

## 2K PROTECTIVE POLYURETHANE COATING

Date of compilation: 20.02.2018 Date  
of revision: - - -  
Version: 1

### Rock iT

#### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1 Product identifier:** rangers 2K PROTECTIVE POLYURETHANE COATING
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
Relevant uses: Varnish. For professional user only.  
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Details of the supplier of the safety data sheet:**  
Spray Shop Supplies Pty Ltd  
38 Cyber Loop, Dandenong South,  
Victoria, Australia.  
Phone.: +61 3 9799 2007  
Fax: +61 9799 6568  
orders@sprayshopsupplies.com.au  
www.sprayshopsupplies.com.au
- 1.4 Emergency telephone number:** (8:00-16:00)+61 3 9799 2007

#### SECTION 2: HAZARDS IDENTIFICATION

**rangers**  
**2K PROTECTIVE POLYURETHANE COATING**

**2.1 Classification of the substance or mixture:**

**CLP Regulation (EC) n° 1272/2008:**

Classification of this product has been carried out in accordance with CLP Regulation (EC) n° 1272/2008.

Aquatic Chronic 3: Hazardous to the aquatic environment, long-term hazard, Category 3, H412

Eye Irrit. 2: Eye irritation, Category 2, H319

Flam. Liq. 3: Flammable liquids, Category 3, H226

Skin Irrit. 2: Skin irritation, Category 2, H315

STOT RE 2: Specific target organ toxicity if swallowed, repeated exposure, Category 2, H373 STOT

SE 3: Respiratory tract toxicity, single exposure, Category 3, H335

**2.2 Label elements:**

**CLP Regulation (EC) n° 1272/2008:**

**Warning**



**Hazard statements:**

Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects

Eye Irrit. 2: H319 - Causes serious eye irritation

Flam. Liq. 3: H226 - Flammable liquid and vapour

Skin Irrit. 2: H315 - Causes skin irritation

STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure (Oral) STOT

SE 3: H335 - May cause respiratory irritation

**Precautionary statements:**

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

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

P302+P352: IF ON SKIN: Wash with plenty of water

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

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

P501: Dispose of contents and / or containers in accordance with regulations on hazardous waste or packaging and packaging waste respectively

**Supplementary information:**

EUH208: Contains Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate, Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate. May produce an allergic reaction

**Substances that contribute to the classification**

Xylene; 4-hydroxy-4-methylpentan-2-one

**2.3 Other hazards:**

Product fails to meet PBT/vPvB criteria

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**rangers**  
**2K PROTECTIVE POLYURETHANE COATING**

**3.1 Substance:**

Non-applicable

**3.2 Mixture:**

**Chemical description:** Mixture composed of chemical products

**Components:**

In accordance with Annex II of Regulation (EC) n°1907/2006 (point 3), the product contains:

**rangers**  
**2K PROTECTIVE POLYURETHANE COATING**

Identification	Chemical name/Classification		Concentration
CAS: 1330-20-7 EC: 215-535-7 Index: 601-022-00-9 REACH 01-2119488216-32- : XXXX	<b>Xylene</b> <sup>1</sup> Self-classified		<b>25 - &lt;50 %</b>
	Regulation 1272/2008	Acute Tox. 4: H312+H332; Asp. Tox. 1: H304; Eye Irrit. 2: H319; Flam. Liq. 3: H226; Skin Irrit. 2: H315; STOT RE 2: H373; STOT SE 3: H335 - Danger	
CAS: 123-42-2 EC: 204-626-7 Index: 603-016-00-1 REACH 01-2119473975-21- : XXXX	<b>4-hydroxy-4-methylpentan-2-one</b> <sup>1</sup> Self-classified		<b>1 - &lt;10 %</b>
	Regulation 1272/2008	Eye Irrit. 2: H319; Flam. Liq. 3: H226; STOT SE 3: H335 - Warning	
CAS: 7779-90-0 EC: 231-944-3 Index: Non-applicable REACH 01-2119485044-40- : XXXX	<b>trizinc bis(orthophosphate)</b> <sup>1</sup> ATP CLP00		<b>1 - &lt;10 %</b>
	Regulation 1272/2008	Aquatic Acute 1: H400; Aquatic Chronic 1: H410 - Warning	
CAS: 100-41-4 EC: 202-849-4 Index: 601-023-00-4 REACH 01-2119489370-35- : XXXX	<b>Ethylbenzene</b> <sup>2</sup> ATP ATP06		<b>&lt;1 %</b>
	Regulation 1272/2008	Acute Tox. 4: H332; Asp. Tox. 1: H304; Flam. Liq. 2: H225; STOT RE 2: H373 - Danger	
CAS: 872-50-4 EC: 212-828-1 Index: 606-021-00-7 REACH 01-2119472430-46- : XXXX	<b>N-methyl-2-pyrrolidone</b> <sup>1</sup> ATP ATP09		<b>&lt;1 %</b>
	Regulation 1272/2008	Eye Irrit. 2: H319; Repr. 1B: H360D; Skin Irrit. 2: H315; STOT SE 3: H335 - Danger	
CAS: 41556-26-7 EC: 255-437-1 Index: Non-applicable REACH Non-applicable	<b>Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate</b> <sup>1</sup> Self-classified		<b>&lt;1 %</b>
	Regulation 1272/2008	Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Skin Sens. 1: H317 - Warning	
CAS: 82919-37-7 EC: 280-060-4 Index: Non-applicable REACH Non-applicable	<b>Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate</b> <sup>1</sup> Self-classified		<b>&lt;1 %</b>
	Regulation 1272/2008	Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Skin Sens. 1: H317 - Warning	
CAS: 108-88-3 EC: 203-625-9 Index: 601-021-00-3 REACH 01-2119471310-51-	<b>Toluene</b> <sup>2</sup> ATP CLP00		<b>&lt;1 %</b>
	Regulation 1272/2008	Asp. Tox. 1: H304; Flam. Liq. 2: H225; Repr. 2: H361d; Skin Irrit. 2: H315; STOT RE 2: H373; STOT SE 3: H336 - Danger	

<sup>1</sup> Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2015/830 <sup>2</sup> Substance with a Union workplace exposure limit

To obtain more information on the risk of the substances consult sections 8, 11, 12, 15 and 16.

**SECTION 4: FIRST AID MEASURES**

**4.1 Description of first aid measures:**

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

**By inhalation:**

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

**By skin contact:**

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

**By eye contact:**

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

**SECTION 4: FIRST AID MEASURES (continued)**

**rangers**  
**2K PROTECTIVE POLYURETHANE COATING**

**By ingestion/aspiration:**

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

**4.2 Most important symptoms and effects, both acute and delayed:**

Acute and delayed effects are indicated in sections 2 and 11.

**4.3 Indication of any immediate medical attention and special treatment needed:**

Non-applicable

**SECTION 5: FIREFIGHTING MEASURES**

**5.1 Extinguishing media:**

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO<sub>2</sub>). IT IS RECOMMENDED NOT to use tap water as an extinguishing agent.

**5.2 Special hazards arising from the substance or mixture:**

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

**5.3 Advice for firefighters:**

Depending on the magnitude of the fire it may be necessary to use full protective clothing and individual respiratory equipment. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

**Additional provisions:**

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures:**

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inertization agent. Destroy any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

**6.2 Environmental precautions:**

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

**6.3 Methods and material for containment and cleaning up:**

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

**6.4 Reference to other sections:**

See sections 8 and 13.

**SECTION 7: HANDLING AND STORAGE**

**7.1 Precautions for safe handling:** A.- Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

**SECTION 7: HANDLING AND STORAGE (continued)**

**rangers**  
**2K PROTECTIVE POLYURETHANE COATING**

Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in Directive 94/9/EC (ATEX 100) and with the minimum requirements for protecting the security and health of workers under the selection criteria of Directive 1999/92/EC (ATEX 137). Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

**7.2 Conditions for safe storage, including any incompatibilities:**

A.- Technical measures for storage

Minimum Temp.: 15 °C  
Maximum Temp.: 25 °C  
Maximum time: 12 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

**7.3 Specific end use(s):**

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters:**

Substances whose occupational exposure limits have to be monitored in the work environment

Identification	Environmental limits		
	IOELV (8h)	IOELV (STEL)	Year
Xylene CAS: 1330-20-7 EC: 215-535-7	50 ppm	221 mg/m <sup>3</sup>	
	100 ppm	442 mg/m <sup>3</sup>	
	2017		
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	100 ppm	442 mg/m <sup>3</sup>	
	200 ppm	884 mg/m <sup>3</sup>	
	2017		
Toluene CAS: 108-88-3 EC: 203-625-9	50 ppm	192 mg/m <sup>3</sup>	
	100 ppm	384 mg/m <sup>3</sup>	
	2017		
N-methyl-2-pyrrolidone CAS: 872-50-4 EC: 212-828-1	10 ppm	40 mg/m <sup>3</sup>	
	20 ppm	80 mg/m <sup>3</sup>	
	2017		

**DNEL (Workers):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Xylene CAS: 1330-20-7 EC: 215-535-7	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	180 mg/kg	Non-applicable
	Inhalation	289 mg/m <sup>3</sup>	289 mg/m <sup>3</sup>	77 mg/m <sup>3</sup>	Non-applicable
4-hydroxy-4-methylpentan-2-one CAS: 123-42-2 EC: 204-626-7	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	9,4 mg/kg	Non-applicable
	Inhalation	Non-applicable	240 mg/m <sup>3</sup>	66,4 mg/m <sup>3</sup>	66,4 mg/m <sup>3</sup>
trizinc bis(orthophosphate)	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	83 mg/kg	Non-applicable

- CONTINUED ON NEXT PAGE -

**rangers**  
**2K PROTECTIVE POLYURETHANE COATING**

CAS: 7779-90-0 EC: 231-944-3	Inhalation	Non-applicable	Non-applicable	5 mg/m <sup>3</sup>	Non-applicable
---------------------------------	------------	----------------	----------------	---------------------	----------------

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

**rangers**  
**2K PROTECTIVE POLYURETHANE COATING**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	180 mg/kg	Non-applicable
	Inhalation	Non-applicable	293 mg/m <sup>3</sup>	77 mg/m <sup>3</sup>	Non-applicable
N-methyl-2-pyrrolidone CAS: 872-50-4 EC: 212-828-1	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	208 mg/kg	Non-applicable	19,8 mg/kg	Non-applicable
	Inhalation	80 mg/m <sup>3</sup>	Non-applicable	40 mg/m <sup>3</sup>	Non-applicable
Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate CAS: 41556-26-7 EC: 255-437-1	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	2,5 mg/kg	Non-applicable	2,5 mg/kg	Non-applicable
	Inhalation	2,35 mg/m <sup>3</sup>	2,35 mg/m <sup>3</sup>	2,35 mg/m <sup>3</sup>	Non-applicable
Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate CAS: 82919-37-7 EC: 280-060-4	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	2,5 mg/kg	Non-applicable	2,5 mg/kg	Non-applicable
	Inhalation	2,35 mg/m <sup>3</sup>	2,35 mg/m <sup>3</sup>	2,35 mg/m <sup>3</sup>	Non-applicable
Toluene CAS: 108-88-3 EC: 203-625-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	384 mg/kg	Non-applicable
	Inhalation	384 mg/m <sup>3</sup>	384 mg/m <sup>3</sup>	192 mg/m <sup>3</sup>	192 mg/m <sup>3</sup>

**DNEL (General population):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Xylene CAS: 1330-20-7 EC: 215-535-7	Oral	Non-applicable	Non-applicable	1,6 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	108 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	14,8 mg/m <sup>3</sup>	Non-applicable
4-hydroxy-4-methylpentan-2-one CAS: 123-42-2 EC: 204-626-7	Oral	Non-applicable	Non-applicable	3,4 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	3,4 mg/kg	Non-applicable
	Inhalation	Non-applicable	120 mg/m <sup>3</sup>	11,8 mg/m <sup>3</sup>	11,8 mg/m <sup>3</sup>
trizinc bis(orthophosphate) CAS: 7779-90-0 EC: 231-944-3	Oral	Non-applicable	Non-applicable	0,83 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	83 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	2,5 mg/m <sup>3</sup>	Non-applicable
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	Oral	Non-applicable	Non-applicable	1,6 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	Non-applicable	15 mg/m <sup>3</sup>	Non-applicable
N-methyl-2-pyrrolidone CAS: 872-50-4 EC: 212-828-1	Oral	26 mg/kg	Non-applicable	6,3 mg/kg	Non-applicable
	Dermal	125 mg/kg	Non-applicable	11,9 mg/kg	Non-applicable
	Inhalation	80 mg/m <sup>3</sup>	Non-applicable	12,5 mg/m <sup>3</sup>	Non-applicable
Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate CAS: 41556-26-7 EC: 255-437-1	Oral	1,25 mg/kg	Non-applicable	1,25 mg/kg	Non-applicable
	Dermal	1,25 mg/kg	Non-applicable	1,25 mg/kg	Non-applicable
	Inhalation	0,58 mg/m <sup>3</sup>	0,58 mg/m <sup>3</sup>	0,58 mg/m <sup>3</sup>	Non-applicable
Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate CAS: 82919-37-7 EC: 280-060-4	Oral	1,25 mg/kg	Non-applicable	1,25 mg/kg	Non-applicable
	Dermal	1,25 mg/kg	Non-applicable	1,25 mg/kg	Non-applicable
	Inhalation	0,58 mg/m <sup>3</sup>	0,58 mg/m <sup>3</sup>	0,58 mg/m <sup>3</sup>	Non-applicable
Toluene CAS: 108-88-3 EC: 203-625-9	Oral	Non-applicable	Non-applicable	8,13 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	226 mg/kg	Non-applicable
	Inhalation	226 mg/m <sup>3</sup>	226 mg/m <sup>3</sup>	56,5 mg/m <sup>3</sup>	56,5 mg/m <sup>3</sup>

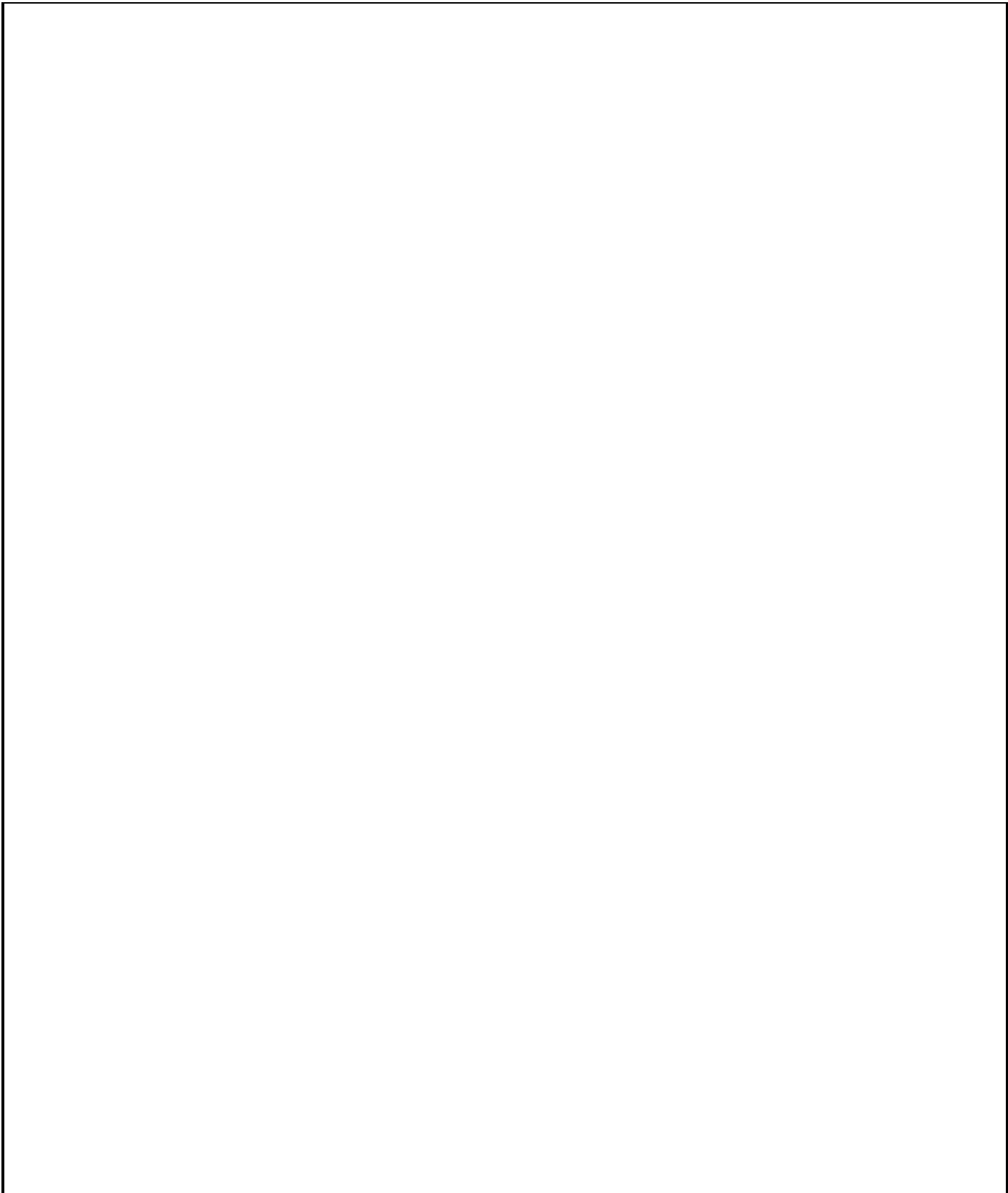
**PNEC:**

Identification					
Xylene CAS: 1330-20-7 EC: 215-535-7	STP	6,58 mg/L	Fresh water	0,327 mg/L	
	Soil	2,31 mg/kg	Marine water	0,327 mg/L	
	Intermittent	0,327 mg/L	Sediment (Fresh water)	12,46 mg/kg	
	Oral	Non-applicable	Sediment (Marine water)	12,46 mg/kg	

- CONTINUED ON NEXT PAGE -



**rangers**  
**2K PROTECTIVE POLYURETHANE COATING**



**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

- CONTINUED ON NEXT PAGE -

**rangers**  
**2K PROTECTIVE POLYURETHANE COATING**

Identification				
4-hydroxy-4-methylpentan-2-one CAS: 123-42-2 EC: 204-626-7	STP	82 mg/L	Fresh water	2 mg/L
	Soil	0,63 mg/kg	Marine water	0,2 mg/L
	Intermittent	1 mg/L	Sediment (Fresh water)	9,06 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,91 mg/kg
trizinc bis(orthophosphate) CAS: 7779-90-0 EC: 231-944-3	STP	0,1 mg/L	Fresh water	0,0206 mg/L
	Soil	35,6 mg/kg	Marine water	0,0061 mg/L
	Intermittent	Non-applicable	Sediment (Fresh water)	117,8 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	56,5 mg/kg
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	STP	9,6 mg/L	Fresh water	0,1 mg/L
	Soil	2,68 mg/kg	Marine water	0,01 mg/L
	Intermittent	0,1 mg/L	Sediment (Fresh water)	13,7 mg/kg
	Oral	20 g/kg	Sediment (Marine water)	1,37 mg/kg
N-methyl-2-pyrrolidone CAS: 872-50-4 EC: 212-828-1	STP	10 mg/L	Fresh water	0,25 mg/L
	Soil	0,138 mg/kg	Marine water	0,025 mg/L
	Intermittent	5 mg/L	Sediment (Fresh water)	1,42 mg/kg
	Oral	1,67 g/kg	Sediment (Marine water)	0,142 mg/kg
Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate CAS: 41556-26-7 EC: 255-437-1	STP	1 mg/L	Fresh water	0,0022 mg/L
	Soil	0,21 mg/kg	Marine water	0,00022 mg/L
	Intermittent	0,009 mg/L	Sediment (Fresh water)	1,05 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,11 mg/kg
Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate CAS: 82919-37-7 EC: 280-060-4	STP	1 mg/L	Fresh water	0,0022 mg/L
	Soil	0,21 mg/kg	Marine water	0,00022 mg/L
	Intermittent	0,009 mg/L	Sediment (Fresh water)	1,05 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,11 mg/kg
Toluene CAS: 108-88-3 EC: 203-625-9	STP	13,61 mg/L	Fresh water	0,68 mg/L
	Soil	2,89 mg/kg	Marine water	0,68 mg/L
	Intermittent	0,68 mg/L	Sediment (Fresh water)	16,39 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	16,39 mg/kg



**8.2 Exposure controls:**

A.- General security and hygiene measures in the work place



As a preventative measure it is recommended to use basic Personal Protection Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours		EN 405:2001+A1:2009	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

C.- Specific protection for the hands

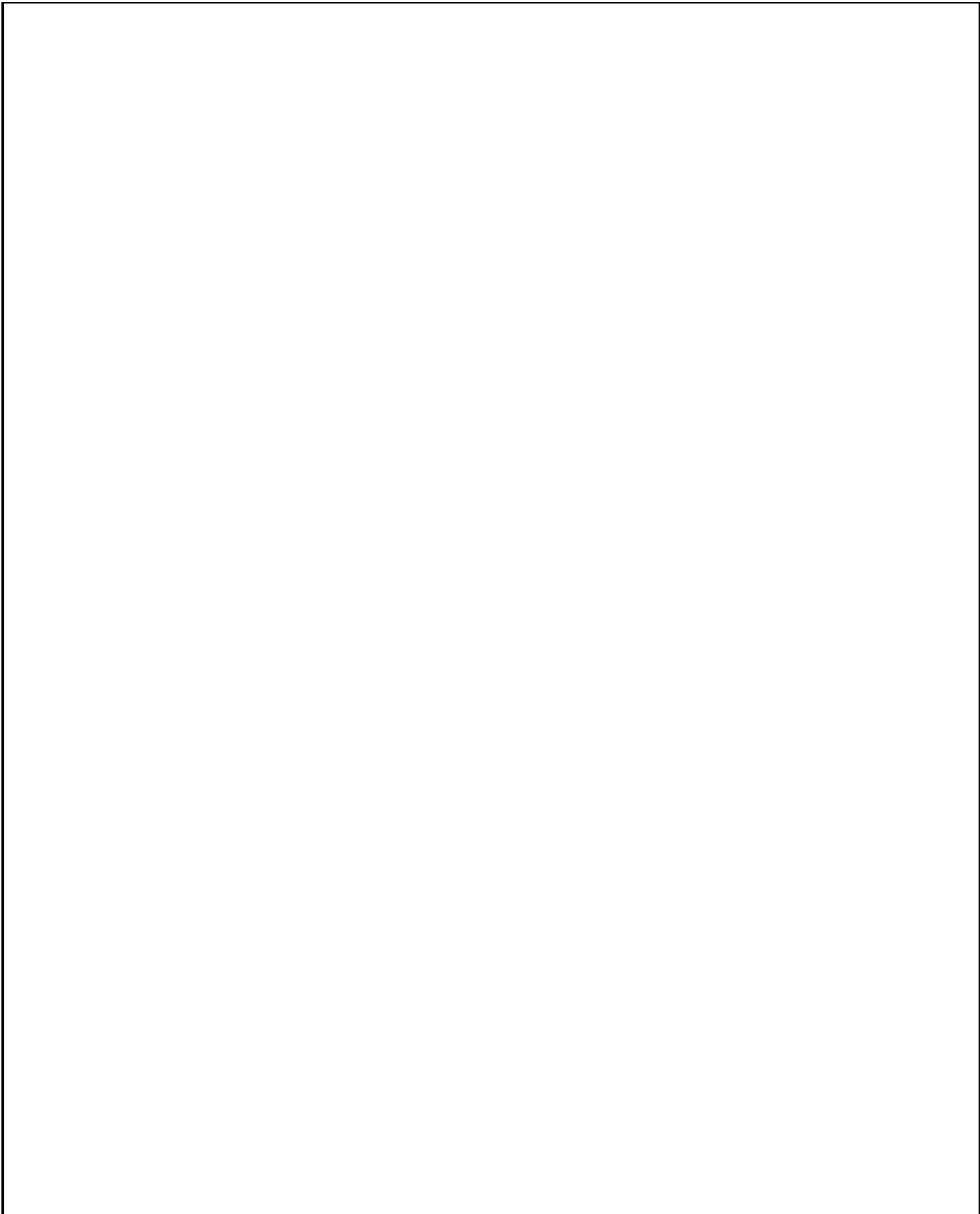
Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Protective gloves against minor risks			Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN 420 and EN 374.

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application

D.- Ocular and facial protection

- CONTINUED ON NEXT PAGE -



**rangers**  
**2K PROTECTIVE POLYURETHANE COATING**







SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

- CONTINUED ON NEXT PAGE -



**rangers**  
**2K PROTECTIVE POLYURETHANE COATING**

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.		EN 166:2001 EN ISO 4007:2012	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

**E.- Bodily protection**

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Antistatic and fireproof protective clothing		EN 1149-1:2006 EN 1149-2:1997 EN 1149-3:2004 EN 168:2001 EN ISO 14116:2015 EN 1149-5:2008	Limited protection against flames.
 Mandatory foot protection	Safety footwear with antistatic and heat resistant properties		EN 13287:2008 EN ISO 20345:2011	Replace boots at any sign of deterioration.

**F.- Additional emergency measures**

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2002	 Eyewash stations	DIN 12 899 ISO 3864-1:2002

**Environmental exposure controls:**

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

**Volatile organic compounds:**

With regard to Directive 2010/75/EU, this product has the following characteristics:


V.O.C. (Supply): 34,25 % weight  
V.O.C. density at 20 °C: 389 kg/m<sup>3</sup> (389 g/L)  
Average carbon number: 7,81  
Average molecular weight: 107,12 g/mol

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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

For complete information see the product datasheet.

**Appearance:**

Physical state at 20 °C: Liquid  
Appearance: Viscous Colour: Black  
Odour:   
Odour threshold: Non-applicable \*

**Volatility:**

Boiling point at atmospheric pressure: 140 °C  
Vapour pressure at 20 °C: 692 Pa  
Vapour pressure at 50 °C: 3834 Pa (4 kPa)  
Evaporation rate at 20 °C: Non-applicable \*

**Product description:**

\*Not relevant due to the nature of the product, not providing information property of its hazards.

**rangers**  
**2K PROTECTIVE POLYURETHANE COATING**

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)**

Density at 20 °C:	1240 kg/m <sup>3</sup>		
Relative density at 20 °C:	Non-applicable *		
Dynamic viscosity at 20 °C:	Non-applicable *		
Kinematic viscosity at 20 °C:	Non-applicable *		
Kinematic viscosity at 40 °C: >20,5 cSt	Concentration:	Non-applicable *	pH: Non-
applicable *			
Vapour density at 20 °C:	Non-applicable *		
Partition coefficient n-octanol/water 20 °C:	Non-applicable *		
Solubility in water at 20 °C:	Non-applicable *		
Solubility properties:	Non-applicable *		
Decomposition temperature:	Non-applicable *		
Melting point/freezing point:	Non-applicable *		
Explosive properties:	Non-applicable *		
Oxidising properties:	Non-applicable *		
<b>Flammability:</b>			
Flash Point:	28 °C		
Flammability (solid, gas):	Non-applicable *		
Autoignition temperature:	275 °C		
Lower flammability limit:	Not available		
Upper flammability limit:	Not available		
<b>Explosive:</b>			
Lower explosive limit:	Non-applicable *		
Upper explosive limit:	Non-applicable *		
<b>9.2 Other information:</b>			
Surface tension at 20 °C:	Non-applicable *		
Refraction index:	Non-applicable *		

\*Not relevant due to the nature of the product, not providing information property of its hazards.

**SECTION 10: STABILITY AND REACTIVITY**

**10.1 Reactivity:**

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

**10.2 Chemical stability:**

Chemically stable under the conditions of storage, handling and use.

**10.3 Possibility of hazardous reactions:**

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

**10.4 Conditions to avoid:**

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Risk of combustion	Avoid direct impact	Not applicable

**Incompatible materials:**

**10.5**

Acids	Water	Combustive materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

**10.6 Hazardous decomposition products:**

**SECTION 10: STABILITY AND REACTIVITY (continued)**

- CONTINUED ON NEXT PAGE -

**rangers**  
**2K PROTECTIVE POLYURETHANE COATING**

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects:**

The experimental information related to the toxicological properties of the product itself is not available

**Dangerous health implications:**

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

A.- Ingestion (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Produces skin inflammation.
- Contact with the eyes: Produces eye damage after contact.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, however it does contain substances classified as dangerous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.
- Cutaneous: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous with sensitising effects. For more information see section 3.

F- Specific target organ toxicity (STOT) - single exposure:

Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Exposure in high concentration can cause a breakdown in the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness. - Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, however it does contain substances classified as dangerous for this effect. For more information see section 3.

**Other information:**

Non-applicable

**Specific toxicology information on the substances:**

**SECTION 11: TOXICOLOGICAL INFORMATION (continued)**

**rangers**  
**2K PROTECTIVE POLYURETHANE COATING**

Identification	Acute toxicity		Genus
Xylene CAS: 1330-20-7 EC: 215-535-7	LD50 oral	2100 mg/kg	Rat
	LD50 dermal	1100 mg/kg (ATEi)	Rat
	LC50 inhalation	11 mg/L (4 h) (ATEi)	
4-hydroxy-4-methylpentan-2-one CAS: 123-42-2 EC: 204-626-7	LD50 oral	4000 mg/kg	Rat
	LD50 dermal	13630 mg/kg	Rabbit
	LC50 inhalation	>20 mg/L (4 h)	
trizinc bis(orthophosphate) CAS: 7779-90-0 EC: 231-944-3	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>5 mg/L (4 h)	
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	LD50 oral	3500 mg/kg	Rat
	LD50 dermal	15354 mg/kg	Rabbit
	LC50 inhalation	17,2 mg/L (4 h)	Rat
N-methyl-2-pyrrolidone CAS: 872-50-4 EC: 212-828-1	LD50 oral	3598 mg/kg	Rat
	LD50 dermal	7000 mg/kg	Rat
	LC50 inhalation	>20 mg/L	
Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate CAS: 41556-26-7 EC: 255-437-1	LD50 oral	2615 mg/kg	Rat
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>20 mg/L	
Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate CAS: 82919-37-7 EC: 280-060-4	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>5 mg/L	
Toluene CAS: 108-88-3 EC: 203-625-9	LD50 oral	5580 mg/kg	Rat
	LD50 dermal	12124 mg/kg	Rat
	LC50 inhalation	28,1 mg/L (4 h)	Rat

## SECTION 12: ECOLOGICAL INFORMATION

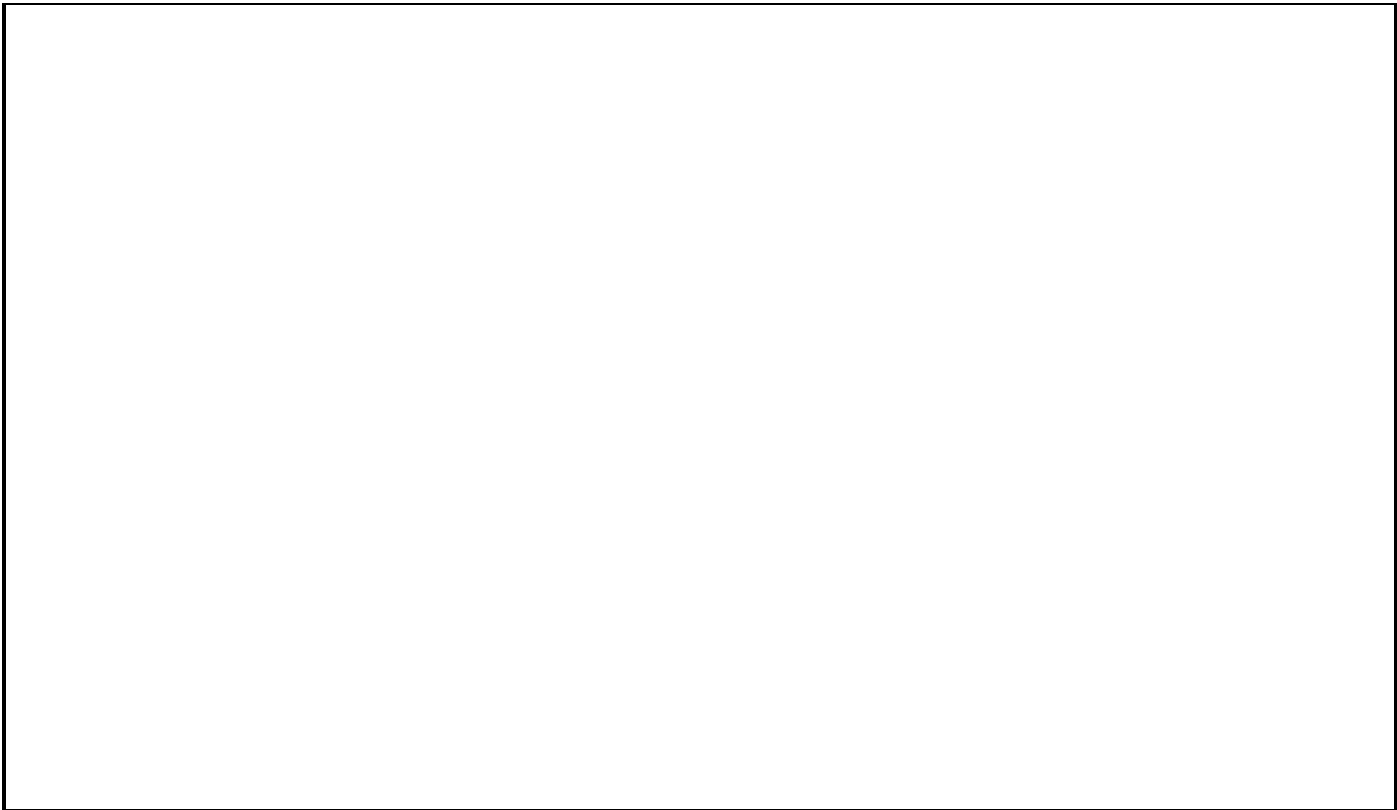
The experimental information related to the eco-toxicological properties of the product itself is not available

### 12.1 Toxicity:

Identification		Acute toxicity	Species	Genus
Xylene CAS: 1330-20-7 EC: 215-535-7	LC50	13.5 mg/L (96 h)	Oncorhynchus mykiss	Fish
	EC50	3.4 mg/L (48 h)	Ceriodaphnia dubia	Crustacean
	EC50	10 mg/L (72 h)	Skeletonema costatum	Algae
4-hydroxy-4-methylpentan-2-one CAS: 123-42-2 EC: 204-626-7	LC50	420 mg/L (96 h)	Lepomis macrochirus	Fish
	EC50	9016 mg/L (24 h)	Daphnia magna	Crustacean
	EC50	Non-applicable		
trizinc bis(orthophosphate) CAS: 7779-90-0 EC: 231-944-3	LC50	0.1 - 1 mg/L (96 h)		Fish
	EC50	0.1 - 1 mg/L		Crustacean
	EC50	0.1 - 1 mg/L		Algae
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	LC50	42.3 mg/L (96 h)	Pimephales promelas	Fish
	EC50	75 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	63 mg/L (3 h)	Chlorella vulgaris	Algae
N-methyl-2-pyrrolidone CAS: 872-50-4 EC: 212-828-1	LC50	832 mg/L (96 h)	Lepomis macrochirus	Fish
	EC50	4897 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	500 mg/L (72 h)	Scenedesmus subspicatus	Algae
Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate CAS: 41556-26-7 EC: 255-437-1	LC50	0.97 mg/L (96 h)	Lepomis macrochirus	Fish
	EC50	20 mg/L (24 h)	Daphnia magna	Crustacean
	EC50	Non-applicable		
Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate CAS: 82919-37-7 EC: 280-060-4	LC50	0.1 - 1 mg/L (96 h)		Fish
	EC50	0.1 - 1 mg/L		Crustacean
	EC50	0.1 - 1 mg/L		Algae

- CONTINUED ON NEXT PAGE -

**rangers**  
**2K PROTECTIVE POLYURETHANE COATING**



**SECTION 12: ECOLOGICAL INFORMATION (continued)**



**rangers**  
**2K PROTECTIVE POLYURETHANE COATING**

Identification	Acute toxicity		Species	Genus
	LC50			
Toluene CAS: 108-88-3 EC: 203-625-9	LC50	13 mg/L (96 h)	Carassius auratus	Fish
	EC50	11.5 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	125 mg/L (48 h)	Scenedesmus subspicatus	Algae

**12.2 Persistence and degradability:**

Identification	Degradability		Biodegradability	
Xylene CAS: 1330-20-7 EC: 215-535-7	BOD5	Non-applicable	Concentration	Non-applicable
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	88 %
4-hydroxy-4-methylpentan-2-one CAS: 123-42-2 EC: 204-626-7	BOD5	Non-applicable	Concentration	100 mg/L
	COD	Non-applicable	Period	14 days
	BOD5/COD	Non-applicable	% Biodegradable	90 %
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	BOD5	Non-applicable	Concentration	100 mg/L
	COD	Non-applicable	Period	14 days
	BOD5/COD	Non-applicable	% Biodegradable	90 %
N-methyl-2-pyrrolidone CAS: 872-50-4 EC: 212-828-1	BOD5	1.09 g O <sub>2</sub> /g	Concentration	100 mg/L
	COD	1.6 g O <sub>2</sub> /g	Period	28 days
	BOD5/COD	0.68	% Biodegradable	73 %
Toluene CAS: 108-88-3 EC: 203-625-9	BOD5	2.5 g O <sub>2</sub> /g	Concentration	100 mg/L
	COD	Non-applicable	Period	14 days
	BOD5/COD	Non-applicable	% Biodegradable	100 %

**12.3 Bioaccumulative potential:**

Identification	Bioaccumulation potential	
Xylene CAS: 1330-20-7 EC: 215-535-7	BCF	9
	Pow Log	2.77
	Potential	Low
4-hydroxy-4-methylpentan-2-one CAS: 123-42-2 EC: 204-626-7	BCF	0.5
	Pow Log	-0.34
	Potential	Low
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	BCF	1
	Pow Log	3.15
	Potential	Low
N-methyl-2-pyrrolidone CAS: 872-50-4 EC: 212-828-1	BCF	0.23
	Pow Log	-0.46
	Potential	Low
Toluene CAS: 108-88-3 EC: 203-625-9	BCF	13
	Pow Log	2.73
	Potential	Low

**12.4 Mobility in soil:**

Identification	Absorption/desorption		Volatility	
Xylene	Koc	202	Henry	524,86 Pa·m <sup>3</sup> /mol

- CONTINUED ON NEXT PAGE -

**rangers**  
**2K PROTECTIVE POLYURETHANE COATING**

CAS: 1330-20-7 EC: 215-535-7	Conclusion	Moderate	Dry soil <input type="checkbox"/>	Yes
	Surface tension	Non-applicable	Moist soil <input type="checkbox"/>	Yes
4-hydroxy-4-methylpentan-2-one CAS: 123-42-2 EC: 204-626-7	Koc	Non-applicable	Henry <input type="checkbox"/>	Non-applicable
	Conclusion	Non-applicable	Dry soil <input type="checkbox"/>	Non-applicable
	Surface tension	2,963E-2 N/m (25 °C)	Moist soil <input type="checkbox"/>	Non-applicable
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	Koc	520	Henry <input type="checkbox"/>	798,44 Pa·m <sup>3</sup> /mol
	Conclusion	Moderate	Dry soil <input type="checkbox"/>	Yes
	Surface tension	2,859E-2 N/m (25 °C)	Moist soil <input type="checkbox"/>	Yes
N-methyl-2-pyrrolidone CAS: 872-50-4 EC: 212-828-1	Koc	Non-applicable	Henry <input type="checkbox"/>	Non-applicable
	Conclusion	Non-applicable	Dry soil <input type="checkbox"/>	Non-applicable
	Surface tension	4,007E-2 N/m (25 °C)	Moist soil <input type="checkbox"/>	Non-applicable

## SECTION 12: ECOLOGICAL INFORMATION (continued)

- CONTINUED ON NEXT PAGE -

**rangers**  
**2K PROTECTIVE POLYURETHANE COATING**

Identification		Absorption/desorption		Volatility	
Toluene		Koc	178	Henry	672,8 Pa·m <sup>3</sup> /mol
CAS: 108-88-3		Conclusion	Moderate	Dry soil	Yes
EC: 203-625-9		Surface tension	2,793E-2 N/m (25 °C)	Moist soil	Yes

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

Product fails to meet PBT/vPvB criteria

**12.6 Other adverse effects:**

Not described

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods:**

Code	Description	Waste class (Regulation (EU) No 1357/2014)
08 01 11*	Waste paint and varnish containing organic solvents or other dangerous substances	Dangerous

**Type of waste (Regulation (EU) No 1357/2014):**

HP14 Ecotoxic, HP3 Flammable, HP4 Irritant — skin irritation and eye damage, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP6 Acute Toxicity

**Waste management (disposal and evaluation):**

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommend disposal down the drain. See paragraph 6.2.

**Regulations related to waste management:**

In accordance with Annex II of Regulation (EC) n°1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

**SECTION 14: TRANSPORT INFORMATION**

**Transport of dangerous goods by land:**

With regard to ADR 2017 and RID 2017:

**14.1 UN number:** UN1263

14.2

14.3

14.4

14.5



**14.6 Special precautions for user**

Special regulations: 163, 367, 640E, 650  
Tunnel restriction code: D/E  
Physico-Chemical properties: see section 9  
Limited quantities: 5 L

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:**

**Transport of dangerous goods by sea:**

With regard to IMDG 38-16:

**SECTION 14: TRANSPORT INFORMATION (continued)**

rangers  
**2K PROTECTIVE POLYURETHANE COATING**

14.2

14.3

14.4

14.5



**14.1 UN number:** UN1263

Special regulations: 163, 223, 367, 955  
EmS Codes: F-E, S-E  
Physico-Chemical properties: see section 9  
Limited quantities: 5 L

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

**Transport of dangerous goods by air:**

With regard to IATA/ICAO 2017:

14.1

14.2

14.3

14.4



**14.6 Special precautions for user**

Physico-Chemical properties: see section 9

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

**SECTION 15: REGULATORY INFORMATION**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:** Candidate substances for authorisation under the Regulation (EC) 1907/2006 (REACH): N-methyl-2-pyrrolidone

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

Regulation (EC) 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: Non-applicable

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

**Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ....):**

**SECTION 15: REGULATORY INFORMATION (continued)**

**rangers**  
**2K PROTECTIVE POLYURETHANE COATING**

Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following: — metallic glitter intended mainly for decoration,

- artificial snow and frost,
- “whoopie” cushions,
- silly string aerosols,
- imitation excrement,
- horns for parties,
- decorative flakes and foams,
- artificial cobwebs, — stink bombs.

Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with:

‘For professional users only’.

Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

**Specific provisions in terms of protecting people or the environment:**

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

**Other legislation:**

The product could be affected by sectorial legislation

**15.2 Chemical safety assessment:**

The supplier has not carried out evaluation of chemical safety.

**SECTION 16: OTHER INFORMATION**

**Legislation related to safety data sheets:**

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) N° 1907/2006 (Regulation (EC) N° 2015/830)

**Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:**

Non-applicable

**Texts of the legislative phrases mentioned in section 2:**

H315: Causes skin irritation

H335: May cause respiratory irritation

H373: May cause damage to organs through prolonged or repeated exposure (Oral)

H412: Harmful to aquatic life with long lasting effects

H226: Flammable liquid and vapour H319:

Causes serious eye irritation

**Texts of the legislative phrases mentioned in section 3:**

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

**CLP Regulation (EC) n° 1272/2008:**

**rangers**  
**2K PROTECTIVE POLYURETHANE COATING**

**SECTION 16: OTHER INFORMATION (continued)**

Acute Tox. 4: H312+H332 - Harmful in contact with skin or if inhaled  
Acute Tox. 4: H332 - Harmful if inhaled  
Aquatic Acute 1: H400 - Very toxic to aquatic life  
Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects  
Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways  
Eye Irrit. 2: H319 - Causes serious eye irritation  
Flam. Liq. 2: H225 - Highly flammable liquid and vapour  
Flam. Liq. 3: H226 - Flammable liquid and vapour  
Repr. 1B: H360D - May damage the unborn child.  
Repr. 2: H361d - Suspected of damaging the unborn child.  
Skin Irrit. 2: H315 - Causes skin irritation  
Skin Sens. 1: H317 - May cause an allergic skin reaction  
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure  
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure (Oral)  
STOT SE 3: H335 - May cause respiratory irritation  
STOT SE 3: H336 - May cause drowsiness or dizziness

**Classification procedure:**

Skin Irrit. 2: Calculation method  
STOT SE 3: Calculation method  
STOT RE 2: Calculation method  
Aquatic Chronic 3: Calculation method  
Flam. Liq. 3: Calculation method (2.6.4.3)  
Eye Irrit. 2: Calculation method

**Advice related to training:** Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

**Principal bibliographical sources:** <http://echa.europa.eu> <http://eur-lex.europa.eu>

**Abbreviations and acronyms:**

ADR: European agreement concerning the international carriage of dangerous goods by road  
IMDG: International maritime dangerous goods code  
IATA: International Air Transport Association  
ICAO: International Civil Aviation Organisation  
COD: Chemical Oxygen Demand  
BOD5: 5-day biochemical oxygen demand  
BCF: Bioconcentration factor  
LD50: Lethal Dose 50  
LC50: Lethal Concentration 50  
EC50: Effective concentration 50  
Log-POW: Octanol–water partition coefficient  
Koc: Partition coefficient of organic carbon

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

END OF SAFETY DATA SHEET