SISTEC – ST 081HA

Hydro 2K-hardener

Article No.	SIS ST 00 081HA	Print Date:	18.05.2016
Version	V1	Revision:	18.05.2016

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

1.1 Product identifiers

Article No. (manufacturer/supplier) ST 00 081HA

Identification of the substance or mixture SISTEC Hydro 2K-hardener

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

Relevant identified uses Paint / Accessory material for the treatment of surface by the industrial user.

1.3 Details of the supplier of the safety data sheet
supplier (manufacturer/importer/downstream user/distributor)

SISTEC Coatings GmbH
Mauserstr. 6/1
71640 Ludwigsburg, Germany
Tel: +49 (0)7141 990 5516 / Fax: +49(0)7141 990 5522

E-mail: info@sistec-coatings.de

Dept. responsible for information: Laboratory

1.4 Emergency telephone number +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 [CLP]

This mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Skin Sens. 1 / H317
Respiratory or skin sensitisation
May cause an allergic skin reaction.

STOT SE 3 / H335
Specific target organ toxicity (single exposure)
May cause respiratory irritation.

Aquatic Chronic 3 / H412
Hazardous to the aquatic environment
Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]	
Hazard pictograms	Warning
Hazard statements	H317 May cause an allergic skin reaction. H335 May cause respiratory irritation. H412 Harmful to aquatic life with long lasting effects.
Precautionary statements:	P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P312 Call a POISON CENTER or doctor/physician if you feel unwell. P362 + P364 Take off contaminated clothing and wash it before reuse. P501.2 Dispose according to legislation.
contains:	
Supplemental Hazard information (EU)	not applicable

2.3 Other hazards

SECTION 3: Composition / information on ingredients

3.2 Mixtures

Product description / chemical characterization	
Description	Isocyanate preparation
Hazardous ingredients	
Classification according to Regulation (EC) No 1272/2008 [CLP]	160994-68-3 Acute Tox. 4 H332 / Skin Sens. 1 H317 / STOT SE 3 H335 / Aquatic Chronic 3 H412 60 < 70 %
Additional information	Full text of classification: see section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General information	In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.

In case of inhalation	Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.
Following skin contact	Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners.
After eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.
After ingestion	If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.
4.2 Most important symptoms and effects, both acute and delayed	In all cases of doubt, or when symptoms persist, seek medical advice.
4.3 Mammalian cells (with metabolic activation)	

SECTION 5: Firefighting measures

5.1 Extinguishing media **Suitable extinguishing media**	alcohol resistant foam, carbon dioxide, Powder, spray mist, (water)
Extinguishing media which must not be used for safety reasons:	strong water jet
5.2 Special hazards arising from the substance or mixture	Dense black smoke occurs during fire. Inhaling hazardous decomposing products can cause serious health damage.
5.3 Advice for firefighters	Provide a conveniently located respiratory protective device. Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways. Treat runoff as hazardous.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures	Keep away from sources of ignition. Ventilate affected area. Do not breathe vapours. See protective measures under point 7 and 8.
6.2 Environmental precautions	Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.
6.3 Methods and material for containment and cleaning up	Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13). Use appropriate container to avoid environmental contamination. Fouled surfaces must be immediately cleaned with suitable solvents, Useable as such (flammable): water 45 vol.% ethanol or i-propanol 50 vol. % ammonia solution (density= 0.88) 5 vol.%

Alternative (non-flammable): sodium carbonate 5 vol. % water 95 vol. %.

Take up spilled residuals with the same agent and leave them for a few days in unclosed containers until there is no further reaction. Then, close the containers and dispose of them in accordance with the regulations for waste removal (refer to Chapter 13).

6.4 Reference to other sections

Observe protective provisions (see chapter 7 and 8).

SECTION 7: Handling and storage

People who suffer from skin sensitazion problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this preparation.
People who spray this preparation should have regular pulmonary function tests.

7.1 Precautions for safe handling

Advices on safe handling

Avoid formation of flammable and explosive vapour concentrations in the air and exceeding the exposure limit values. Only use the material in places where open light, fire and other flammable sources can be kept away. Electrical equipment must be protected meeting the accepted standard. Product may become electrostatically charged. Provide earthing of containers, equipment, pumps and ventilation facilities. Anti-static clothing including shoes are recommended. Floors must be electrically conductive. Be careful when opening used containers (excess pressure). Precautionary measures should be taken in order to reduce strain from humidity or water: CO2 is formed which may produce excess pressure in closed containers. Keep away from heat sources, sparks and open flames. Use only spark proof tools. Avoid contact with skin, eyes and clothes. Do not inhale dusts, particulates and spray mist when using this preparation. Avoid respiration of swarf. When using do not eat, drink or smoke. Personal protection equipment: refer to section 8. Do not empty containers with pressure - no pressure vessel! Always keep in containers that correspond to the material of the original container. Follow the legal protection and safety regulations.

Precautions against fire and explosion:

Vapours are heavier than air. Vapours form explosive mixtures with air.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Do not empty containers with pressure - no pressure vessel! Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks. Soils have to conform to the "Guidelines for avoidance of ignition hazards due to electrostatic charges (TRBS 2153)".

Hints on joint storage

Keep away from strongly acidic and alkaline materials as well as oxidizers. Keep away from amines, alcohols and water.

Further information on storage conditions

Take care of instructions on label. Store in a well-ventilated and dry room at temperatures between 5 °C and 30 °C. Protect from heat

and direct sunlight. Keep container tightly closed. Remove all sources of ignition. Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

7.3 Specific end use(s) — Observe technical data sheet. Observe instructions for use.

SECTION 8: Exposure controls/personal protection

People who suffer from skin sensitazion problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this preparation.
People who spray this preparation should have regular pulmonary function tests.

8.1. Control parameters
Occupational exposure limit values: — not applicable

8.2 Exposure controls — Provide good ventilation. This can be achieved with local or room suction. When spraying, wear self-contained breathing apparatus. For other tasks a suitable respiratory system must be used, if local and room suction is not sufficient for keeping aerosol and solvent vapour concentration below the exposure limit values (refer to Personal protection equipment.)

Occupational exposure controls

Respiratory protection — If concentration of solvents is beyond the occupational exposure limit values, approved and suitable respiratory protection must be used. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190). Use only respiratory protection equipment with CE-symbol including four digit test number. Filter type:A2-P2 (EN 141, 143, 371)

Hand protection — For prolonged or repeated handling the following glove material must be used: Latex gloves Thickness of the glove material > 0,4 mm ; Breakthrough time (maximum wearing time) > 480 min.
Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles DIN EN 374
Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

Eye protection — Wear closely fitting protective glasses in case of splashes.

Protective clothing — Wear suitable protective clothing.

Protective measures — After contact clean skin thoroughly with water and soap or use appropriate cleanser.

Environmental exposure controls — Do not allow to enter into surface water or drains. See chapter 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

. Appearance:

Physical state:	liquid
Colour:	refer to label
Odour:	kind-typically
Odour threshold:	Not determined, because of possible health risks when inhaled.
pH at 20 °C:	not applicable
Melting point/freezing point:	not applicable
Initial boiling point and boiling range:	175 °C Source: PH|EN|500271|GEFBEZ@RL-145
Flash point:	61 °C
Evaporation rate:	not applicable
Flammability (solid, gas):	not applicable
burning time (s):	
Upper/lower flammability or explosive limits:	
Lower explosion limit:	0,7 Vol-%
Upper explosion limit:	5,5 Vol-% Source: PH|EN|500271|GEFBEZ@RL-145
Vapour pressure at 20 °C:	20,97 mbar
Vapour density:	not applicable
Relative density:	
Density at 20 °C:	1,07 g/cm³
Solubility(ies):	
Water solubility (g/L) at 20 °C:	insoluble
Partition coefficient: n-octanol/water:	See section 12.
Auto-ignition temperature:	165 °C Source: PH|EN|500271|GEFBEZ@RL-145
Decomposition temperature:	not applicable
Viscosity at 20 °C:	100 s 4 mm Method: DIN 53211
Explosive properties:	not applicable
Oxidising properties:	not applicable

9.2 Other information

Solid content (%):	65,05 Wt %
solvent content:	
Organic solvents:	35 Wt %
Water:	0 Wt %
Solvent separation test (%):	< 3 Wt % (ADR/RID)

SECTION 10: Stability and reactivity

10.1 Reactivity

Reacts with water, forming carbon dioxide, producing bursting hazard in closed containers due to build-up of pressure. No hazardous reaction when handled and stored according to provisions.

10.2 Chemical stability

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to chapter 7.

10.3 Possibility of hazardous reactions

Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions. Reacts with water, forming carbon dioxide,

producing bursting hazard in closed containers due to build-up of pressure.

10.4 Conditions to avoid

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to chapter 7. Hazardous decomposition byproducts may form with exposure to high temperatures.

10.5 Incompatible materials

10.6 Hazardous decomposition products

Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: carbon dioxide, carbon monoxide, smoke, nitrogen oxides. No known hazardous decomposition products.

SECTION 11: Toxicological information

Classification according to Regulation (EC) No 1272/2008 [CLP]
No data on preparation itself available.

11.1 Information on toxicological effects

Acute toxicity

oral, LD50, Rat: > 2000 mg/kg
inhalative (dust and mist), LC50, Rat: 0,39 mg/L (4 h)
Method: OECD 403

skin corrosion/irritation; Serious eye damage/eye irritation

Toxicological data are not available.

Respiratory or skin sensitisation

Toxicological data are not available.

Specific target organ toxicity

Toxicological data are not available.

Aspiration hazard

Toxicological data are not available.

Practical experience/human evidence

Other observations:
Inhaling of solvent components above the MWC-value can lead to health damage, e.g. irritation of the mucous membrane and respiratory organs, as well as damage to the liver, kidneys and the central nerve system. Indications for this are: headache, dizziness, fatigue, amyosthenia, drowsiness, in serious cases: unconsciousness. Solvents may cause some of the aforementioned effects through skin resorption. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and/or absorption through skin. Splashing may cause eye irritation and reversible damage. Because of the isocyanate components' properties of this and with consideration of similar preparations the following applies: Preparation may cause acute irritation and/or sensitization of airways which lead to tightness in thorax, short-breath and asthmatic complaints. After sensitization even concentrations below the exposure limit values may cause asthma. Repeated inhaling can lead to permanent illness of the respiratory tract.

Overall Assessment on CMR properties

The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP.

Remark

There is no information available on the preparation itself.

SECTION 12: Ecological information

	overall evaluation	Classification according to Regulation (EC) No 1272/2008 [CLP] There is no information available on the preparation itself. Do not allow to enter into surface water or drains.
12.1	**Toxicity**	Fish toxicity, LC50, Brachydanio rerio (zebra-fish): 28,3 mg/L (96 h) Method: OECD 203 Daphnia toxicity, EC50, Daphnia magna: > 100 mg/L (48 h) Method: OECD 202 Algae toxicity, ErC50, Scenedesmus subspicatus: > 100 mg/L (72 h) Method: OECD 201
	Long-term Ecotoxicity	Fish toxicity, LC50, Brachydanio rerio (zebra-fish): 28,3 mg/L (96 h) Method: OECD 203 Daphnia toxicity, EC50, Daphnia magna (Big water flea): > 100 mg/L (48 h) Method: OECD 202
12.2	**Persistence and degradability**	Toxicological data are not available.
12.3	**Bioaccumulative potential**	Toxicological data are not available.
	Bioconcentration factor (BCF)	Toxicological data are not available.
12.4	**Mobility in soil**	Toxicological data are not available.
12.5	**Results of PBT assessment**	The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
12.6	**Other adverse effects**	

SECTION 13: Disposal considerations

13.1	**Waste treatment methods** **Appropriate disposal / Product Recommendation**	Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
	List of proposed waste codes/waste designations in accordance with EWC	080111 waste paint and varnish containing organic solvents or
	Packaging Recommendation	Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

SECTION 14: Transport information

No dangerous good in sense of this transport regulation.

14.1	**UN number**	not applicable
14.2	**UN proper shipping name**	
14.3	**Transport hazard class(es)**	not applicable
14.4	**Packing group**	not applicable

14.5 Environmental hazards

Land transport (ADR/RID)	not applicable
Marine pollutant	not applicable

14.6 Special precautions for user — Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage. Advices on safe handling: see parts 6 – 8

Additional information

Land transport (ADR/RID) — tunnel restriction code

Sea transport (IMDG)

EmS-Nr. — not applicable

Air transport (ICAO-TI / IATA-DGR)

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

EU legislation

Directive 2010/75/EU on industrial emissions

VOC-value (in g/L): 374

Directive 2004/42/EC on the limitation of emissions of volatile organic compounds

VOC product category: not apply to directive 2004/42/CE ; VOC limit value: 0
Maximum VOC content (g/L) of the product in a ready to use condition: 374

National regulations

Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

15.2 Chemical Safety Assessment — Chemical safety assessments for substances in this preparation were not carried out.

SECTION 16: Other information

Full text of classification in section 3:

Acute Tox. 4 / H332
Acute toxicity (inhalative)
Harmful if inhaled.

Skin Sens. 1 / H317
Respiratory or skin sensitisation
May cause an allergic skin reaction.

STOT SE 3 / H335
Specific target organ toxicity (single exposure)
May cause respiratory irritation.

Aquatic Chronic 3 / H412
Hazardous to the aquatic environment
Harmful to aquatic life with long lasting effects.

Abbreviations and acronyms

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

Additional information

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

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in chapter 1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.