



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 02.06.2015

Version number 5

Revision: 02.06.2015

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
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. 2 H225 Highly flammable liquid and vapour.



GHS08 health hazard

Repr. 2 H361d Suspected of damaging the unborn child.
 STOT RE 2 H373 May cause damage to the central nervous system through prolonged or repeated exposure. Route of exposure: Inhalative.
 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

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Trade name: **ZENITH HS420 Hardener Fast**

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xylene

toluene

4-methylpentan-2-one

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.

H361d Suspected of damaging the unborn child.

H335 May cause respiratory irritation.

H373 May cause damage to the central nervous system through prolonged or repeated exposure. Route of exposure: Inhalative.

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/ doctor.

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

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

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

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:

CAS: 28182-81-2	Hexamethylene diisocyanate, oligomers	25-50%
NLP: 500-060-2	⚠ Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	
Reg.nr.: 01-2119485796-17		
CAS: 1330-20-7	xylene	10-25%
EINECS: 215-535-7	⚠ 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; Aquatic Chronic 3, H412	
Reg.nr.: 01-2119488216-32		
01-2119486136-34		
01-2119555267-33		
CAS: 108-88-3	toluene	10-25%
EINECS: 203-625-9	⚠ Flam. Liq. 2, H225; ⚠ Repr. 2, H361d; STOT RE 2, H373; Asp. Tox. 1, H304; ⚠ Skin Irrit. 2, H315; STOT SE 3, H336	
Reg.nr.: 01-2119471310-51		
01-2116601980-50		
17-2119453989-16		
05-211538126-46		
CAS: 141-78-6	ethyl acetate	10-25%
EINECS: 205-500-4	⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	
Reg.nr.: 01-2119475103-46		
05-2116947025-47		
CAS: 108-10-1	4-methylpentan-2-one	2,5-10%
EINECS: 203-550-1	⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335	
Reg.nr.: 01-2119473980-30		
CAS: 100-41-4	ethylbenzene	2,5-10%
EINECS: 202-849-4	⚠ Flam. Liq. 2, H225; ⚠ STOT RE 2, H373; Asp. Tox. 1, H304; ⚠ Acute Tox. 4, H332; Aquatic Chronic 3, H412	

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Reg.nr.: 01-2119455851-35 Hydrocarbons, C9, aromatics 0,5-2,5%
 Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H335-H336

CAS: 123-86-4 n-butyl acetate 0,5-2,5%
 EINECS: 204-658-1 Flam. Liq. 3, H226; STOT SE 3, H336
 Reg.nr.: 01-2119485493-29

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:
 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 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: 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.
 Do not flush with water or aqueous cleansing agents
- 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.

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- 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:
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.
Keep container tightly sealed.
Store in dry conditions.
Protect from heat and direct sunlight.
- 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 - local effects	289 mg/m ³ (worker)
	Acute - short-term exposure - systemic effects	289 mg/m ³ (worker)
	Long-term exposure - systemic effects	77 mg/m ³ (worker)

108-88-3 toluene

Dermal	Long-term exposure - systemic effects	384 mg/kg bw/day (worker)
Inhalative	Acute - short-term exposure - local effects	384 mg/m ³ (worker)
	Acute - short-term exposure - systemic effects	384 mg/m ³ (worker)
	Long-term exposure - local effects	192 mg/m ³ (worker)
	Long-term exposure - systemic effects	192 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 - local effects	1468 mg/m ³ (worker)
	Acute - short-term exposure - systemic effects	1468 mg/m ³ (worker)
	Long-term exposure - local effects	734 mg/m ³ (worker)
	Long-term exposure - systemic 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)
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Inhalative Acute - short-term exposure - local effects	208 mg/m3 (worker)
Acute - short-term exposure - systemic effects	208 mg/m3 (worker)
Long-term exposure - local effects	83 mg/m3 (worker)
Long-term exposure - systemic effects	83 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)

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)

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

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)
- 26670 mg/kg (aqua, marine water)
- 53182 mg/kg (bd)
- 266700 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)

108-88-3 toluene

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

141-78-6 ethyl acetate

PNEC 650 mg/l (STP)

- 0,26 mg/l (aqua, freshwater)
- 1,65 mg/l (aqua, intermittent releases)
- 0,026 mg/l (aqua, marine water)
- 0,125 mg/kg (sediment marine water)
- 1,25 mg/kg (sediment freshwater)

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

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)
- 0,83 mg/kg (sediment marine water)
- 8,27 mg/kg (sediment freshwater)

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)

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2,68 mg/kg (soil)

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)

· **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 skin.

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.

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**

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.

Fluorocarbon rubber gloves (Viton)

· **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.

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- Change in condition
 - Melting point/Melting range: Undetermined.
 - Boiling point/Boiling range: 77 °C
- Flash point: 4 °C
- Flammability (solid, gaseous): Not applicable.
- Ignition temperature: 460 °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) 59,59 %
- 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 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
- LD/LC50 values relevant for classification:

1330-20-7 xylene

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

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108-88-3 toluene

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

- Primary irritant effect:
- Skin corrosion/irritation Irritant to skin and mucous membranes.
- Serious eye damage/irritation No irritating effect.
- Respiratory or skin 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.
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
 Repr. 2

SECTION 12: Ecological information

- 12.1 Toxicity
- Aquatic toxicity:

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)

108-88-3 toluene

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)
 NOEC/72h 10 mg/l (Skeletonema costatum)

141-78-6 ethyl acetate

EC50/48h 5600 mg/l (algae)
 610 mg/l (daphnia magna)

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

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

EC50/48h >200 mg/l (daphnia magna)
 EC50/96h 400 mg/l (algae)
 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)
 LC50/96h 18 mg/l (pimphales promelas) (OECD 203)
 NOAEL/72h 200 mg/l (desmodesmus supspicatus)

· 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

108-88-3 toluene

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

· 12.4 Mobility in soil No further relevant information available.

· 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.

· 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 RELATED MATERIAL

· IMDG, IATA

PAINT RELATED MATERIAL

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· 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

· 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

· 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":

UN1263, 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

· 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.

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- 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 the central nervous system through prolonged or repeated exposure. Route of exposure: Inhalative.
- 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
 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

· * Data compared to the previous version altered.

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