

Safety Data Sheet RLFRAL-R-US-SDS

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Issue date: 06/01/2018

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Supersedes: 06/01/2018

Version: 2.0

SECTION 1: Identification			
1.1. Identification			
Product form	: Mixture		
Trade name	: RAPTOR 2K PROTECTIVE COATING FLAME RED AEROSOL		
UP Number	UP4886		
1.2. Recommended use and restrictions	on use		
Use of the substance/mixture	: Coatings and paints, thinners, paint removers		
Recommended use	: Coating		
Restrictions on use	: Consumer uses: Private households (= general public = consumers)		
1.3. Supplier			
Supplier U-POL US Inc 108 Commerce Way Easton, PA 18040 - United States T 1-800-340-7824 - F 1-800-787-5150 technicalsupport@u-pol.com - www.u-pol.com			
1.4. Emergency telephone number			
Emergency number	: CHEMTREC - 1-800-424-9300		
SECTION 2: Hazard(s) identification			
2.1. Classification of the substance or m	nixture		
GHS US classification			
Flammable aerosol Category 1 Serious eye damage/eye irritation Category 2 Skin sensitization, Category 1	Extremely flammable aerosol Causes serious eye irritation May cause an allergic skin reaction		
2.2. GHS Label elements, including pred	cautionary statements		
GHS US labeling			
Hazard pictograms (GHS US)			
Signal word (GHS US)	: Danger		
Hazard statements (GHS US)	: Extremely flammable aerosol May cause an allergic skin reaction Causes serious eye irritation		
Precautionary statements (GHS US)	 If medical advice is needed, have product container or label at hand. Keep out of reach of children. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Pressurized container: Do not pierce or burn, even after use. Avoid breathing vapors, spray, fume. Wear protective gloves, protective clothing, eye protection. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. 		

2.4. Unknown acute toxicity (GHS US)

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SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable 3.2. Mixtures

Name	Product identifier	%	GHS US classification
acetone	(CAS-No.) 67-64-1	5 – 23	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
hexamethylene diisocyanate oligomers	(CAS-No.) 28182-81-2	5 – 23	Acute Tox. 4 (Inhalation), H332 Skin Sens. 1, H317 STOT SE 3, H335
n-butyl acetate	(CAS-No.) 123-86-4	< 23	Flam. Liq. 3, H226 STOT SE 3, H336
reaction mass of ethylbenzene, m-xylene and p-xylene		< 5	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304
kieselguhr, soda ash flux calcined	(CAS-No.) 68855-54-9	< 5	STOT RE 2, H373
reaction mass of α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4- hydroxyphenyl)propionyl- ω -hydroxypoly(oxyethylene) and α - 3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4- hydroxyphenyl)propionyl- ω -3-(3-(2H-benzotriazol-2-yl)-5-tert- butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene)		< 5	Skin Sens. 1A, H317 Aquatic Chronic 2, H411
reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	(CAS-No.) 1065336-91-5	< 5	Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures		
4.1. Description of first aid measures		
First-aid measures general	: IF exposed or concerned: Get medical advice/attention.	
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.	
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.	
First-aid measures after eye contact	 Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. 	
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.	
4.2. Most important symptoms and effe	ects (acute and delayed)	
Symptoms/effects after skin contact	: May cause an allergic skin reaction.	
Symptoms/effects after eye contact	: Eye irritation.	
4.3. Immediate medical attention and special treatment, if necessary		
Treat symptomatically.		
SECTION 5: Fire-fighting measures		
5.1. Suitable (and unsuitable) extinguishing media		
Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.	
.2. Specific hazards arising from the chemical		
Fire hazard	: Extremely flammable aerosol.	
Explosion hazard	Pressurized container: may burst if heated.	
Reactivity	: Extremely flammable aerosol. Pressurized container: may burst if heated.	

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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SECTION 6: Assidental release measures			
SECTION 6: Accidental release measures			
6.1.	Personal precautions, protective equipment and emergency procedures		
6.1.1.	For non-emergency personnel		
Emergen	cy procedures :	No open flames, no sparks, and no smoking. Only qualified personnel equipped with suitable protective equipment may intervene. Avoid breathing fume, vapors, spray.	
6.1.2.	For emergency responders		
Protective	e equipment :	Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".	
6.2.	Environmental precautions		
Avoid rele	ease to the environment. Notify authorities	if product enters sewers or public waters.	
6.3.	Methods and material for containment	and cleaning up	
Methods	for cleaning up :	Mechanically recover the product. Notify authorities if product enters sewers or public waters.	
Other info	ormation :	Dispose of materials or solid residues at an authorized site.	
6.4.	Reference to other sections		
For furthe	er information refer to section 13.		
SECTIO	ON 7: Handling and storage		
7.1.	Precautions for safe handling		
Precautic	ons for safe handling :	Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Avoid contact with skin and eyes. Avoid breathing vapors, fume, spray.	
Hygiene	measures :	Separate working clothes from town clothes. Launder separately. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.	
7.2.	Conditions for safe storage, including	any incompatibilities	
Storage of	conditions :	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store locked up. Store in a well-ventilated place. Keep cool.	

SECTION 8: Exposure controls/personal protection	bn
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8.1. Control parameters

acetone (67-64-1)				
ACGIH	Local name	Acetone		
ACGIH	ACGIH OEL TWA [ppm]	250 ppm		
ACGIH	ACGIH OEL STEL [ppm]	500 ppm		
ACGIH	Remark (ACGIH)	TLV® Basis: URT & eye irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI		
ACGIH	Regulatory reference	ACGIH 2021		
OSHA	OSHA PEL (TWA) [1]	2400 mg/m ³		
OSHA	OSHA PEL (TWA) [2]	1000 ppm		
OSHA	Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1		
kieselguhr, soda ash flux calcined (68855-54-9)				
Not applicable				
reaction mass of ethylbenzene, m-xylene and p-xylene				
Not applicable				
n-butyl acetate (123-86-4)				
ACGIH	Local name	n-Butyl acetate		
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n-butyl acetate (123-86-4)		
ACGIH	ACGIH OEL TWA [ppm]	50 ppm
ACGIH	ACGIH OEL STEL [ppm]	150 ppm
ACGIH	Remark (ACGIH)	TLV® Basis: Eye & URT irr
ACGIH	Regulatory reference	ACGIH 2021
OSHA	OSHA PEL (TWA) [1]	710 mg/m³
OSHA	OSHA PEL (TWA) [2]	150 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

reaction mass of α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -hydroxypoly(oxyethylene) and α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene)

Not applicable

reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5) Not applicable

hexamethylene diisocyanate oligomers (28182-81-2)

Not applicable

8.2. Appropriate engineering controls

Appropriate engineering controls Environmental exposure controls Ensure good ventilation of the work station.Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eve protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear respiratory protection.

Personal protective equipment symbol(s):



SECTION 9: Physical and	chemical properties	
9.1. Information on basic p	hysical and chemical properties	
Physical state	: Liquid	
Appearance	: aerosol.	
Color	: red	
Odor	: characteristic	
Odor threshold	: No data available	
рН	: No data available	
Melting point	: Not applicable	
Freezing point	: No data available	
Boiling point	: No data available	
Flash point	: No data available	

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Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Extremely flammable aerosol.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Density	: 0.952 g/cm ³
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
No data availableViscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: Pressurized container: may burst if heated.
Oxidizing properties	: No data available
9.2. Other information	
As Packaged Regulatory VOC	: 500 g/l (4.1 lb/gal)
As Packaged Actual VOC	: 443 g/l (3.6 lb/gal)
As Applied Regulatory VOC	: 500 g/l (4.1 lb/gal)
As Applied Actual VOC	: 443 g/l (3.6 lb/gal)
Water Content	0 wt%
Volatiles	: 56.1 wt%
% EPA HAPS	: 3.7 wt%
Percent Solids	: 43.9 wt%
Percent Solids	: 28.02 vol %
Maximum Incremental Reactivity (MIR)	: 0.81
MIR EPA Aerosol Category	: Non-Flat Coating - NFP 1.4
MIR CARB Aerosol Category	: Nonflat Coating - General Coatings - NFP 0.95
SECTION 10: Stability and reactivity	

10.1. Reactivity

Extremely flammable aerosol. Pressurized container: may burst if heated.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTIO	ON 11: Toxicological informati	on
11.1.	Information on toxicological effects	
Acute tox	ticity (oral)	: Not classified
Acute tox	ticity (dermal)	: Not classified
Acute tox	ticity (inhalation)	: Not classified

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acetone (67-64-1)		
LD50 oral rat	5800 mg/kg body weight Animal: rat, Animal sex: female	
LD50 dermal rabbit	20000 mg/kg (Equivalent or similar to OECD 402, Rabbit, Male, Experimental value, Dermal)	
LC50 Inhalation - Rat	76 mg/l air Animal: rat, Animal sex: female, 95% CL: 65,2 - 88,4	
ATE US (oral)	5800 mg/kg body weight	
ATE US (dermal)	20000 mg/kg body weight	
kieselguhr, soda ash flux calcined (68855-54	4-9)	
LD50 oral rat	> 2000 mg/kg body weight Animal: rat, Animal sex: female, Guideline: OECD Guideline 401	
	(Acute Oral Toxicity)	
LC50 Inhalation - Rat	> 2.6 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)	
reaction mass of ethylbenzene, m-xylene an	nd p-xylene	
LD50 oral rat	3523 mg/kg (EU Method B.1 (Acute Toxicity (Oral), rat, male)	
LD50 dermal rabbit	12126 mg/kg body weight Animal: rabbit, Animal sex: male	
LC50 Inhalation - Rat [ppm]	6350 ppm/4h (4 h, EU Method B.2 (Acute Toxicity (Inhalation)), rat, male, Inhalation, vapours)	
ATE US (oral)	3523 mg/kg body weight	
ATE US (dermal)	1100 mg/kg body weight	
ATE US (gases)	6350 ppmV/4h	
ATE US (vapors)	11 mg/l/4h	
ATE US (dust, mist)	1.5 mg/l/4h	
n-butyl acetate (123-86-4)		
LD50 oral rat	10760 – 12789 mg/kg body weight (Equivalent or similar to OECD 423, Rat, Male / female, Experimental value, Oral)	
LD50 dermal rabbit	14112 mg/kg body weight (Equivalent or similar to OECD 402, Rabbit, Male / female, Experimental value, Dermal)	
LC50 Inhalation - Rat [ppm]	390 ppm/4h	
ATE US (oral)	10760 mg/kg body weight	
	14112 mg/kg body weight	
ATE US (oral) ATE US (dermal) ATE US (gases)		
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-y	14112 mg/kg body weight 390 ppmV/4h /l)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H-nyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-	
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-y benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphe	14112 mg/kg body weight 390 ppmV/4h /l)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H-nyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-	
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-y benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphe hydroxyphenyl)propionyloxypoly(oxyethyle	14112 mg/kg body weight 390 ppmV/4h /l)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H-nyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-ne)	
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-y) benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphe hydroxyphenyl)propionyloxypoly(oxyethyle LD50 oral rat	14112 mg/kg body weight 390 ppmV/4h /l)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H-nyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-ne) > 5000 mg/kg (OECD Guideline No. 401 (equivalent to Annex V), limit test, rat, male/female)	
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-y benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphe hydroxyphenyl)propionyloxypoly(oxyethyle LD50 oral rat LD50 dermal rat	14112 mg/kg body weight 390 ppmV/4h /l)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H-nyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-ne) > 5000 mg/kg (OECD Guideline No. 401 (equivalent to Annex V), limit test, rat, male/female) > 2000 mg/kg (OECD Guideline No. 402 (equivalent to Annex V), limit test, rat, male/female)	
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-y benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphe hydroxyphenyl)propionyloxypoly(oxyethyle LD50 oral rat LD50 dermal rat LC50 Inhalation - Rat	14112 mg/kg body weight 390 ppmV/4h /l)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H-nyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-me) > 5000 mg/kg (OECD Guideline No. 401 (equivalent to Annex V), limit test, rat, male/female) > 2000 mg/kg (OECD Guideline No. 402 (equivalent to Annex V), limit test, rat, male/female) 5800 mg/l (OECD Guideline 403, 14d, rat)	
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-y) benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphe hydroxyphenyl)propionyloxypoly(oxyethyle LD50 oral rat LD50 dermal rat LC50 Inhalation - Rat ATE US (vapors) ATE US (dust, mist)	14112 mg/kg body weight 390 ppmV/4h /l)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H-nyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-nee) > 5000 mg/kg (OECD Guideline No. 401 (equivalent to Annex V), limit test, rat, male/female) > 2000 mg/kg (OECD Guideline No. 402 (equivalent to Annex V), limit test, rat, male/female) 5800 mg/l (OECD Guideline 403, 14d, rat) 5800 mg/l/4h	
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-y) benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphe hydroxyphenyl)propionyloxypoly(oxyethyle LD50 oral rat LD50 dermal rat LC50 Inhalation - Rat ATE US (vapors) ATE US (dust, mist)	14112 mg/kg body weight 390 ppmV/4h /l)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H-nyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-ne) > 5000 mg/kg (OECD Guideline No. 401 (equivalent to Annex V), limit test, rat, male/female) > 2000 mg/kg (OECD Guideline No. 402 (equivalent to Annex V), limit test, rat, male/female) 5800 mg/l (OECD Guideline 403, 14d, rat) 5800 mg/l/4h	
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-ybenzotriazol-2-yl)-5-tert-butyl-4-hydroxyphe hydroxyphenyl)propionyloxypoly(oxyethyle LD50 oral rat LD50 dermal rat LC50 Inhalation - Rat ATE US (vapors) ATE US (dust, mist) reaction mass of bis(1,2,2,6,6-pentamethyl-4-byle)	14112 mg/kg body weight 390 ppmV/4h /l)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H-nyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-nee) > 5000 mg/kg (OECD Guideline No. 401 (equivalent to Annex V), limit test, rat, male/female) > 2000 mg/kg (OECD Guideline No. 402 (equivalent to Annex V), limit test, rat, male/female) 5800 mg/l (OECD Guideline 403, 14d, rat) 5800 mg/l/4h 5800 mg/l/4h 4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5) 3230 mg/kg (OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), rat,	
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-ybenzotriazol-2-yl)-5-tert-butyl-4-hydroxyphe hydroxyphenyl)propionyloxypoly(oxyethyle LD50 oral rat LD50 dermal rat LC50 Inhalation - Rat ATE US (vapors) ATE US (dust, mist) reaction mass of bis(1,2,2,6,6-pentamethyl-4-byle)	14112 mg/kg body weight 390 ppmV/4h /l)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H-nyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-nee) > 5000 mg/kg (OECD Guideline No. 401 (equivalent to Annex V), limit test, rat, male/female) > 2000 mg/kg (OECD Guideline No. 402 (equivalent to Annex V), limit test, rat, male/female) 5800 mg/l (OECD Guideline 403, 14d, rat) 5800 mg/l/4h 5800 mg/l/4h 4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5) 3230 mg/kg (OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), rat, male/female)	
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-y) benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphe hydroxyphenyl)propionyloxypoly(oxyethyle LD50 oral rat LD50 dermal rat LC50 Inhalation - Rat ATE US (vapors) ATE US (dust, mist) reaction mass of bis(1,2,2,6,6-pentamethyl-4 LD50 oral rat LD50 dermal rat	14112 mg/kg body weight 390 ppmV/4h /l)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H-nyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-nee) > 5000 mg/kg (OECD Guideline No. 401 (equivalent to Annex V), limit test, rat, male/female) > 2000 mg/kg (OECD Guideline No. 401 (equivalent to Annex V), limit test, rat, male/female) > 2000 mg/kg (OECD Guideline No. 402 (equivalent to Annex V), limit test, rat, male/female) 5800 mg/l (OECD Guideline 403, 14d, rat) 5800 mg/l/4h 5800 mg/l/4h 4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5) 3230 mg/kg (OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), rat, male/female) > 3170 mg/kg (OECD Guideline 402 (Acute Dermal Toxicity), read-across, 3230 mg/kg body weight	
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-y) benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphe hydroxyphenyl)propionyloxypoly(oxyethyle LD50 oral rat LD50 dermal rat LC50 Inhalation - Rat ATE US (vapors) ATE US (dust, mist) reaction mass of bis(1,2,2,6,6-pentamethyl-4 LD50 oral rat	14112 mg/kg body weight 390 ppmV/4h /l)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H-nyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-nee) > 5000 mg/kg (OECD Guideline No. 401 (equivalent to Annex V), limit test, rat, male/female) > 2000 mg/kg (OECD Guideline No. 401 (equivalent to Annex V), limit test, rat, male/female) > 2000 mg/kg (OECD Guideline No. 402 (equivalent to Annex V), limit test, rat, male/female) 5800 mg/l (OECD Guideline 403, 14d, rat) 5800 mg/l/4h 5800 mg/l/4h 4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5) 3230 mg/kg (OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), rat, male/female) > 3170 mg/kg (OECD Guideline 402 (Acute Dermal Toxicity), read-across, 3230 mg/kg body weight	
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-ybenzotriazol-2-yl)-5-tert-butyl-4-hydroxyphe hydroxyphenyl)propionyloxypoly(oxyethyle LD50 oral rat LD50 dermal rat LC50 Inhalation - Rat ATE US (vapors) ATE US (dust, mist) reaction mass of bis(1,2,2,6,6-pentamethyl-4 LD50 oral rat LD50 dermal rat LD50 dermal rat ATE US (oral) hexamethylene diisocyanate oligomers (281)	14112 mg/kg body weight 390 ppmV/4h /l)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H-nyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-nee) > 5000 mg/kg (OECD Guideline No. 401 (equivalent to Annex V), limit test, rat, male/female) > 2000 mg/kg (OECD Guideline No. 401 (equivalent to Annex V), limit test, rat, male/female) > 2000 mg/kg (OECD Guideline No. 402 (equivalent to Annex V), limit test, rat, male/female) 5800 mg/l (OECD Guideline 403, 14d, rat) 5800 mg/l/4h 5800 mg/l/4h 4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5) 3230 mg/kg (OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), rat, male/female) > 3170 mg/kg (OECD Guideline 402 (Acute Dermal Toxicity), read-across, 3230 mg/kg body weight 182-81-2)	
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-ybenzotriazol-2-yl)-5-tert-butyl-4-hydroxyphe hydroxyphenyl)propionyloxypoly(oxyethyle LD50 oral rat LD50 dermal rat LC50 Inhalation - Rat ATE US (vapors) ATE US (dust, mist) reaction mass of bis(1,2,2,6,6-pentamethyl-4-hydroxyphe) LD50 oral rat LD50 dermal rat ATE US (oral) hexamethylene diisocyanate oligomers (281 LD50 dermal rat LD50 dermal rat	14112 mg/kg body weight 390 ppmV/4h /l)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H-nyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-nee) > 5000 mg/kg (OECD Guideline No. 401 (equivalent to Annex V), limit test, rat, male/female) > 2000 mg/kg (OECD Guideline No. 402 (equivalent to Annex V), limit test, rat, male/female) 5800 mg/l (OECD Guideline 403, 14d, rat) 5800 mg/l/4h 5800 mg/l/4h 4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5) 3230 mg/kg (OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), rat, male/female) > 3170 mg/kg (OECD Guideline 402 (Acute Dermal Toxicity), read-across, 3230 mg/kg body weight 182-81-2) > 2500 mg/kg (OECD Test Guideline 423, rat, female)	
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-ybenzotriazol-2-yl)-5-tert-butyl-4-hydroxyphe hydroxyphenyl)propionyloxypoly(oxyethyle LD50 oral rat LD50 dermal rat LC50 Inhalation - Rat ATE US (vapors) ATE US (dust, mist) reaction mass of bis(1,2,2,6,6-pentamethyl-4-byle) LD50 dermal rat LD50 oral rat LD50 dermal rat LD50 oral rat LD50 dermal rat ATE US (oral) hexamethylene diisocyanate oligomers (281 LD50 dermal rat ATE US (gases)	14112 mg/kg body weight 390 ppmV/4h /l)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H-nyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-nee) > 5000 mg/kg (OECD Guideline No. 401 (equivalent to Annex V), limit test, rat, male/female) > 2000 mg/kg (OECD Guideline No. 402 (equivalent to Annex V), limit test, rat, male/female) 5800 mg/l (OECD Guideline 403, 14d, rat) 5800 mg/l/4h 5800 mg/l/4h 4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5) 3230 mg/kg (OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), rat, male/female) > 3170 mg/kg (OECD Guideline 402 (Acute Dermal Toxicity), read-across, 3230 mg/kg body weight 182-81-2) > 2500 mg/kg (OECD Test Guideline 423, rat, female) > 2000 mg/kg (OECD Test Guideline 402, rat, male/female)	
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-ybenzotriazol-2-yl)-5-tert-butyl-4-hydroxyphe hydroxyphenyl)propionyloxypoly(oxyethyle LD50 oral rat LD50 dermal rat LC50 Inhalation - Rat ATE US (vapors) ATE US (dust, mist) reaction mass of bis(1,2,2,6,6-pentamethyl-4 LD50 dermal rat LD50 oral rat LD50 dermal rat ATE US (oral) hexamethylene diisocyanate oligomers (281 LD50 dermal rat ATE US (gases) ATE US (vapors)	14112 mg/kg body weight 390 ppmV/4h /l)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H-nyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4- ne) > 5000 mg/kg (OECD Guideline No. 401 (equivalent to Annex V), limit test, rat, male/female) > 2000 mg/kg (OECD Guideline No. 402 (equivalent to Annex V), limit test, rat, male/female) 5800 mg/l (OECD Guideline 403, 14d, rat) 5800 mg/l/4h 5800 mg/l/4h 5800 mg/l/4h 5300 mg/kg (OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), rat, male/female) > 3170 mg/kg (OECD Guideline 402 (Acute Dermal Toxicity), read-across, 3230 mg/kg body weight 182-81-2) > 2500 mg/kg (OECD Test Guideline 423, rat, female) > 2000 mg/kg (OECD Test Guideline 402, rat, male/female) > 2000 mg/kg (OECD Test Guideline 402, rat, male/female)	
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-ybenzotriazol-2-yl)-5-tert-butyl-4-hydroxyphe hydroxyphenyl)propionyloxypoly(oxyethyle LD50 oral rat LD50 dermal rat LC50 Inhalation - Rat ATE US (vapors) ATE US (dust, mist) reaction mass of bis(1,2,2,6,6-pentamethyl-4 LD50 dermal rat LD50 oral rat LD50 dermal rat ATE US (dust, mist) reaction mass of bis(1,2,2,6,6-pentamethyl-4 LD50 dermal rat LD50 dermal rat LD50 dermal rat ATE US (oral) hexamethylene diisocyanate oligomers (281 LD50 dermal rat ATE US (gases) ATE US (gases) ATE US (vapors) ATE US (vapors) ATE US (dust, mist)	14112 mg/kg body weight 390 ppmV/4h /l)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H-nyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-me) > 5000 mg/kg (OECD Guideline No. 401 (equivalent to Annex V), limit test, rat, male/female) > 2000 mg/kg (OECD Guideline No. 402 (equivalent to Annex V), limit test, rat, male/female) > 800 mg/l (OECD Guideline No. 402 (equivalent to Annex V), limit test, rat, male/female) 5800 mg/l (OECD Guideline 403, 14d, rat) 5800 mg/l/4h 5800 mg/l/4h 4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5) 3230 mg/kg (OECD Guideline 402 (Acute Oral toxicity - Acute Toxic Class Method), rat, male/female) > 3170 mg/kg (OECD Guideline 402 (Acute Dermal Toxicity), read-across, 3230 mg/kg body weight 182-81-2) > 2500 mg/kg (OECD Test Guideline 423, rat, female) > 2000 mg/kg (OECD Test Guideline 402, rat, male/female) > 2000 mg/kg (OECD Test Guideline 402, rat, male/female) > 2000 mg/kg (OECD Test Guideline 402, rat, male/female) > 2000 mg/kg (OECD Test Guideline 402, rat, male/female) > 300 mg/kg (OECD Test Guideline 402, rat, male/female) > 300 mg/kg (OECD Test Guideline 402, rat, male/female) > 300 mg/kg (OECD Test Guideline 402, rat, male/female) > 300 mg/kg (OECD Test Guideline 402, rat, male/fema	
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-ybenzotriazol-2-yl)-5-tert-butyl-4-hydroxyphehydroxyphenyl)propionyloxypoly(oxyethyle LD50 oral rat LD50 dermal rat LC50 Inhalation - Rat ATE US (vapors) ATE US (dust, mist) reaction mass of bis(1,2,2,6,6-pentamethyl-4-hydroxyphe) LD50 dermal rat LD50 oral rat LD50 oral rat LD50 dermal rat ATE US (oral) hexamethylene diisocyanate oligomers (281) LD50 dermal rat ATE US (oral) hexamethylene diisocyanate oligomers (281) LD50 dermal rat ATE US (oral) hexamethylene diisocyanate oligomers (281) LD50 dermal rat LD50 dermal rat ATE US (gases) ATE US (vapors) ATE US (dust, mist) Skin corrosion/irritation	14112 mg/kg body weight 390 ppmV/4h /l)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H-nyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-ne) > 5000 mg/kg (OECD Guideline No. 401 (equivalent to Annex V), limit test, rat, male/female) > 2000 mg/kg (OECD Guideline No. 402 (equivalent to Annex V), limit test, rat, male/female) > 2000 mg/kg (OECD Guideline 403, 14d, rat) 5800 mg/l/4h 5800 mg/l/4h 4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5) 3230 mg/kg (OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), rat, male/female) > 3170 mg/kg (OECD Guideline 402 (Acute Dermal Toxicity), read-across, 3230 mg/kg body weight 182-81-2) > 2500 mg/kg (OECD Test Guideline 402, rat, female) > 2000 mg/kg (OECD Test Guideline 402, rat, male/female) 4500 ppmV/4h 11 mg//4h 0.39 mg/l/4h	
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-ybenzotriazol-2-yl)-5-tert-butyl-4-hydroxyphehydroxyphenyl)propionyloxypoly(oxyethyle LD50 oral rat LD50 dermal rat LC50 Inhalation - Rat ATE US (vapors) ATE US (dust, mist) reaction mass of bis(1,2,2,6,6-pentamethyl-4-hydroxyphe) LD50 dermal rat LD50 oral rat LD50 oral rat LD50 dermal rat ATE US (oust, mist) reaction mass of bis(1,2,2,6,6-pentamethyl-4-hydroxyphe) LD50 oral rat LD50 dermal rat ATE US (oral) hexamethylene diisocyanate oligomers (281 LD50 dermal rat LD50 dermal rat LD50 dermal rat LD50 dermal rat ATE US (oral) hexamethylene diisocyanate oligomers (281 LD50 dermal rat ATE US (gases) ATE US (dust, mist) Skin corrosion/irritation Serious eye damage/irritation	14112 mg/kg body weight 390 ppmV/4h //>/5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H-nyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-ne) > 5000 mg/kg (OECD Guideline No. 401 (equivalent to Annex V), limit test, rat, male/female) > 2000 mg/kg (OECD Guideline No. 402 (equivalent to Annex V), limit test, rat, male/female) 5800 mg/l (OECD Guideline 403, 14d, rat) 5800 mg/l/4h 5800 mg/l/4h 4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5) 3230 mg/kg (OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), rat, male/female) > 3170 mg/kg (OECD Guideline 402 (Acute Dermal Toxicity), read-across, 3230 mg/kg body weight 182-81-2) > 2000 mg/kg (OECD Test Guideline 423, rat, female) > 2000 mg/kg (OECD Test Guideline 402, rat, male/female) 4500 ppmV/4h 11 mg//4h 0.39 mg/l/4h : Not classified : Causes serious eye irritation.	
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-y) benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphe hydroxyphenyl)propionyloxypoly(oxyethyle LD50 oral rat LD50 dermal rat LC50 Inhalation - Rat ATE US (vapors) ATE US (dust, mist) reaction mass of bis(1,2,2,6,6-pentamethyl-4 LD50 dermal rat LD50 dermal rat LD50 dermal rat LD50 dermal rat LD50 oral rat LD50 dermal rat ATE US (oral) hexamethylene diisocyanate oligomers (281 LD50 dermal rat ATE US (oral) hexamethylene diisocyanate oligomers (281 LD50 dermal rat ATE US (gases) ATE US (quors) ATE US (dust, mist) Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitization	14112 mg/kg body weight 390 ppmV/4h //>//	
ATE US (dermal) ATE US (gases) reaction mass of α-3-(3-(2H-benzotriazol-2-y) benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphe hydroxyphenyl)propionyloxypoly(oxyethyle LD50 oral rat LD50 dermal rat LC50 Inhalation - Rat ATE US (vapors) ATE US (dust, mist) reaction mass of bis(1,2,2,6,6-pentamethyl-4 LD50 oral rat LD50 oral rat LD50 dermal rat ATE US (oral) hexamethylene diisocyanate oligomers (281 LD50 oral rat LD50 oral rat LD50 dermal rat ATE US (oral) hexamethylene diisocyanate oligomers (281 LD50 dermal rat ATE US (gases) ATE US (uapors) ATE US (dust, mist) Skin corrosion/irritation Serious eye damage/irritation	14112 mg/kg body weight 390 ppmV/4h //>-5-tert-butyl-4-hydroxyphenyl)propionyl-w-hydroxypoly(oxyethylene) and α-3-(3-(2H-nyl)propionyl-w-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-ne) > 5000 mg/kg (OECD Guideline No. 401 (equivalent to Annex V), limit test, rat, male/female) > 2000 mg/kg (OECD Guideline No. 402 (equivalent to Annex V), limit test, rat, male/female) > 800 mg/l (OECD Guideline No. 402 (equivalent to Annex V), limit test, rat, male/female) 5800 mg/l/4h 5800 mg/l/4h 4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5) 3230 mg/kg (OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), rat, male/female) > 3170 mg/kg (OECD Guideline 402 (Acute Dermal Toxicity), read-across, 3230 mg/kg (OECD Test Guideline 423, rat, female) > 2000 mg/kg (OECD Test Guideline 423, rat, female) > 2000 mg/kg (OECD Test Guideline 402, rat, male/female) 4500 ppmV/4h 11 mg//4h 0.39 mg/l/4h : Not classified : Causes serious eye irritation.	

reaction mass of ethylbenzene, m-xylene and p-xylene			
IARC group	2B - Possibly carcinogenic to humans		

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 Not classified Not classified May cause drowsiness or dizziness.
May cause drowsiness or dizziness.
May cause drowsiness or dizziness.
-
d p-xylene
May cause respiratory irritation.
May cause drowsiness or dizziness.
82-81-2)
May cause respiratory irritation.
: Not classified
I-9)
3737.9 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90- Day Oral Toxicity in Rodents)
May cause damage to organs through prolonged or repeated exposure.
d p-xylene
150 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents), Guideline: EPA OPP 82-1 (90-Day Oral Toxicity)
150 mg/kg bodyweight/day (OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents), female)
May cause damage to organs through prolonged or repeated exposure.
: Not classified
: No data available
: May cause an allergic skin reaction.
: Eye irritation.

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
acetone (67-64-1)	
LC50 - Fish [1]	5540 mg/l (EU Method C.1, 96 h, Salmo gairdneri, Static system, Fresh water, Experimental value, Nominal concentration)
LOEC (chronic)	> 79 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	≥ 79 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
reaction mass of ethylbenzene, n	n-xylene and p-xylene
LC50 - Fish [1]	2.6 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	> 3.4 mg/l Test organisms (species): Ceriodaphnia dubia
NOEC chronic fish	> 1.3 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) Duration: '56 d'
n-butyl acetate (123-86-4)	
LC50 - Fish [1]	18 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	44 mg/l Test organisms (species): Daphnia sp.
LC50 - Fish [2]	62 mg/l (Leuciscus idus, static system)
NOEC (chronic)	23 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic crustacea	23 mg/l

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reaction mass of α-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H- benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4- hydroxyphenyl)propionyloxypoly(oxyethylene)	
LC50 - Fish [1]	2.8 mg/l (96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	4 mg/l (48 h, Daphnia magna, Static system, Fresh water, Experimental value, Nominal concentration)
ErC50 algae	> 100 mg/l (72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)

12.2. Persistence and degradability

acetone (67-64-1)		
Persistence and degradability	Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Readily biodegradable in water.	
Biochemical oxygen demand (BOD)	1.43 g O₂/g substance	
Chemical oxygen demand (COD)	1.92 g O₂/g substance	
ThOD	2.2 g O₂/g substance	
BOD (% of ThOD)	0.872 (20 day(s), Literature study)	
kieselguhr, soda ash flux calcined (68855-54-9)		
Persistence and degradability	Biodegradability: not applicable.	
Chemical oxygen demand (COD)	Not applicable	
ThOD	Not applicable	
BOD (% of ThOD)	Not applicable	
n-butyl acetate (123-86-4)		
Persistence and degradability	Readily biodegradable in water.	
ThOD	2.21 g O₂/g substance	
BOD (% of ThOD)	0.46	

12.3. Bioaccumulative potential

acetone (67-64-1)		
BCF - Fish [1]	0.69 (Pisces)	
BCF - Other aquatic organisms [1]	3 (BCFWIN, Calculated value)	
Partition coefficient n-octanol/water (Log Pow)	-0.24 (Test data)	
Bioaccumulative potential	Not bioaccumulative.	
kieselguhr, soda ash flux calcined (68855-54-9)		
Bioaccumulative potential	No test data of component(s) available.	
n-butyl acetate (123-86-4)		
BCF - Fish [1]	15.3 (Calculated value)	
Partition coefficient n-octanol/water (Log Pow)	2.3 (Test data, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).	
reaction mass of α-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H- benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4- hydroxyphenyl)propionyloxypoly(oxyethylene)		
BCF - Fish [1]	2658 – 3430 (502 h, Oncorhynchus mykiss, Flow-through system, Fresh water, Experimental value)	
Partition coefficient n-octanol/water (Log Pow)	4.6 (Experimental value, Equivalent or similar to OECD 117, 25 °C)	

12.4. Mobility in soil

acetone (67-64-1)	
Surface tension	0.0237 N/m
Ecology - soil	No (test)data on mobility of the substance available.

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n-butyl acetate (123-86-4)	
Surface tension	0.0163 N/m (20 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.268 – 1.844 (log Koc, SRC PCKOCWIN v2.0, QSAR)
Ecology - soil	Low potential for adsorption in soil.

12.5. Other adverse effects

SECTION 13: Disposal consideration	IS
13.1. Disposal methods	
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
SECTION 14: Transport information	
Department of Transportation (DOT) In accordance with DOT	
Transport document description (DOT) UN-No.(DOT) Proper Shipping Name (DOT) Class (DOT) Hazard labels (DOT)	 : UN1950 Aerosols, 2.1 : UN1950 : Aerosols : 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115 : 2.1 - Flammable gas
DOT Packaging Non Bulk (49 CFR 173.xxx)	: None
DOT Packaging Bulk (49 CFR 173.xxx)	: None
DOT Special Provisions (49 CFR 172.102)	: N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 306
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 75 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 150 kg
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	: 25 - Protected from sources of heat,87 - Stow "separated from" Class 1 (explosives) except Division 14,126 - Segregation same as for Class 9, miscellaneous hazardous materials
Emergency Response Guide (ERG) Number	: 126
Other information	: No supplementary information available.
Transportation of Dangerous Goods	
Transport document description (TDG) UN-No. (TDG) Proper Shipping Name (TDG) TDG Primary Hazard Classes	 : UN1950 AEROSOLS (flammable), 2.1 : UN1950 : AEROSOLS : 2.1 - Class 2.1 - Flammable Gas

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TDG Special Provisions	 80 - Despite section 1.17 of Part 1 (Coming into Force, Repeal, Interpretation, General Provisions and Special Cases), a person must not offer for transport or transport these dangerous goods unless they are in a means of containment that is in compliance with the requirements for transporting gases in Part 5 (Means of Containment),107 - (1) These Regulations, except for Part 1 (Coming into Force, Repeal, Interpretation, General Provisions and Special Cases) and Part 2 (Classification), do not apply to the handling, offering for transport or transporting of UN1950, AEROSOLS, and UN2037, GAS CARTRIDGES, that contain dangerous goods included in Class 2.1 or Class 2.2 and that are transported on a road vehicle, a railway vehicle or a vessel on a domestic voyage, if the aerosols or gas cartridges have a capacity less than or equal to 50 mL. (2) Subsection (1) does not apply to self-defence spray.
Explosive Limit and Limited Quantity Index	: 1L
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	: 75 L
Transport by sea	
Transport document description (IMDG)	: UN 1950 AEROSOLS, 2.1
UN-No. (IMDG)	: 1950
Proper Shipping Name (IMDG)	: AEROSOLS
Class (IMDG)	: 2 - Gases
Air transport	
Transport document description (IATA)	: UN 1950 Aerosols, flammable, 2.1
UN-No. (IATA)	: 1950
Proper Shipping Name (IATA)	: Aerosols, flammable
Class (IATA)	: 2 - Gases

SECTION 15: Regulatory information

15.1. US Federal regulations

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

acetone (67-64-1)		
Listed on the United States TSCA (Toxic Substances Control Act) inventory		
CERCLA RQ	5000 lb	
kieselguhr, soda ash flux calcined (68855-54-9)		
Listed on the United States TSCA (Toxic Substances Control Act) inventory		
reaction mass of ethylbenzene, m-xylene and p-xylene		
Listed on the United States TSCA (Toxic Substances Control Act) inventory		
n-butyl acetate (123-86-4)		
Listed on the United States TSCA (Toxic Substances Control Act) inventory		
CERCLA RQ	5000 lb	
reaction mass of α-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H- benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4- hydroxyphenyl)propionyloxypoly(oxyethylene)		
Listed on the United States TSCA (Toxic Substances Control Act) inventory		
EPA TSCA Regulatory Flag	 FRI - FRI - indicates a polymeric substance containing no free-radical initiator in its Inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used. PMN - PMN - indicates a commenced PMN substance. XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711). 	
reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5)		
Listed on the United States TSCA (Toxic Substances Control Act) inventory		

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hexamethylene diisocyanate oligomers (2818	32-81-2)
Listed on the United States TSCA (Toxic Substa	inces Control Act) inventory
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
15.2. International regulations	
CANADA	
acetone (67-64-1)	
Listed on the Canadian DSL (Domestic Substan	ces List)
kieselguhr, soda ash flux calcined (68855-54-	9)
Listed on the Canadian DSL (Domestic Substan	ces List)
reaction mass of ethylbenzene, m-xylene and	I p-xylene
Listed on the Canadian DSL (Domestic Substan	ces List)
n-butyl acetate (123-86-4)	
Listed on the Canadian DSL (Domestic Substan	ces List)
)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-hydroxypoly(oxyethylene) and α-3-(3-(2H- yl)propionyl-ω-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4- e)
Listed on the Canadian DSL (Domestic Substan	ces List)
reaction mass of bis(1,2,2,6,6-pentamethyl-4-	piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5)
Listed on the Canadian DSL (Domestic Substan	ces List)
hexamethylene diisocyanate oligomers (2818	32-81-2)
Listed on the Canadian DSL (Domestic Substan	ces List)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
kieselguhr, soda ash flux calcined(68855-54-9)	U.S Pennsylvania - RTK (Right to Know) List
n-butyl acetate(123-86-4)	U.S Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S Massachusetts - Right To Know List; U.S New Jersey - Right to Know Hazardous Substance List; U.S New York City – Right to Know Hazardous Substances List; U.S Pennsylvania - RTK (Right to Know) List
acetone(67-64-1)	U.S Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S Massachusetts - Right To Know List; U.S New Jersey - Right to Know Hazardous Substance List; U.S New York City – Right to Know Hazardous Substances List; U.S Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

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: 06/21/2018

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NFPA health hazard	: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
NFPA fire hazard	: 4 - Materials that rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and burn readily.
NFPA reactivity	: 3 - Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction but that require a strong initiating source or must be heated under confinement before initiation.

SDS US GHS (GHS HazCom2012)

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