


*** SECTION 1: Identification of the substance/mixture and of the company/undertaking****· 1.1 Product identifier****· Trade name: 9543 Hardener Fast****· Article number:** FRL1180**· UFI:** N5W0-605R-Q000-TXVH**· 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)

· Product category PC9a Coatings and paints, thinners, paint removers**· Process category** PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities**· Environmental release category** ERC2 Formulation into mixture**· Article category** AC1 Vehicles**· Application of the substance / the mixture** Surface protection**· 1.3 Details of the supplier of the safety data sheet****· Manufacturer/Supplier:** FRL Chemie Gmbh, Theresienhöhe 28,
80339 Munich, Germany
MADE IN EU - T. +498926201297 - E. info@vollchem.com
web:www.vollchem.com**· Further information obtainable from:** FRL Chemie Gmbh, Theresienhöhe 28,
80339 Munich, Germany
MADE IN EU - T. +498926201297 - E. info@vollchem.com
web:www.vollchem.com**· 1.4 Emergency telephone number:**

Regional Medicines and Poisons Information Centre NI

Pharmacy Department, Royal Hospital Suite

Grosvenor Road Belfast

Telephone: +44 28 90 63 2032

Fax: +44 28 90 24 80 30

Emergency telephone: 844 892 0111

E-mail address: nirdic.nirdic@belfasttrust.hscni.net

Members of the public seeking specific information on poisons should contact:

In England and Wales: NHS 111 - dial 111

In Scotland: NHS 24 - dial 111

Trade name: 9543 Hardener Fast

*** SECTION 2: Hazards identification****· 2.1 Classification of the substance or mixture****· Classification according to Regulation (EC) No 1272/2008**

GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS07

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 H336 May cause drowsiness or dizziness.

· 2.2 Label elements**· Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the GB CLP regulation.

· Hazard pictograms

GHS02 GHS07

· Signal word Warning**· Hazard-determining components of labelling:**

Aromatic Polyisocyanate

n-butyl ester

Isocyanates

ethyl acetate

4-isocyanatosulphonyltoluene

· Hazard statements

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H336 May cause drowsiness or dizziness.

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Trade name: 9543 Hardener Fast

Precautionary statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or 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.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment

This product contains no substance that is considered to be persistent, bioaccumulating or non toxic (PBT). This mixture contains no substance that is considered to be very persistent or very bioaccumulating (vPvB).






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

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

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

Dangerous components:

CAS: 123-86-4 EINECS: 204-658-1 Index number: 607-025-00-1 RTECS: AF 7350000 Reg.nr.: 01-2119485493-29-007 01-2119485493-29-004 01-2119485493-29-003 01-2119485493-29-005 01-2119485493-29	n-butyl ester <hr style="border-top: 1px dashed black;"/>  Flam. Liq. 3, H226  STOT SE 3, H336	30-<35%
CAS: 1330-20-7 Index number: 601-022-00-9	xylene <hr style="border-top: 1px dashed black;"/>  Flam. Liq. 3, H226  Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	25-<30%
CAS: 53317-61-6	Aromatic Polyisocyanate <hr style="border-top: 1px dashed black;"/>  Eye Irrit. 2, H319; Skin Sens. 1, H317	15-<20%

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- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
Firefighters should always protective equipment and breathing apparatus when handling fire coming from these products
- **5.6 Fire and explosion Hazards**
- **Speial protective equipment and fire fighting procedures:**
Firefighters should wear full protective flameproof clothing and self contained breathing apparatus for the firefighter if necessary. In the event of any fire try cool down the tanks with water spray. If possible do not allow the water used by firefighters to enter the drains or come in any contact with the water supply lines for the public. Always seek as appropriate.
- **Additional information** Collect contaminated fire fighting water separately. It must not enter the sewage system.

*** 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 section 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.
- **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:** No special requirements.
- **Information about storage in one common storage facility:** Not required.

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- **Further information about storage conditions:** Keep container tightly sealed.
 - **7.3 Specific end use(s)** No further relevant information available.
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*** SECTION 8: Exposure controls/personal protection**
· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:	
123-86-4 n-butyl ester	
WEL	Short-term value: 966 mg/m ³ , 200 ppm Long-term value: 724 mg/m ³ , 150 ppm
1330-20-7 xylene	
WEL	Short-term value: 441 mg/m ³ , 100 ppm Long-term value: 220 mg/m ³ , 50 ppm Sk; BMGV
28182-81-2 Isocyanates	
WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
141-78-6 ethyl acetate	
WEL	Short-term value: 1468 mg/m ³ , 400 ppm Long-term value: 734 mg/m ³ , 200 ppm
4083-64-1 4-isocyanatosulphonyltoluene	
WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO

- **Regulatory information** WEL: EH40/2020

· Ingredients with biological limit values:	
1330-20-7 xylene	
BMGV	650 mmol/mol creatinine Medium: urine Sampling time: post shift Parameter: methyl hippuric acid
28182-81-2 Isocyanates	
BMGV	1 µmol creatinine/mol Medium: urine Sampling time: At the end of the period od exposure Parameter: isocyanate-derived diamine

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

· **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.

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.

· **Protection of hands:**



Protective gloves

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

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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.

· **Penetration time of glove material**

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

· **For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:**

The breakthrough time of gloves is unknown for this product itself. The glove material that can be used is recommended on the basis of the different substances in the preparation.

· **For the permanent contact gloves made of the following materials are suitable:** Fluorocarbon rubber (Viton)

· **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Rubber gloves

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Trade name: 9543 Hardener Fast

· **Eye protection:**



Tightly sealed goggles

· **Body protection:** Protective work clothing

* **SECTION 9: Physical and chemical properties**

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Fluid
Colour:	According to product specification
Odour:	Characteristic
Odour threshold:	Not determined.

· **pH-value:** Mixture is non-soluble (in water).

· **Change in condition**

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	77-78 °C (141-78-6 ethyl acetate)

· **Flash point:** 23 - 60 °C

· **Flammability** Flammable.

· **Autoignition temperature:** 370 °C (123-86-4 n-butyl ester)

· **Decomposition temperature:** Not determined.

· **Ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Risk of explosion by shock, friction, fire or other sources of ignition.

· **Explosion limits:**

Lower:	1.1 Vol %
Upper:	7.5 Vol %

· **Vapour pressure at 20 °C:** 10.7 hPa (123-86-4 n-butyl ester)

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· Vapour pressure at 50 °C:	55 hPa
· Density at 20 °C:	0.97561-0.9777 g/cm ³
· 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:	0 mm ² /s
· Solvent content:	
Organic solvents:	71.2 %
VOC (EC)	-
	694.5-696 g/l
Solids content (volume):	28.8 %
· 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** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

Trade name: 9543 Hardener Fast

* **SECTION 11: Toxicological information**

· **11.1 Information on toxicological effects**

· **Acute toxicity** Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:		
ATE (Acute Toxicity Estimates)		
Dermal	LD50	6,700 mg/kg (rabbit)
Inhalative	LC50/4 h	36.9 mg/l

123-86-4 n-butyl ester		
Oral	LD50	13,100 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)
Inhalative	LC50/4 h	>21 mg/l (rat)

1330-20-7 xylene		
Oral	LD50	4,300 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	11 mg/l (ATE)

141-78-6 ethyl acetate		
Oral	LD50	5,620 mg/kg (rabbit)
Inhalative	LC50/4 h	1,600 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.

· **Additional toxicological information:**

· **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 drowsiness or dizziness.

· **STOT-repeated exposure** Based on available data, the classification criteria are not met.

Trade name: 9543 Hardener Fast

· **Aspiration hazard** Based on available data, the classification criteria are not met.

* **SECTION 12: Ecological information**

· **12.1 Toxicity**

· **Aquatic toxicity:**

This product is not toxic for the aquatic life. Nevertheless do not dispose the product or any cleaning solvents used along with this product into the sea

· **12.2 Persistence and degradability**

This product contains polyesteric molecules and organic solvents and is not known to be bioaccumulative. It can be considered as biodegradable in small quantities. In case of disposal, it should be treated as a hazardous material and should be disposed accordingly. Do not just throw it away

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** This product contains no substance that is considered to be persistent, bioaccumulating or non toxic (PBT).

· **vPvB:** This mixture contains no substance that is considered to be very persistent or very bioaccumulating (vPvB).

· **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**



HP3	Flammable
HP4	Irritant - skin irritation and eye damage
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP6	Acute Toxicity
HP13	Sensitising

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Trade name: 9543 Hardener Fast

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

* **SECTION 14: Transport information**

· 14.1 UN-Number	
· ADR, IMDG, IATA	UN1263
· 14.2 UN proper shipping name	
· ADR	UN1263 PAINT RELATED MATERIAL
· IMDG, IATA	PAINT RELATED MATERIAL
· 14.3 Transport hazard class(es)	
· ADR	
	
· Class	3 (F1) Flammable liquids.
· Label	3
· IMDG, IATA	
	
· Class	3 Flammable liquids.
· Label	3
· 14.4 Packing group	
· ADR, IMDG, IATA	III
· 14.5 Environmental hazards:	
· Marine pollutant:	No
· 14.6 Special precautions for user	Warning: Flammable liquids.
· Hazard identification number (Kemler code):	30
· EMS Number:	F-E, <u>S</u> -E

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Trade name: 9543 Hardener Fast

· Stowage Category	A
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· IATA	
· Remarks:	•3Y
· UN "Model Regulation":	UN 1263 PAINT RELATED MATERIAL, 3, III

* **SECTION 15: Regulatory information**
 •3Y

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture		
28182-81-2	Isocyanates	5-<10%

· Poisons Act
· Regulated explosives precursors
None of the ingredients is listed.
· Regulated poisons
None of the ingredients is listed.

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Trade name: 9543 Hardener Fast**Reportable explosives precursors**

None of the ingredients is listed.

Reportable poisons

None of the ingredients is listed.

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the GB CLP regulation.

Hazard pictograms

GHS02 GHS07

Signal word Warning**Hazard-determining components of labelling:**Aromatic Polyisocyanate
n-butyl ester
Isocyanates
ethyl acetate
4-isocyanatosulphonyltoluene**Hazard statements**H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H336 May cause drowsiness or dizziness.**Precautionary statements**P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or 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.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.**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

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Trade name: 9543 Hardener Fast

- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

- **REGULATION (EU) 2019/1148**

· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS
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None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our current 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.
- 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.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H412 Harmful to aquatic life with long lasting effects.

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Trade name: 9543 Hardener Fast

Classification according to Regulation (EC) No 1272/2008

Flammable liquids

Bridging principles

Skin corrosion/irritation

Serious eye damage/irritation

Skin sensitisation

Specific target organ toxicity (single exposure)

The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

· **Department issuing SDS:** Department of Quality Control· **Contact:**

FRL Chemie Gmbh, Theresienhöhe 28,

80339 Munich, Germany

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web:www.vollchem.com

· *** Data compared to the previous version altered.**

Trade name: 9543 Hardener Fast

*** Annex: Exposure scenario****· Short title of the exposure scenario****· 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)

· Product category PC9a Coatings and paints, thinners, paint removers**· Process category** PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities**· Article category** AC1 Vehicles**· Environmental release category** ERC2 Formulation into mixture**· Description of the activities / processes covered in the Exposure Scenario**

See section 1 of the annex to the Safety Data Sheet.

· Conditions of use According to directions for use.**· Duration and frequency** Frequency of use:**· Physical parameters**

The data on the physical - chemical properties in the Exposure Scenario is based on the properties of the preparation.

· Physical state Fluid**· Concentration of the substance in the mixture** The substance is main component.**· Used amount per time or activity** Smaller than 100 g per application.**· Other operational conditions****· Other operational conditions affecting environmental exposure** Use only on hard ground.**· Other operational conditions affecting worker exposure**

Avoid contact with the skin.

Avoid long-term or repeated skin contact.

Do not breathe gas/vapour/aerosol.

Avoid contact with eyes.

Take precautionary measures against static discharge.

Keep away from sources of ignition - No smoking.

· Other operational conditions affecting consumer exposure No special measures required.**· Other operational conditions affecting consumer exposure during the use of the product**

Not applicable.

· Risk management measures**· Worker protection****· Organisational protective measures**

Ensure good ventilation. This can be achieved by using a local exhaustion or general exhaust system. If these measures are insufficient to keep the solvent vapour concentration below the workplace limit, wear an adequate respiratory protective device.

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Trade name: 9543 Hardener Fast

· Technical protective measures

Use product only in enclosed systems.
Ensure that suitable extractors are available on processing machines
Provide explosion-proof electrical equipment.

· Personal protective measures

Do not inhale gases / fumes / aerosols.
Avoid contact with the skin.
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.
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Avoid contact with the eyes.
Tightly sealed goggles

· Measures for consumer protection

Ensure adequate labelling.
Observe consumer information and advice on safe use.

· Environmental protection measures**· Water**

Do not allow to reach sewage system. Dispose of this product and its container at hazardous or special waste collection point.
Do not allow to reach sewage system.

· Soil

Prevent contamination of soil.
The product is only processed over the concrete collecting basin.

· Disposal measures Ensure that waste is collected and contained.**· Disposal procedures**

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

· Waste type Partially emptied and uncleaned packaging**· Exposure estimation****· Consumer**

This product is to be used by professional technicians only.
Not relevant for this Exposure Scenario.

· Guidance for downstream users

Whether the downstream user acts within the scope of the Exposure Scenario can be verified based on the information in sections 1 to 8.