



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 02.03.2015

Version number 6

Revision: 02.03.2015

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

- 1.1 Product identifier
- Trade name: **KRISTAL HS Hardener 82 STD PLUS**
- Article number: 8210
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.
- Application of the substance / the mixture Hardening agent/ Curing agent
- 1.3 Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
Kristal Coatings B.V.
Platinawerf 22B
6641 TL Beuningen - Holland
Tel: 0031 24 67 526 36
Fax: 0031 24 67 533 60
- Further information obtainable from: Product safety department: info@kristalcoatings.nl
- 1.4 Emergency telephone number:
National Poisoning Information Centre - Bilthoven - The Netherlands
T +31 (0)30 274 88 88
Restricted to physicians for information on ingredients.

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

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.
Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

GHS07

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

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

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



Xn; Harmful

R20/21-65: Harmful by inhalation and in contact with skin. Harmful: may cause lung damage if swallowed.



Xi; Irritant

R37: Irritating to respiratory system.



Xi; Sensitising

R43: May cause sensitisation by skin contact.

R10-52/53-66: Flammable. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Repeated exposure may cause skin dryness or cracking.

- Information concerning particular hazards for human and environment:

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.

(Contd. on page 2)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 02.03.2015

Version number 6

Revision: 02.03.2015

Trade name: **KRISTAL HS Hardener 82 STD PLUS**

(Contd. of page 1)

At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.

· **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

· **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

GHS07

GHS08

· **Signal word** Danger· **Hazard-determining components of labelling:**

Hexane, 1,6-diisocyanato-, homopolymer

xylene

ethylbenzene

Solvent naphtha (petroleum), light arom.

· **Hazard statements**

H226 Flammable liquid and vapour.

H332 Harmful if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

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

H304 May be fatal if swallowed and enters airways.

H412 Harmful to aquatic life with long lasting effects.

· **Precautionary statements**

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

P260 Do not breathe mist/vapours/spray.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

Continue rinsing.

P402 Store in a dry place.

· **Additional information:**

EUH066 Repeated exposure may cause skin dryness or cracking.

EUH204 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 characterisation: Mixtures**· **Description:** Mixture of substances listed below with nonhazardous additions.· **Dangerous components:**

CAS: 28182-81-2	Hexane, 1,6-diisocyanato-, homopolymer	25-50%
Polymer	☒ Xn R20; ☒ Xi R37; ☒ Xi R43	
Reg.nr.: 01-2119485796-17	☒ Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	
CAS: 123-86-4	n-butyl acetate	10-25%
EINECS: 204-658-1	R10-66-67	
Reg.nr.: 01-2119485493-29	☒ Flam. Liq. 3, H226; ☒ STOT SE 3, H336	

(Contd. on page 3)

— EU —



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 02.03.2015

Version number 6

Revision: 02.03.2015

Trade name: **KRISTAL HS Hardener 82 STD PLUS**

(Contd. of page 2)

CAS: 1330-20-7	xylene	10-25%
EINECS: 215-535-7	☒ Xn R20/21-65; ☒ Xi R36/37/38	
Reg.nr.: 01-2119488216-32	R10	
01-2119486136-34	⚠ Flam. Liq. 3, H226; ⚠ STOT RE 2, H373; Asp. Tox. 1, H304; ⚠ Acute Tox. 4, H312;	
01-2119555267-33	Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; Aquatic Chronic 3, H412	
CAS: 64742-95-6	Hydrocarbons, C9, aromatics	2,5-10%
EC number: 918-668-5	☒ Xn R65; ☒ Xi R37; ☒ N R51/53	
Reg.nr.: 01-2119455851-35	R10-66-67	
	⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ STOT SE 3, H335-H336	
CAS: 108-65-6	2-methoxy-1-methylethyl acetate	2,5-10%
EINECS: 203-603-9	R10	
Reg.nr.: 01-2119475791-29	⚠ Flam. Liq. 3, H226	
CAS: 100-41-4	ethylbenzene	2,5-10%
EINECS: 202-849-4	☒ Xn R20-48/20-65; ☒ F R11	
	⚠ Flam. Liq. 2, H225; ⚠ STOT RE 2, H373; Asp. Tox. 1, H304; ⚠ Acute Tox. 4, H332; Aquatic Chronic 3, H412	
CAS: 64742-95-6	Solvent naphtha (petroleum), light arom.	2,5-10%
EINECS: 265-199-0	☒ Xn R65; ☒ Xi R37; ☒ N R51/53	
Reg.nr.: 01-2119455851-35	R10-66-67	
	⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ Acute Tox. 4, H332; STOT SE 3, H335-H336	

· 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 soiled by the product.

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:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· After eye contact:

Remove contactlenses.

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

· After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help 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

No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· Suitable extinguishing agents: CO₂ or powder. Fight larger fights with alcohol resistant foam.

· For safety reasons unsuitable extinguishing agents: Water with full jet

· 5.2 Special hazards arising from the substance or mixture Carbon monoxide (CO)

· 5.3 Advice for firefighters

· Protective equipment: Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

· 6.2 Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

(Contd. on page 4)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 02.03.2015

Version number 6

Revision: 02.03.2015

Trade name: **KRISTAL HS Hardener 82 STD PLUS**

(Contd. of page 3)

Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 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

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this preparation is used.

Examination of lung function should be carried out on a regular basis on persons spraying this preparation.

Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Store away from oxidising agents.

Further information about storage conditions:

Protect from humidity and water.

Caution when reopening receptacles with broken seal.

Keep container tightly sealed.

Storage class: 3

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

SECTION 8: Exposure controls/personal protection

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

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

1330-20-7 xylene

IOELV Short-term value: 442 mg/m³, 100 ppmLong-term value: 221 mg/m³, 50 ppm

Skin

108-65-6 2-methoxy-1-methylethyl acetate

IOELV Short-term value: 550 mg/m³, 100 ppmLong-term value: 275 mg/m³, 50 ppm

Skin

100-41-4 ethylbenzene

IOELV Short-term value: 884 mg/m³, 200 ppmLong-term value: 442 mg/m³, 100 ppm

Skin

DNELs

123-86-4 n-butyl acetate

Inhalative Acute - short-term exposure - local effects 960 mg/m³ (worker)Acute - short-term exposure - systemic effects 960 mg/m³ (worker)Long-term exposure - local effects 480 mg/m³ (worker)Long-term exposure - systemic effects 480 mg/m³ (worker)

1330-20-7 xylene

Dermal Long-term exposure - systemic effects 180 mg/kg bw/day (worker)

Inhalative Acute - short-term exposure - local effects 289 mg/m³ (worker)Acute - short-term exposure - systemic effects 289 mg/m³ (worker)

(Contd. on page 5)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 02.03.2015

Version number 6

Revision: 02.03.2015

Trade name: **KRISTAL HS Hardener 82 STD PLUS**

(Contd. of page 4)

Long-term exposure - systemic effects 77 mg/m3 (worker)

64742-95-6 Hydrocarbons, C9, aromatics

Dermal Long-term exposure - systemic effects 25 mg/kg bw/day (worker)

Inhalative Long-term exposure - systemic effects 150 mg/m3 (wki)

108-65-6 2-methoxy-1-methylethyl acetate

Dermal Long-term exposure - systemic effects 153,5 mg/kg bw/day (worker)

Inhalative Long-term exposure - systemic effects 275 mg/m3 (worker)

100-41-4 ethylbenzene

Dermal Acute - short-term exposure - local effects 293 mg/kg bw/day (worker)

Long-term exposure - systemic effects 180 mg/kg bw/day (worker)

Inhalative Long-term exposure - systemic effects 77 mg/m3 (worker)

PNECs**123-86-4 n-butyl acetate**

PNEC 35,6 mg/l (STP)

0,18 mg/l (aqua, freshwater)

0,36 mg/l (aqua, intermittent releases)

0,018 mg/l (aqua, marine water)

0,0981 mg/l (sediment marine water)

0,981 mg/kg (sediment freshwater)

1330-20-7 xylene

PNEC 6,58 mg/l (STP)

0,237 mg/l (aqua, freshwater)

0,327 mg/l (aqua, intermittent releases)

0,327 mg/l (aqua, marine water)

12,46 mg/kg (sediment marine water)

108-65-6 2-methoxy-1-methylethyl acetate

PNEC 100 mg/l (STP)

6,35 mg/l (aqua, intermittent releases)

0,0635 mg/l (aqua, marine water)

0,635 mg/l (aqua freshwater)

0,329 mg/kg (sediment marine water)

3,29 mg/kg (sediment freshwater)

0,29 mg/kg (soil)

100-41-4 ethylbenzene

PNEC 9,6 mg/l (STP)

0,1 mg/l (aqua, freshwater)

0,1 mg/l (aqua, intermittent releases)

0,01 mg/l (aqua, marine water)

13,7 mg/kg (sediment freshwater)

2,68 mg/kg (soil)

Additional information:

The lists valid during the making were used as basis.

Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this preparation is used.

Examination of lung function should be carried out on a regular basis on persons spraying this preparation.

8.2 Exposure controls**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.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

(Contd. on page 6)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 02.03.2015

Version number 6

Revision: 02.03.2015

Trade name: **KRISTAL HS Hardener 82 STD PLUS**

(Contd. of page 5)

Filter A.

· Protection of hands:



Protective gloves

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

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

Fluorocarbon rubber gloves (Viton)

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

Thickness of the gloves ≥ 0.7 mm (xylenes)Value for the permeation: Level ≥ 480 min (xylenes)

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

· Eye protection:



Tightly sealed goggles

· Body protection: Solvent resistant protective clothing

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Transparent
Odour:	Characteristic

· Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 126 °C

· Flash point: 23 °C

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 315 °C

· Decomposition temperature: Not determined.

· Self-igniting: Product is not selfigniting.

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

· Explosion limits:

Lower:	1,1 Vol %
Upper:	7,5 Vol %

· Vapour pressure at 20 °C: 10,7 hPa

· Density at 20 °C: 1,0 g/cm³

· Solubility in / Miscibility with water:

Insoluble.

· Viscosity:

Dynamic:	Not determined.
Kinematic at 20 °C:	± 12 s (DIN 53211/4)

· Solvent content:

Organic solvents: 53,6 %

(Contd. on page 7)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 02.03.2015

Version number 6

Revision: 02.03.2015

Trade name: **KRISTAL HS Hardener 82 STD PLUS**

(Contd. of page 6)

VOC (EC) 53,64 %

Solids content: 46,4 %

· 9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

- 10.1 Reactivity
- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions
 - Reacts with alcohols.
 - Reacts with amines.
 - Reacts with water.
 - Reacts with strong oxidising agents.
- 10.4 Conditions to avoid High temperatures.
- 10.5 Incompatible materials: Oxidizing agents.
- 10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
- Acute toxicity:
- LD/LC50 values relevant for classification:

123-86-4 n-butyl acetate

Oral LD50 10760 mg/kg (rat) (OECD 423)
 Dermal LD50 >14112 mg/kg (rabbit) (OECD 402)
 Inhalative LC50/4h 23,4 mg/l (rat) (OECD 403 in vivo, aerosol)

1330-20-7 xylene

Oral LD50 3523 mg/kg (rat)
 Dermal LD50 12126 mg/kg bw (rabbit)
 Inhalative LC50/4h 27124 mg/m3 (rat)

64742-95-6 Hydrocarbons, C9, aromatics

Oral LD50 3592 mg/kg (rat)
 Dermal LD50 >3160 ml/kg (rabbit)
 Inhalative LC50/4h >6193 ppm (rat)

108-65-6 2-methoxy-1-methylethyl acetate

Oral LD50 > 5000 mg/kg (rat)
 Dermal LD50 > 5000 mg/kg (rat)

100-41-4 ethylbenzene

Oral LD50 3500 mg/kg (rat)
 Dermal LD50 17800 mg/kg (rabbit)

64742-95-6 Solvent naphtha (petroleum), light arom.

Oral LD50 >6800 mg/kg (rat)
 Dermal LD50 >3400 mg/kg (rab)
 Inhalative LC50/4h >10,2 mg/l (rat)

- Primary irritant effect:
 - on the skin: No irritant effect.
 - on the eye: No irritating effect.
- Sensitisation: Sensitisation possible through skin contact.
- Additional toxicological information:
 - The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
 - Harmful
 - Irritant
- Sensitisation May cause sensitisation by skin contact.

— EU —
(Contd. on page 8)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 02.03.2015

Version number 6

Revision: 02.03.2015

Trade name: **KRISTAL HS Hardener 82 STD PLUS**

(Contd. of page 7)

SECTION 12: Ecological information

- 12.1 Toxicity

- Aquatic toxicity:

- **123-86-4 n-butyl acetate**

- EC50/48h 44 mg/l (daphnia magna)

- EC50/72h 647,7 mg/l (desmodesmus supspicatus)

- IC50 356 mg/l (tetrahymena pyriformis) (40 h)

- LC50/96h 18 mg/l (pimphales promelas) (OECD 203)

- NOAEL/72h 200 mg/l (desmodesmus supspicatus)

- **1330-20-7 xylene**

- EC50/48h 7,4 mg/l (daphnia magna)

- IC50 1-10 mg/l (TISBE Marine copepod)

- 1-10 mg/l (algae)

- > 100 mg/l (bacteria)

- 1-10 mg/l (fish)

- NOAEL 0,1-1 mg/l (TISBE Marine copepod)

- 1-10 mg/l (fish)

- **108-65-6 2-methoxy-1-methylethyl acetate**

- EC50/48h 408-500 mg/l (daphnia magna)

- LC50/96h 100-180 mg/l (oncorhynchus mykiss)

- **100-41-4 ethylbenzene**

- EC50/24h >100 mg/l (daphnia magna)

- 12.2 Persistence and degradability No further relevant information available.

- Degree of elimination:

- **123-86-4 n-butyl acetate**

- OECD 301D 83 % (/) (28 d)

- 12.3 Bioaccumulative potential No further relevant information available.

- 12.4 Mobility in soil No further relevant information available.

- Ecotoxicological effects:

- Remark: Harmful to fish

- Additional ecological information:

- General notes:

- Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

- Do not allow product to reach ground water, water course or sewage system.

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

- Harmful to aquatic organisms

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

- European waste catalogue

- 08 01 11* waste paint and varnish containing organic solvents or other dangerous substances

- Uncleaned packaging:

- Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

- 14.1 UN-Number

- ADR,ADN, IMDG, IATA

UN1263

- 14.2 UN proper shipping name

- ADR/ADN

1263 PAINT

(Contd. on page 9)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 02.03.2015

Version number 6

Revision: 02.03.2015

Trade name: **KRISTAL HS Hardener 82 STD PLUS**

(Contd. of page 8)

· IMDG, IATA PAINT

· 14.3 Transport hazard class(es)

· ADR,ADN, IMDG, IATA



· Class 3 Flammable liquids.

· Label 3

· 14.4 Packing group

· ADR,ADN, IMDG, IATA III

· 14.5 Environmental hazards:

· Marine pollutant: No

· 14.6 Special precautions for user Warning: Flammable liquids.

· Danger code (Kemler): 30

· EMS Number: F-E,S-E

· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

· Transport/Additional information:

· ADR/ADN

· Limited quantities (LQ) 5L

· Transport category 3

· Tunnel restriction code D/E

· UN "Model Regulation": UN1263, PAINT, 3, III

SECTION 15: Regulatory information

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

· National regulations:

· Other regulations, limitations and prohibitive regulations

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.

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

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

- H225 Highly flammable liquid and vapour.
- 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.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H411 Toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.

R10 Flammable.

R11 Highly flammable.

R20 Harmful by inhalation.

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

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

R37 Irritating to respiratory system.

R43 May cause sensitisation by skin contact.

R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

(Contd. on page 10)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 02.03.2015

Version number 6

Revision: 02.03.2015

Trade name: KRISTAL HS Hardener 82 STD PLUS

(Contd. of page 9)

- 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.

- **Contact:** Dhr. B. Peters

- **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 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 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

Flam. Liq. 2: Flammable liquids, Hazard Category 2

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

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

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

 EU