in accordance with HSNO



Printing date 28.09.2023

Version number 1

Revision: 22.09.2023



(Contd. on page 2)

- NZ

in accordance with HSNO



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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

(Contd. on page 3)

NZ

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Revision: 22.09.2023

Printing date 28.09.2023

Version number 1

Trade name: Smartline2K Clearcoat Hardener standard

(Contd. of page 2)

- · 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 Long-term value: 713 mg/m³, 150 ppm
IOELV (EU)	Short-term value: 723 mg/m³, 150 ppm 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 Long-term value: 275 mg/m³, 50 ppm Skin
<u> </u>	(Contd. on page 4)

in accordance with HSNO



Printing date 28.09.2023

Version number 1

Revision: 22.09.2023

Trade name: Smartline 2K Clearcoat Hardener standard

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

(Contd. on page 5)

in accordance with HSNO



Revision: 22.09.2023

Printing date 28.09.2023

Version number 1

Trade name: Smartline 2K Clearcoat Hardener standard

	(Contd. of page 4)
· 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 ³ (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.

(Contd. on page 6)

in accordance with HSNO



Printing date 28.09.2023

Version number 1

Revision: 22.09.2023

Trade name: Smartline 2K Clearcoat Hardener standard

(Contd. of page 5)

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)

in accordance with HSNO



Printing date 28.09.2023

Version number 1

Revision: 22.09.2023

Trade name: Smartline 2K Clearcoat Hardener standard

	(Contd. of page
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.

(Contd. on page 8)

⁻ NZ

Safety Data Sheet in accordance with HSNO



Revision: 22.09.2023

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Version number 1

Trade name:	Smartline	2K	Clearcoat	Hardener	standard
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1	
P280	(Contd. of page 7) Wear protective gloves/protective clothing/eye protection/face protection/hearing
P303+P361+P.	protection. 353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with
P304+P340 P312	water [or shower]. IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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 2 toxicity – Category 4
Acute Tox. 4: Acute	e toxicity – Category 4
Acute Tox. 4: Acute Skin Irrit. 2: Skin co	e toxicity – Category 4 orrosion/irritation – Category 2
Acute Tox. 4: Acute Skin Irrit. 2: Skin co Eye Irrit. 2: Serious	e toxicity – Category 4 orrosion/irritation – Category 2 s eye damage/eye irritation – Category 2
Acute Tox. 4: Acute Skin Irrit. 2: Skin co Eye Irrit. 2: Serious Skin Sens. 1: Skin s	e toxicity – Category 4 orrosion/irritation – Category 2 s eye damage/eye irritation – Category 2 ensitisation – Category 1
Acute Tox. 4: Acute Skin Irrit. 2: Skin co Eye Irrit. 2: Serious Skin Sens. 1: Skin s STOT SE 3: Specifi	e toxicity – Category 4 orrosion/irritation – Category 2 s eye damage/eye irritation – Category 2
Acute Tox. 4: Acute Skin Irrit. 2: Skin c Eye Irrit. 2: Serious Skin Sens. 1: Skin s STOT SE 3: Specifi STOT RE 2: Specifi	e toxicity – Category 4 orrosion/irritation – Category 2 s eye damage/eye irritation – Category 2 ensitisation – Category 1 ic target organ toxicity (single exposure) – Category 3
Acute Tox. 4: Acute Skin Irrit. 2: Skin cu Eye Irrit. 2: Serious Skin Sens. 1: Skin s STOT SE 3: Specifi STOT RE 2: Specifi Asp. Tox. 1: Aspira	e toxicity – Category 4 orrosion/irritation – Category 2 s eye damage/eye irritation – Category 2 vensitisation – Category 1 ic target organ toxicity (single exposure) – Category 3 ic target organ toxicity (repeated exposure) – Category 2