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#### Trade name: Smartline 2K Clearcoat Hardener standard

(Contd. of page 1) · Precautionary statements P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. *P304+P340* IF INHALED: Remove person to fresh air and keep comfortable for breathing. *P312* Call a POISON CENTER/doctor if you feel unwell. • Other hazards · Results of PBT and vPvB assessment

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

#### 3 Composition/Information on ingredients

#### · Chemical characterisation: Mixtures

• Description: Mixture of substances listed below with nonhazardous additions.

| · Dangerous | components:   |         |
|-------------|---|---------|
| 123-86-4    | n-Butyl acetate   | 25-50%  |
|             | 🚸 Flam. Liq. 3, H226; 🚸 STOT SE 3, H336   |         |
| 28182-81-2  | Hexamethylene diisocyanate, oligomers   | 25-50%  |
|             | Hexamethylene diisocyanate, oligomers   |         |
| 108-65-6    | 2-Methoxy-1-methylethyl acetate   | 10-25%  |
|             | 🚸 Flam. Liq. 3, H226; 🚸 STOT SE 3, H336   |         |
| 1330-20-7   |   | 2.5-<5% |
|             | ♦ 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 |         |

• Additional information: For the wording of the listed hazard phrases refer to section 16.

#### 4 First aid measures

- · General information: Immediately remove any clothing soiled by the product.
- 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 rinse with water.
- · After eye contact:
- Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed
- No further relevant information available.

### 5 Fire fighting measures

· Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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

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- · Special hazards arising from the substance or mixture
- During heating or in case of fire poisonous gases are produced.
- *Protective equipment: Mouth respiratory protective device.*

### 6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures Mount respiratory protective device.
- Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.

• *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 section 13. Ensure adequate ventilation.

- · 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.

#### 7 Handling and storage

#### · Handling:

- · Precautions for safe handling
- Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols.
- Information about fire and explosion protection:
- Keep ignition sources away Do not smoke.
- Protect against electrostatic charges.
- Keep respiratory protective device available.
- · Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Store away from foodstuffs.
- Further information about storage conditions: Keep container tightly sealed.
- Storage class: 3
- · Specific end use(s) No further relevant information available.

#### 8 Exposure controls/personal protection

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

| • Ingredients with lim | it values that require monitoring at the workplace:                                |
|------------------------|--|
| 123-86-4 n-Butyl ac    | etate  |
| WES (New Zealand)      | Short-term value: 950 mg/m³, 200 ppm<br>Long-term value: 713 mg/m³, 150 ppm        |
| IOELV (EU)             | Short-term value: 723 mg/m³, 150 ppm<br>Long-term value: 241 mg/m³, 50 ppm         |
| 108-65-6 2-Methoxy     | y-1-methylethyl acetate  |
| IOELV (EU)             | Short-term value: 550 mg/m³, 100 ppm<br>Long-term value: 275 mg/m³, 50 ppm<br>Skin |
| <u> </u>               | (Contd. on page 4)   |

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|                   | (Contd. of page 3)   |
|-------------------|--|
| 1330-20-7 Xylene  |  |
| WES (New Zealand) | Long-term value: 217 mg/m <sup>3</sup> , 50 ppm<br>oto                             |
| IOELV (EU)        | Short-term value: 442 mg/m³, 100 ppm<br>Long-term value: 221 mg/m³, 50 ppm<br>Skin |

• Additional information: The lists valid during the making were used as basis.

- · 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.

• 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.

#### • Protection of hands:

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



Protective gloves (EN 374)

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

#### $\cdot$ 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.

#### Breakthrough time of glove material

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

• Eye protection:



Tightly sealed goggles

## 9 Physical and chemical properties

| Appearance:                          |                                    |
|--------------------------------------|------------------------------------|
| Form:                                | Fluid                              |
| Colour:                              | According to product specification |
| Odour:                               | Characteristic                     |
| Odour threshold:                     | Not determined.                    |
| pH-value:                            | Not determined.                    |
| Change in condition                  |                                    |
| Melting point/freezing point:        | Undetermined.                      |
| Initial boiling point and boiling re | unge: 124-128 °C                   |

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|---|--|
| · Flash point:                          | 27 °C (DIN EN ISO 1523:2002)   |
| · Flammability (solid, gas):            | Flammable.   |
| Auto-ignition temperature:              | 315 °C (DIN 51794)   |
| Decomposition temperature:              | Not determined.  |
| Ignition temperature:                   | Product is not selfigniting.   |
| Explosive properties:                   | <i>Product is not explosive. However, formation of explosive air/vapour mixtures are possible.</i> |
| Explosion limits:                       |  |
| Lower:                                  | 1.2 Vol %  |
| Upper:                                  | 10.8 Vol %   |
| Vapour pressure at 20 °C:               | 10.7 hPa   |
| Vapour pressure at 50 °C:               | 55 hPa   |
| Density at 20 °C:                       | 0.976 g/cm <sup>3</sup> (DIN EN ISO 2811-1)  |
| Relative density                        | Not determined.  |
| Vapour density                          | Not determined.  |
| Evaporation rate                        | Not determined.  |
| Solubility in / Miscibility with        |  |
| water:                                  | Not miscible or difficult to mix.  |
| Partition coefficient: n-octanol/water: | Not determined.  |
| Viscosity:                              |  |
| Dynamic:                                | Not determined.  |
| Kinematic at 20 °C:                     | 10-15 s (DIN 53211/4)  |
| Solvent content:                        |  |
| VOC (EC)                                | 63.95 %  |
| Solids content (weight-%):              | 36.0 %   |
| Other information                       | No further relevant information available.   |

## 10 Stability and reactivity

· **Reactivity** No further relevant information available.

- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: Carbon monoxide

## 11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity Based on available data, the classification criteria are not met.
- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- · Serious eye damage/irritation Based on available data, the classification criteria are not met.
- · Respiratory or skin sensitisation May cause an allergic skin reaction.
- 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. May cause drowsiness or dizziness.
- STOT-repeated exposure May cause damage to organs through prolonged or repeated exposure.
- Aspiration hazard Based on available data, the classification criteria are not met.

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#### **12 Ecological information**

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behaviour in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- Additional ecological information:
- · General notes:

Water hazard class 1 (German Regulation) : slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

#### 13 Disposal considerations

#### · Waste treatment methods

· Recommendation

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

- · Uncleaned packaging:
- · Recommendation:

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

## 14 Transport information · UN-Number · NZS, IMDG, IATA UN1263 · UN proper shipping name · NZS UNI263 PAINT RELATED MATERIAL PAINT RELATED MATERIAL · IMDG, IATA • Transport hazard class(es) · NZS · Class 3 (F1) Flammable liquids. 3 · Label · IMDG, IATA · Class 3 Flammable liquids. · Label 3 (Contd. on page 7)

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|--|--|
| Packing group                                  |  |
| NZS, IMDG, IATA                                | III                                    |
| Environmental hazards:                         | Not applicable.                        |
| Special precautions for user                   | Warning: Flammable liquids.            |
| Hazard identification number (Kemler code):    | 30                                     |
| EMS Number:                                    | F- $E$ , $S$ - $E$                     |
| Stowage Category                               | A                                      |
| Transport in bulk according to Annex II of Mar | pol                                    |
| and the IBC Code                               | Not applicable.                        |
| Transport/Additional information:              |  |
| NZS  |  |
| Limited quantities (LQ)                        | 5L                                     |
| Transport category                             | 3                                      |
| Tunnel restriction code                        | D/E                                    |
| IMDG   |  |
| Limited quantities (LQ)                        | 5L                                     |
| UN "Model Regulation":                         | UN 1263 PAINT RELATED MATERIAL, 3, III |

## 15 Regulatory information

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

| 123-86-4 n-Butyl acetate HSR00109 | · HSNO App | roval numbers   |           |
|-----------------------------------|------------|-----------------|-----------|
|                                   | 123-86-4   | n-Butyl acetate | HSR001091 |
| 1330-20-7 Xylene HSR00098         | 1330-20-7  | Xylene          | HSR000983 |

· GHS label elements

- *The product is classified and labelled according to the Globally Harmonised System (GHS). Hazard pictograms*



· Signal word Warning

- · Hazard-determining components of labelling:
- Hexamethylene diisocyanate, oligomersn-Butyl acetateXylene2-Methoxy-1-methylethyl acetateHazard statementsH226Flammable liquid and vapour.H317May cause an allergic skin reaction.H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.H373May cause damage to organs through prolonged or repeated exposure.
- · Precautionary statements
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.

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|-------------|-----------|----|-------------|------------|----------|
| 1           | 5         |    | 01011100111 | 1100.00000 |          |

| 1  |   |
|--|---|
|  |   |
| P280   | (Contd. of page 7)<br>Wear protective gloves/protective clothing/eye protection/face protection/hearing   |
| P303+P361+P.   | protection.<br>353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with  |
| P304+P340<br>P312  | water [or shower].<br>IF INHALED: Remove person to fresh air and keep comfortable for breathing.<br>Call a POISON CENTER/doctor if you feel unwell.   |
| D:   | /10/711   |
| · Directive 2012/  |   |
|  | ous substances - ANNEX I None of the ingredients is listed.   |
| · Seveso category  | y P5c FLAMMABLE LIQUIDS   |
|  | ntity (tonnes) for the application of lower-tier requirements 5,000 t   |
|  | ntity (tonnes) for the application of upper-tier requirements 50,000 t  |
| Quanjying qua  | nuty (tonnes) for the application of apper-aet requirements 50,000 t  |
| • National regula  | itions:   |
| · Additional class   | sification according to Decree on Hazardous Materials, Annex II:  |
| Class Share  |   |
| Cluss Shure  |   |
| NK 50-1  | 00  |
|  |   |
| • Other regulatio  | ns, limitations and prohibitive regulations   |
|  | gs and Colourants (Flammable) Group Standard 2006   |
|  | l Number: The HSNO Approval Number for this Group Standard is HSR002662.  |
|  |   |
|  | e Site & Storage requirements document.   |
| • Chemical safety  | y assessment: A Chemical Safety Assessment has not been carried out.  |
|  |   |
|  |   |
| 16 Other inform  | nation  |
| , and the second se |   |
|  | n is based on our present knowledge. However, this shall not constitute a guarantee for any t features and shall not establish a legally valid contractual relationship.  |
| · Relevant phras   |   |
|  |   |
|  | le liquid and vapour.   |
| H304 May be fa   | ital if swallowed and enters airways.   |
|  | in contact with skin.   |
| H315 Causes sk   | cin irritation.   |
| H317 May caus  | e an allergic skin reaction.  |
|  | prious eye irritation.  |
| H332 Harmful i   |   |
|  |   |
|  | e respiratory irritation.   |
|  | e drowsiness or dizziness.  |
| H373 May caus  | e damage to organs through prolonged or repeated exposure.  |
| · Contact:   |   |
| • Abbreviations a  | und acronyms:   |
|  | tif au transport international des marchandises dangereuses par route (European Agreement Concerning the  |
|  | age of Dangerous Goods by Road)   |
| IMDG: Internation  | al Maritime Code for Dangerous Goods  |
|  | l Air Transport Association   |
|  | Inventory of Existing Commercial Chemical Substances  |
|  | List of Notified Chemical Substances  |
|  | stracts Service (division of the American Chemical Society)   |
|  | anic Compounds (USA, EU)  |
|  | oaccumulative and Toxic   |
|  | ent and very Bioaccumulative  |
|  |   |
|  | mable liquids – Category 3<br>2 toxicity – Category 4   |
| Acute Tox. 4: Acute  | e toxicity – Category 4   |
| Acute Tox. 4: Acute<br>Skin Irrit. 2: Skin co  | e toxicity – Category 4<br>orrosion/irritation – Category 2   |
| Acute Tox. 4: Acute<br>Skin Irrit. 2: Skin co<br>Eye Irrit. 2: Serious   | e toxicity – Category 4<br>orrosion/irritation – Category 2<br>s eye damage/eye irritation – Category 2   |
| Acute Tox. 4: Acute<br>Skin Irrit. 2: Skin co<br>Eye Irrit. 2: Serious<br>Skin Sens. 1: Skin s   | e toxicity – Category 4<br>orrosion/irritation – Category 2<br>s eye damage/eye irritation – Category 2<br>ensitisation – Category 1  |
| Acute Tox. 4: Acute<br>Skin Irrit. 2: Skin co<br>Eye Irrit. 2: Serious<br>Skin Sens. 1: Skin s<br>STOT SE 3: Specifi   | e toxicity – Category 4<br>orrosion/irritation – Category 2<br>s eye damage/eye irritation – Category 2   |
| Acute Tox. 4: Acute<br>Skin Irrit. 2: Skin c<br>Eye Irrit. 2: Serious<br>Skin Sens. 1: Skin s<br>STOT SE 3: Specifi<br>STOT RE 2: Specifi  | e toxicity – Category 4<br>orrosion/irritation – Category 2<br>s eye damage/eye irritation – Category 2<br>ensitisation – Category 1<br>ic target organ toxicity (single exposure) – Category 3   |
| Acute Tox. 4: Acute<br>Skin Irrit. 2: Skin cu<br>Eye Irrit. 2: Serious<br>Skin Sens. 1: Skin s<br>STOT SE 3: Specifi<br>STOT RE 2: Specifi<br>Asp. Tox. 1: Aspira  | e toxicity – Category 4<br>orrosion/irritation – Category 2<br>s eye damage/eye irritation – Category 2<br>vensitisation – Category 1<br>ic target organ toxicity (single exposure) – Category 3<br>ic target organ toxicity (repeated exposure) – Category 2 |