours may cause drowsiness and dizziness.

• **Department issuing MSDS:**

SISTEC Coatings GmbH

Mauserstraße 6/1

71640 Ludwigsburg

GERMANY

• **Abbreviations and acronyms:**

ADR: Accord européen sur le transport 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 Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Muta. 1B: Germ cell mutagenicity, Hazard Category 1B
Carc. 1B: Carcinogenicity, Hazard Category 1B
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
Asp. Tox. 1: Aspiration hazard, Hazard Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

· **Sources:** These data are based on information submitted by pre-suppliers.