



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.04.2016

Version number 6

Revision: 19.04.2016

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

- 1.1 Product identifier
- Trade name: **ZENITH HS420 Hardener Fast**
- Article number: Z8201
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
- Sector of Use
 - SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
 - SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- 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. 2 H225 Highly 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.

- 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:
Hexamethylene diisocyanate, oligomers

(Contd. on page 2)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.04.2016

Version number 6

Revision: 19.04.2016

Trade name: **ZENITH HS420 Hardener Fast**

(Contd. of page 1)

xylene

4-methylpentan-2-one

ethylbenzene

· Hazard statements

H225 Highly 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

P260 Do not breathe mist/vapours/spray.

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

P303+P361+P353 IF ON SKIN (or hair): 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.

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

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

· Additional information:

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 %(m/m):

CAS: 28182-81-2 NLP: 500-060-2 Reg.nr.: 01-2119485796-17	Hexamethylene diisocyanate, oligomers ⚠ Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	25-50%
CAS: 1330-20-7 EINECS: 215-535-7 Reg.nr.: 01-2119488216-32	xylene ⚠ Flam. Liq. 3, H226; ⚠ STOT RE 2, H373; Asp. Tox. 1, H304; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	25-50%
CAS: 141-78-6 EINECS: 205-500-4 Reg.nr.: 01-2119475103-46	ethyl acetate ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	10-25%
CAS: 108-10-1 EINECS: 203-550-1 Reg.nr.: 01-2119473980-30	4-methylpentan-2-one ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335	2,5-10%
CAS: 100-41-4 EINECS: 202-849-4 Reg.nr.: 01-2119489370-35	ethylbenzene ⚠ Flam. Liq. 2, H225; ⚠ STOT RE 2, H373; Asp. Tox. 1, H304; ⚠ Acute Tox. 4, H332; Aquatic Chronic 3, H412	2,5-10%
Reg.nr.: 01-2119455851-35	Hydrocarbons, C9, aromatics ⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ STOT SE 3, H335-H336	0,5-2,5%
CAS: 123-86-4 EINECS: 204-658-1 Reg.nr.: 01-2119485493-29	n-butyl acetate ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336	0,5-2,5%
CAS: 108-88-3 EINECS: 203-625-9 Reg.nr.: 01-2119471310-51	toluene ⚠ Flam. Liq. 2, H225; ⚠ Repr. 2, H361d; STOT RE 2, H373; Asp. Tox. 1, H304; ⚠ Skin Irrit. 2, H315; STOT SE 3, H336	≤ 0,5%

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

— EU —
(Contd. on page 3)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.04.2016

Version number 6

Revision: 19.04.2016

Trade name: **ZENITH HS420 Hardener Fast**

(Contd. of page 2)

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:
Rinse opened eye for several minutes under running water. Then consult a doctor.
Remove contactlenses.
- After swallowing:
Do not induce vomiting; call for medical help immediately.
Rinse out mouth and then drink plenty of water.
- 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
During heating or in case of fire poisonous gases are produced.
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
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- 6.2 Environmental precautions:
Inform respective authorities in case of seepage into water course or sewage system.
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.
Keep respiratory protective device available.

(Contd. on page 4)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.04.2016

Version number 6

Revision: 19.04.2016

Trade name: **ZENITH HS420 Hardener Fast**

(Contd. of page 3)

- 7.2 Conditions for safe storage, including any incompatibilities
- Storage:
 - Requirements to be met by storerooms and receptacles:
 - Store in a cool location.
 - Store only in the original receptacle.
 - Information about storage in one common storage facility: Store away from oxidising agents.
 - Further information about storage conditions:
 - Caution when reopening receptacles with broken seal.
 - Store in dry conditions.
 - 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 ppm
 Long-term value: 221 mg/m³, 50 ppm
 Skin

108-10-1 4-methylpentan-2-one

IOELV Short-term value: 208 mg/m³, 50 ppm
 Long-term value: 83 mg/m³, 20 ppm

100-41-4 ethylbenzene

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

· DNELs

28182-81-2 Hexamethylene diisocyanate, oligomers

Dermal	Acute - short-term exposure - local effects	1 mg/cm ² (worker)
Inhalative	Long-term exposure - systemic effects	0,5 mg/m ³ (worker)

1330-20-7 xylene

Dermal	Long-term exposure - systemic effects	180 mg/kg bw/day (worker)
Inhalative	Acute - short-term exposure - systemic effects	289 mg/m ³ (worker)
	Acute - short-term exposure - local effects	289 mg/m ³ (worker)
	Long-term exposure - systemic effects	77 mg/m ³ (worker)

141-78-6 ethyl acetate

Dermal	Long-term exposure - systemic effects	63 mg/kg bw/day (worker)
Inhalative	Acute - short-term exposure - systemic effects	1468 mg/m ³ (worker)
	Acute - short-term exposure - local effects	1468 mg/m ³ (worker)
	Long-term exposure - systemic effects	734 mg/m ³ (worker)
	Long-term exposure - local effects	734 mg/m ³ (worker)

108-10-1 4-methylpentan-2-one

Dermal	Long-term exposure - systemic effects	11,8 mg/kg bw/day (worker)
Inhalative	Acute - short-term exposure - systemic effects	208 mg/m ³ (worker)
	Acute - short-term exposure - local effects	208 mg/m ³ (worker)
	Long-term exposure - systemic effects	83 mg/m ³ (worker)
	Long-term exposure - local effects	83 mg/m ³ (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/m ³ (worker)

(Contd. on page 5)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.04.2016

Version number 6

Revision: 19.04.2016

Trade name: **ZENITH HS420 Hardener Fast**

(Contd. of page 4)

123-86-4 n-butyl acetate

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

108-88-3 toluene

Dermal Long-term exposure - systemic effects 384 mg/kg bw/day (worker)
 Inhalative Acute - short-term exposure - systemic effects 384 mg/m³ (worker)
 Acute - short-term exposure - local effects 384 mg/m³ (worker)
 Long-term exposure - systemic effects 192 mg/m³ (worker)
 Long-term exposure - local effects 192 mg/m³ (worker)

PNECs**28182-81-2 Hexamethylene diisocyanate, oligomers**

PNEC 26670 mg/kg (aqua, marine water)
 53182 mg/kg (bd)
 266700 mg/kg (sediment freshwater)
 PNEC 38,28 mg/l (STP)
 0,127 mg/l (aqua, freshwater)
 1,27 mg/l (aqua, intermittent releases)
 0,0127 mg/l (aqua, marine water)

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)

141-78-6 ethyl acetate

PNEC 0,115 mg/kg (sediment marine water)
 1,15 mg/kg (sediment freshwater)
 0,148 mg/kg (soil)
 PNEC 650 mg/l (STP)
 0,24 mg/l (aqua, freshwater)
 1,65 mg/l (aqua, intermittent releases)
 0,024 mg/l (aqua, marine water)

108-10-1 4-methylpentan-2-one

PNEC 0,83 mg/kg (sediment marine water)
 8,27 mg/kg (sediment freshwater)
 PNEC 27,5 mg/l (STP)
 0,6 mg/l (aqua, freshwater)
 1,5 mg/l (aqua, intermittent releases)
 0,06 mg/l (aqua, marine water)

100-41-4 ethylbenzene

PNEC 13,7 mg/kg (sediment freshwater)
 2,68 mg/kg (soil)
 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)

123-86-4 n-butyl acetate

PNEC 0,981 mg/kg (sediment freshwater)
 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)

(Contd. on page 6)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.04.2016

Version number 6

Revision: 19.04.2016

Trade name: **ZENITH HS420 Hardener Fast**

(Contd. of page 5)

0,0981 mg/l (sediment marine water)

108-88-3 toluene

PNEC 16,39 mg/kg (sediment marine water)

PNEC 13,61 mg/l (STP)

0,68 mg/l (aqua, freshwater)

0,68 mg/l (aqua, intermittent releases)

0,68 mg/l (aqua, marine water)

· **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.

Store protective clothing separately.

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.

Short term filter device:

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**

Suitable materials for safety gloves (EN 374):

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 ≥ 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: Clear

· **Odour:** Characteristic· **Odour threshold:** Not determined.· **pH-value:** Not determined.

(Contd. on page 7)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.04.2016

Version number 6

Revision: 19.04.2016

Trade name: **ZENITH HS420 Hardener Fast**

(Contd. of page 6)

- Change in condition
 - Melting point/Melting range: Undetermined.
 - Boiling point/Boiling range: 77 °C
- Flash point: 8 °C
- Flammability (solid, gaseous): Not applicable.
- Ignition temperature: 430 °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: 11,5 Vol %
- Vapour pressure at 20 °C: 97 hPa
- Density at 20 °C: 0,96 g/cm³
- Relative density: Not determined.
- Vapour density: Not determined.
- Evaporation rate: Not determined.
- Solubility in / Miscibility with water: Slightly soluble.
- Partition coefficient (n-octanol/water): Not determined.
- Viscosity:
 - Dynamic: Not determined.
 - Kinematic at 20 °C: 15 s (DIN 53211/4)
- Solvent content:
 - Organic solvents: 59,6 %
 - VOC (EC) 59,60 %
- 9.2 Other information: No further relevant information available.

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
 - Reacts with alcohols.
 - Reacts with amines.
 - Reacts with water.
 - Reacts with strong oxidizing 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: Harmful if inhaled.
- LD/LC50 values relevant for classification:

1330-20-7 xylene

Oral	LD50	3523 mg/kg (rat)
Dermal	LD50	12126 mg/kg bw (rabbit)

(Contd. on page 8)

EU



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.04.2016

Version number 6

Revision: 19.04.2016

Trade name: **ZENITH HS420 Hardener Fast**

(Contd. of page 7)

Inhalative LC50/4h 27124 mg/m³ (rat)**141-78-6 ethyl acetate**

Oral LD50 4100 mg/kg (mouse)
 Dermal LD50 5620 mg/kg (rat)
 > 20000 mg/kg (rabbit)
 Inhalative LC50/4h 30 mg/l (rat)

108-10-1 4-methylpentan-2-one

Oral LD50 2080 mg/kg (rat)
 Dermal LD50 >2000 mg/kg (rabbit)
 Inhalative LC50/4h 8,2-16,4 mg/l (rat)

100-41-4 ethylbenzene

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

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)

108-88-3 toluene

Oral LD50 5580 mg/kg (rat)
 Dermal LD50 > 5000 mg/kg (rabbit)
 Inhalative LC50/4h 28,1 mg/l (rat)

- Primary irritant effect:
- Skin corrosion/irritation
Causes skin irritation.
- Serious eye damage/irritation
Causes serious eye irritation.
- Respiratory or skin sensitisation
May cause an allergic skin reaction.
- Sensitisation May cause sensitisation by skin contact.
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- 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 organs through prolonged or repeated exposure.
- Aspiration hazard
May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

- 12.1 Toxicity
- Aquatic toxicity:

1330-20-7 xylene

IC50/72h 2,2 mg/l (algae)
 EC50/48h 1 mg/l (daphnia magna)
 LC50/96h 2,6 mg/l (oncorhynchus mykiss)

141-78-6 ethyl acetate

NOEC/32d >9,65 mg/l (fish)
 NOEC/21d 2,4 mg/l (daphnia magna)
 EC50/48h 5600 mg/l (algae)
 610 mg/l (daphnia magna)
 LC50/96h 230 mg/l (fish)

(Contd. on page 9)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.04.2016

Version number 6

Revision: 19.04.2016

Trade name: **ZENITH HS420 Hardener Fast**

(Contd. of page 8)

108-10-1 4-methylpentan-2-one

EC50/96h 400 mg/l (algae)
 EC50/48h >200 mg/l (daphnia magna)
 LC50/96h >179 mg/l (fish)

100-41-4 ethylbenzene

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

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)
 NOAEL/72h 200 mg/l (desmodesmus supspicatus)
 LC50/96h 18 mg/l (pimphales promelas) (OECD 203)

108-88-3 toluene

NOEC/72h 10 mg/l (Skeletonema costatum)
 EC50/3h 134 mg/l (Chlorella vulgaris)
 EC50/48h 3,78 mg/l (daphnia magna)
 EC50/72h 12,5 mg/l (algae)
 LC50/96h 5,5 mg/l (Oncorhynchus kisutch)
 5,5 mg/l (fish)

· 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

1330-20-7 xylene

LogPow 3,15 (/)

141-78-6 ethyl acetate

BCF 30 (leuciscus idus)

108-88-3 toluene

BCF 90 (/)
 LogPow 2,73 (/)

· 12.4 Mobility in soil

141-78-6 ethyl acetate

Koc 1,43 (/)

· Other information:

141-78-6 ethyl acetate

BOD5/20d 79 (/)

· 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.

(Contd. on page 10)



Printing date 19.04.2016

Safety data sheet

according to 1907/2006/EC, Article 31

Version number 6

Revision: 19.04.2016

Trade name: **ZENITH HS420 Hardener Fast**

(Contd. of page 9)

- European waste catalogue
08 01 11* waste paint and varnish containing organic solvents or other hazardous 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 RELATED MATERIAL
IMDG PAINT RELATED MATERIAL
IATA Paint related material
- 14.3 Transport hazard class(es)
ADR,ADN, IMDG, IATA



- Class 3 Flammable liquids.
 - Label 3
 - 14.4 Packing group
ADR,ADN, IMDG, IATA II
 - 14.5 Environmental hazards:
Marine pollutant: No
 - 14.6 Special precautions for user Warning: Flammable liquids.
 - Danger code (Kemler): 33
 - EMS Number: F-E,S-E
 - Stowage Category B
 - 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.
 - Transport/Additional information:
-
- ADR/ADN
 - Limited quantities (LQ) 5L
 - Excepted quantities (EQ) Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml
 - Transport category 2
 - Tunnel restriction code D/E
-
- IMDG
 - Limited quantities (LQ) 5L
 - Excepted quantities (EQ) Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml
 - UN "Model Regulation": UN 1263 PAINT RELATED MATERIAL, 3, II

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- Seveso category P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 5.000 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50.000 t

(Contd. on page 11)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.04.2016

Version number 6

Revision: 19.04.2016

Trade name: ZENITH HS420 Hardener Fast

(Contd. of page 10)

- 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.

H361d Suspected of damaging the unborn child.

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.

- 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

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

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

Repr. 2: Reproductive toxicity, Hazard Category 2

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