kinetics Material Safety Data Sheet

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II - Europe

Version : 01 **Date of issue: 20.02.2023**
Date of revision: -

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier	
	Kinetics SHIELD Art Top **KGPTT**
1.2. Relevant identified uses of the substance or mixture and uses advised against	
Identified uses	Cosmetic.
Uses advised against	Manufacture of food products.
1.3. Details of the supplier of the safety data sheet	
Responsible person:	**Kinetics Nail Systems, Ltd** 3K Kurzemes pr., Riga, Latvia, LV-1067, Latvia TEL: +(371) 20436655 FAX: +(371) 6 7873 525 e-mail: info@kineticsbeauty.com web: www.kineticsbeauty.com E-mail of person responsible for Product Safety Data Sheet: info@kineticsbeauty.com
1.4. Emergency telephone number	
	EU:112 Emergency telephone for other regions to be filled out by local business

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture	
According to regulation (EC) No 1272/2008:	**Skin Irrit. 2, H315** **Skin Sens. 1A, H317** **Eye Irrit. 2, H319** **STOT SE 3, H335** **Aquatic Acute 1, H400** **Aquatic Chronic 1, H410**
Important adverse physicochemical, human health and environmental effects:	**Skin Irrit. 2 - Skin corrosion/ irritation, Hazard Category 2;** **H315 Causes skin irritation.** **Skin Sens. 1A - Sensitisation — Skin, Hazard Category 1A;** **H317 May cause an allergic skin reaction** **Eye Irrit. 2 - Serious eye damage/eye irritation, Hazard Category 2;** **H319 Causes serious eye irritation.** **STOT SE 3, Specific target organ toxicity — Single exposure, Hazard Category 3, Respiratory tract irritation;** **H335 May cause respiratory irritation.** **Aquatic Acute 1 - Short-term (acute) aquatic hazard — Acute Hazard, Category 1;** **H400 Very toxic to aquatic life.** **Aquatic Chronic 1 - Long-term (chronic) aquatic hazard, Category 1;** **H410 Very toxic to aquatic life with long lasting effects.**
2.2. Label elements	
According to regulation (EC) No 1272/2008:	 **Warning** **H315 Causes skin irritation.** **H317 May cause an allergic skin reaction.**

	H319 Causes serious eye irritation. **H335 May cause respiratory irritation.** **H410 Very toxic to aquatic life with long lasting effects.** Contain: URETHANE ACRYLATE; PENTAERYTHRITYL TETRAMERCAPTOPROPIONATE; HYDROXYPROPYL METHACRYLATE; ISOBORNYL METHACRYLATE; TRIPROPYLENE GLYCOL DIACRYLATE. P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read carefully and follow all instructions. P233 Keep container tightly closed. P261 Avoid breathing mist/vapours/ spray. P264 Wash hands/ affected body parts thoroughly after handling. P273 Avoid release to the environment. P280 Wear protective gloves/eye protection. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P302+P352 IF ON SKIN: Wash with plenty of water/soap. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P362+P364 Take off contaminated clothing and wash it before reuse. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/ attention. P391 Collect spillage. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/container to in accordance with local/ regional/ national/ international regulation.
2.3. Other hazards	
	Product does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH (Regulation (EC) No 1907/2006).

See section 11 for more detailed information on health effects and symptoms.

SECTION 3: Composition/information on ingredients

3.1. Substances	No relevant.
3.2. Mixtures	Mixture of acrylic monomers and other ingredients.

Ingredient name (INCI)	INDEX no.	CAS no.	EINECS no.	Conc.%	Classification Regulation (EC) 1272/2008 (CLP)	Type
URETHANE ACRYLATE	N/A	N/A	N/A	35-40	Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 Aquatic Chronic 3, H412	[1]
Pentaerythritol tetrakis(3-mercaptopropionate) [PENTAERYTHRITYL TETRAMERCAPTOPROPIONATE]	N/A	7575-23-7	231-472-8	20-25	Acute Tox. 4, H302 Skin Sens. 1A, H317 Aquatic Acute 1, H400 M=1 Aquatic Chronic 1, H410 M=1	[1]
Methacrylic acid, monoester with propane-1,2-diol [HYDROXYPROPYL METHACRYLATE]	N/A	27813-02-1	248-666-3	10-15	Skin Sens. 1, H317 Eye Irrit. 2, H319	[1]
Propylidynetrimethyl trimethacrylate [TRIMETHYLOLPROPANE TRIMETHACRYLATE]	N/A	3290-92-4	221-950-4	5-10	Aquatic Chronic 2, H411	[1]
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate [ISOBORNYL METHACRYLATE]	N/A	7534-94-3	201-204-4	5-10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 (respiratory tract) Aquatic Chronic 3, H412	[1]
(1-Methyl-1,2-Ethanediyl)bis[oxy(methyl-2,1-	607-249-00-X	42978-66-5	256-032-2	5-10	Skin Irrit. 2, H315 Eye Irrit. 2, H319	[1] [5]

ethanediyl)] diacrylate [TRIPROPYLENE GLYCOL DIACRYLATE]					Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 2, H411 *Specific Concentration limits:* STOT SE 3; H335: C ≥ 10 %	
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide [TRIMETHYLBENZOYL DIPHENYLPHOSPHINE OXIDE]	015-203-00-X	75980-60-8	278-355-8	1-<3	Repr. 2, H361f	[1]
2,6-Di-tert-butyl-p-cresol [BHT]	N/A	128-37-0	204-881-4	<0.2	Aquatic Chronic 1, H410	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.
See section 16 for the full text of the R and H phrases declared above.
Occupational exposure limits, if available, are listed in section 8.
[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[3] PBT-substance
[4] vPvB-substance
[5] SEVESO SUBSTANCE

SECTION 4: First aid measures

4.1. Description of first aid measures	
General advice:	Remove contaminated clothing.
Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If necessary, call a poison centre or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Skin contact:	Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms persist.
Eye contact:	Flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if symptoms persist.
Ingestion:	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
4.2. Most important symptoms and effects, both acute and delayed	
Eye contact:	Irritating to the eyes. Symptoms might be as follows: Conjunctivitis, lacrimation, redness, pain or irritation, reversible cornea damage and swelling of eyes.
Inhalation:	May cause nose and throat irritation. Symptoms might be as follows: Irritation, coughing, shortness of breath, dizziness, headache or nausea.
Skin contact:	Irritating to the skin, might cause skins sensitization. Symptoms might be as follows: Redness, inflammation, rash, urticaria, pain or irritation and dermatitis.

Ingestion:	May be harmful if ingested. Symptoms might be as follows: Gastrointestinal symptoms, such as nausea, vomiting, abdominal pain or irritation, and diarrhoea could develop.
4.3. Indication of any immediate medical attention and special treatment needed	
Specific treatments:	Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

See section 11 for more detailed information on health effects and symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media	
Suitable extinguishing media:	Water spray, foam, dry chemical, carbon dioxide.
Unsuitable extinguishing media:	Full-power water jet.
5.2. Special hazards arising from the substance or mixture	
	Hazards from the substance or mixture: In a fire or if heated, a pressure increase will occur and the container may burst. Hazardous decomposition products may include: Carbon monoxide (CO) Carbon dioxide (CO_2) Other unidentified organic and inorganic substances. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterways, sewer or drain.
5.3. Advice for firefighters	
	Water may be ineffective in fighting fire. If water is used to cool closed containers to prevent pressure build-up, fog nozzles are preferred. Full protective equipment, including self-contained breathing apparatus is needed to protect fire-fighters from exposure to coating's hazardous ingredients and hazardous decomposition products. During emergency conditions, overexposure to decomposition products may cause a health hazard; symptoms may not be immediately apparent. Obtain medical attention.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures	
	Personal precautions, protective equipment and emergency procedures For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section "Exposure controls/personal protection" on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
6.2. Environmental precautions	
	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
6.3. Methods and material for containment and cleaning up	
	Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. Large spill: Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.
6.4. Reference to other sections	
	See Section 1 for emergency contact information.

	See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	
Protective measures:	Put on appropriate personal protective equipment (see Section "Exposure controls/ personal protection"). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene:	Good industrial hygiene practices should be observed. Provide sufficient air exchange and/or exhaust in work rooms. Wash hands before work breaks and after finishing work. Do not eat, drink or smoke while working. Take off all contaminated clothing immediately. Use of dispensing equipment is recommended to minimise the risk of skin or eye contact. See also Section 8 for additional information on hygiene measures.
7.2. Conditions for safe storage, including any incompatibilities	
Storage:	Store in well-ventilated area. Keep containers (solvent resistant) closed when not in use. Store away from ignition sources. Store in a clean, dry area. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. Empty container may retain product residues (vapour or liquid).
7.3. Specific end use(s)	
Industrial sector specific solutions:	Product is for professional use only.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters	
Occupational exposure limits	Limit values are laid down throughout the EU, but each Member State establishes its own national OELs, often going beyond EU legislation. OELs are set by competent national authorities and other relevant institutions. **United Kingdom (HSE, 2011):** *2,6-Di-tert-butyl-p-cresol:* Long-term exposure limit: 8 hrs: 10 mg/m^3 **Germany (TRGS-900):** *2,6-Di-tert-butyl-p-kresol:* **Long-term exposure limit: 8 hrs: 10 E mg/m^3**
Recommended monitoring Procedures:	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.
8.2. Exposure controls	
Appropriate engineering Controls:	Ensure good ventilation/extraction.
Individual protection measures:	
Hygiene measures:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

Respiratory protection	 Ensure adequate ventilation. An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area. Filter type: A
Eye/face protection:	 Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.
Skin protection:	 Chemical-resistant protective gloves (EN 374). Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374): nitrile rubber (NBR; >= 0.4 mm thickness). Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): nitrile rubber (NBR; >= 0.4 mm thickness). This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed, then the gloves should be replaced. Wear suitable protective clothing.
Environmental exposure controls:	
	According to available technology.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties	
Appearance	
Physical state	Viscous liquid
Colour	Not available.
Odour	Not available.
Odour threshold	Not available.
pH at 25 ^{o}C	Not applicable**.**
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available
Flammability (solid, gas)	Not applicable**.**
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Evaporation Rate	Not available.
Explosive properties	Not available.
Oxidising properties	Not available
9.2. Other information	
Impurity	Not available

SECTION 10: Stability and reactivity

10.1. Reactivity	
	No hazardous reactions if stored and handled as prescribed/indicated.
10.2. Chemical stability	
	Stable under recommended storage conditions.
10.3. Possibility of hazardous reactions	
	Polymerization is possible.
10.4. Conditions to avoid	
	Sun-Light, un-clean conditions to avoid during storage.
10.5. Incompatible materials	
	Do not store with polymerization initiators including peroxides, strong oxidizing agents, strong alkalis, metals. Free radical initiators.
10.6. Hazardous decomposition products	
	Fumes produced when heated to decomposition may include: Toxic carbon monoxide, carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008				
Acute toxicity	ATE mix Oral calculation: >2000 mg/kg, not classified as acute toxic.			
Mixture/ Ingredient name	**Result**	**Species**	**Dose**	**Exposure**
Amanda Tack free top coat, Hema free AMT-T38	ATE Oral	-	4 000 mg/kg bw	-
Pentaerythritol tetrakis(3-mercaptopropionate) [PENTAERYTHRITYL TETRAMERCAPTOPROPIONATE]	LD50 Oral	Rat	> 1 000 - < 2 000 mg/kg bw	-
	LC50 Inhalation	Rat	> 3 363 mg/m³ air (analytical)	4 h
Methacrylic acid, monoester with propane-1,2-diol [HYDROXYPROPYL METHACRYLATE]	LD50 Oral	Rat	>= 2 000 mg/kg bw	-
	LD50 Dermal	Rabbit	> 5 000 mg/kg bw	-
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate [ISOBORNYL METHACRYLATE]	LD50 Oral	Rat	3.16 mL/kg bw	-
	LD50 Dermal	Rabbit	> 3 000 mg/kg bw	-
Propylidynetrimethyl trimethacrylate [TRIMETHYLOLPROPANE TRIMETHACRYLATE]	LD50 Oral	Rat	> 2 000 mg/kg bw	-
	LD50 Dermal	Rat	> 2 000 mg/kg bw	-
(1-methyl-1,2-Ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate [TRIPROPYLENE GLYCOL DIACRYLATE]	LD50 Oral	Rat	> 2 000 mg/kg bw	-
	LC0 Inhalation	Rat	0.001 mg/L air	7 h
	LD50 Dermal	Rabbit	> 2 000 mg/kg bw	-
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide [TRIMETHYLBENZOYL DIPHENYLPHOSPHINE OXIDE]	LD50 Oral	Rat	> 5 000 mg/kg bw	-
	LD50 Dermal	Rat	> 2 000 mg/kg bw	-
BHT	LD50 Oral	Rat	LD50 Rat oral 890 mg/kg [Sax, N.I. Dangerous Properties of Industrial Materials. 6th ed. New York, NY: Van Nostrand Reinhold, 1984., p. 426]	-
Eye irritation	**Eye Irrit. 2, H319 Causes serious eye irritation.**			
Mixture/ Ingredient name	**Effect**			
URETHANE ACRYLATE	Causes moderate irritation.			
Methacrylic acid, monoester with propane-1,2-diol	Category 2B (mildly irritating to eyes) based on GHS criteria.			

[HYDROXYPROPYL METHACRYLATE]	
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate [ISOBORNYL METHACRYLATE]	Slightly irritating.
(1-methyl-1,2-Ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate [TRIPROPYLENE GLYCOL DIACRYLATE]	Mildly irritating to eyes.
Skin irritation/ corrosion	**Skin Irrit. 2, H315 Causes skin irritation.**
Mixture/ Ingredient name	**Effect**
URETHANE ACRYLATE	Causes skin irritation.
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate [ISOBORNYL METHACRYLATE]	Irritating.
(1-methyl-1,2-Ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate [TRIPROPYLENE GLYCOL DIACRYLATE]	Mild irritant.
Sensitisation	**Skin Sens. 1A, H317 May cause an allergic skin reaction**
Mixture/ Ingredient name	**Effect**
URETHANE ACRYLATE	Sensitising.
Pentaerythritol tetrakis(3-mercaptopropionate) [PENTAERYTHRITYL TETRAMERCAPTOPROPIONATE	Strong sensitizer.
Methacrylic acid, monoester with propane-1,2-diol [HYDROXYPROPYL METHACRYLATE]	Sensitising.
(1-methyl-1,2-Ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate [TRIPROPYLENE GLYCOL DIACRYLATE]	Category 1 (skin sensitising) based on GHS criteria.
Repeated dose toxicity	No known effect according to our database.
Carcinogenicity	No known effect according to our database.
Mutagenicity	No known effect according to our database.
Toxicity for reproduction	**The product is not classified.**
Mixture/ Ingredient name	**Effect**
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide [TRIMETHYLBENZOYL DIPHENYLPHOSPHINE OXIDE]	*Toxicity to reproduction:* NOAEL (Parental toxicity): 200 mg/kg bw/day (actual dose received) NOAEL (Reproduction): 60 mg/kg bw/day (actual dose received) *Developmental toxicity / teratogenicity:* NOAEL (maternal toxicity): 150 mg/kg bw/day (actual dose received)
STOT	**STOT SE 3, H335 May cause respiratory irritation.**
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate [ISOBORNYL METHACRYLATE]	May cause respiratory irritation.
(1-methyl-1,2-Ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate [TRIPROPYLENE GLYCOL DIACRYLATE]	May cause respiratory irritation.
Potential acute health effects	
Eye contact:	May cause nose and throat irritation. May cause respiratory irritation, headache or nausea.
Inhalation:	Causes skin sensitisation and skin irritation.
Skin contact:	Causes serious eye irritation.

Ingestion:	Harmful if swallowed, abdominal pain.
Symptoms related to the physical, chemical and toxicological characteristics	
Eye contact:	Conjunctivitis, lacrimation, redness, pain or irritation, reversible cornea damage and swelling of eyes.
Inhalation:	Irritation, coughing, shortness of breath, dizziness, headache or nausea.
Skin contact:	Redness, inflammation, rash, urticaria, pain or irritation and dermatitis.
Ingestion:	Gastrointestinal symptoms, such as nausea, vomiting, abdominal pain or irritation, and diarrhoea could develop.
Delayed and immediate effects and also chronic effects from short and long term exposure	
Short term exposure:	
Potential immediate effects:	Not available.
Potential delayed effects:	Not available.
Long term exposure	
Potential immediate effects:	Not available.
Potential delayed effects:	Not available.
Potential chronic health effects	
Conclusion/Summary	Not available.
General	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.
11.2. Information on other hazards	
	Not available.

SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity	**Aquatic Acute 1, H400 Very toxic to aquatic life.** **Aquatic Chronic 1, H410 Very toxic to aquatic life with long lasting effects.**					
Mixture/ Ingredient name	**Species**	**Water media type**	**Exposure**	**Dose**	**Effect conc.**	**Notes**
URETHANE ACRYLATE	Leucuscus idus	freshwater	96 h	LC50	4,6-10 mg/L	
	Daphnia magna	freshwater	48 h	EC50	89 mg/L	
Pentaerythritol tetrakis(3-mercaptopropionate) [PENTAERYTHRITYL TETRAMERCAPTOPROPIONATE]	Oncorhynchus mykiss	freshwater	96 h	LC50	0.42 mg/L	
	Daphnia magna	freshwater	48 h	EC50	> 0.35 mg/L	
	Desmodesmus subspicatus	freshwater	72 h	EC50	> 0.12 mg/L	
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate [ISOBORNYL METHACRYLATE]	Danio rerio	freshwater	96 h	LC50	1.79 mg/L	
	Daphnia magna	freshwater	48 h	EC50	> 2.57 mg/L	
	Daphnia magna	freshwater	21 d	NOEC	0.233 mg/L	
	Pseudokirchneriella subcapitata	freshwater	72 h	EC50	2.28 mg/L	
Propylidynetrimethyl trimethacrylate [TRIMETHYLOLPROPANE TRIMETHACRYLATE]	Oncorhynchus mykiss	freshwater	96 h	LC50	2 mg/L	
	Pimephales promelas	freshwater	32 d	NOEC	>= 1.431 mg/L	
	Daphnia magna	freshwater	48 h	EC50	> 9.22 mg/L	
	Pseudokirchneriella subcapitata	freshwater	72 h	NOEC	0.177 mg/L	
	Activated sludge	freshwater	3 h	EC50	> 1 000 mg/L	
(1-methyl-1,2-Ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate [TRIPROPYLENE GLYCOL DIACRYLATE]	Leuciscus idus	freshwater	96 h	LC50	> 4.6 - < 10 mg/L	
	Daphnia magna	freshwater	48 h	EC50	89 mg/L	
	Desmodesmus subspicatus	freshwater	72 h	EC50	65.9 mg/L	
	Activated sludge, domestic	freshwater	30 min	EC50	> 1 000 mg/L	
BHT	QSAR calculation	freshwater	96 h	LC50	0.199 mg/L	-

12.2. Persistence and degradability			
Mixture/ Ingredient name	**Effect**		
Mixture/ Ingredient name	**CAS no.**	**Degradability**	**Test method/ Guideline**
Pentaerythritol tetrakis(3-mercaptopropionate) [PENTAERYTHRITYL TETRAMERCAPTOPROPIONATE]	7575-23-7	Not readily biodegradable. 26% biodegradation on Day 28 in CO2 evolution test.	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)/ EU Method C.4-C (Determination of the "Ready" Biodegradability - Carbon Dioxide Evolution Test)
Propylidynetrimethyl trimethacrylate [TRIMETHYLOLPROPANE TRIMETHACRYLATE]	3290-92-4	Inherently biodegradable. Biodegradation in water was 53% after 28 days.	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
(1-methyl-1,2-Ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate [TRIPROPYLENE GLYCOL DIACRYLATE	42978-66-5	Moderately biodegradable Biodegradation in water was 48% after 28 days.	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)

12.3. Bioaccumulative potential	
Mixture/ Ingredient name	**Effect**
Pentaerythritol tetrakis(3-mercaptopropionate) [PENTAERYTHRITYL TETRAMERCAPTOPROPIONATE]	Considered to have a low potential for bioaccumulation.
Propylidynetrimethyl trimethacrylate [TRIMETHYLOLPROPANE TRIMETHACRYLATE]	The calculated LogBCF for the substance is 2.432 (BCF = 270.1 L/kg wet weight).
(1-methyl-1,2-Ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate [TRIPROPYLENE GLYCOL DIACRYLATE	Accumulation in organisms is not to be expected.

12.4. Mobility in soil	
Mixture/ Ingredient name	**Effect**
Pentaerythritol tetrakis(3-mercaptopropionate) [PENTAERYTHRITYL TETRAMERCAPTOPROPIONATE]	Koc at 20 °C: 347
Propylidynetrimethyl trimethacrylate [TRIMETHYLOLPROPANE TRIMETHACRYLATE]	Koc at 20 °C: 1 757
(1-methyl-1,2-Ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate [TRIPROPYLENE GLYCOL DIACRYLATE	Koc at 20 °C: 1 023

12.5. Results of PBT and vPvB assessment	
	Regarding all available data on biotic and abiotic degradation, bioaccumulation and toxicity it can be stated that the substance does not fulfil the PBT criteria (not PBT) and not the vPvB criteria (not vPvB). .

12.6. Endocrine disrupting properties	
	2,6-Di-tert-butyl-p-cresol is under development under SEV as endocrine disruption by France. At the date of MSDS printing there was no hazard assessment outcome available to the best knowledge of the compiler of this MSDS.

12.7. Other adverse effects	
	No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:	
Methods of disposal:	Waste must be disposed of in accordance with federal, state and local environmental control regulations. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Hazardous waste:	Within the present knowledge of the supplier, this product IS regarded as hazardous waste, as defined by EU regulation 1357/2014.
European waste catalogue (EWC):	20 01 27* paint, inks, adhesives and resins containing dangerous substances
Packaging:	
Methods of disposal:	The generation of waste should be avoided or minimized wherever possible. Packaging: IBC container, plastic drum. Waste packaging should be recycled.
Special precautions:	This material and its container must be disposed of in a safe way.

SECTION 14: Transport information

This **preparation is classified** as dangerous according to international transport regulations (ADR/RID, IMDG or ICAO/IATA).
International transport regulations:

	ADR/RID	**ADN**	**IMDG**	**IATA**
14.1. UN number or ID number	UN3082	UN3082	UN3082	UN3082
14.2. UN proper shipping name	Environmentally Hazardous Substance Liquid, N.O.S. (PENTAERYTHRITYL TETRAMERCAPTOPROPIONATE)			
14.3. Transport hazard class(es)	9  This product is not regulated as a dangerous good when transported in sizes of ≤ 5 L or ≤ 5 kg, provided the packaging meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.	9  This product is not regulated as a dangerous good when transported in sizes of ≤ 5 L or ≤ 5 kg, provided the packaging meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.	9  This product is not regulated as a dangerous good when transported in sizes of ≤ 5 L or ≤ 5 kg, provided the packaging meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.	9  This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packaging meet the general provisions of 5.0.2.4.1, 5.0.2.6.1. 1 and 5.0.2.8.
14.4. Packing group	III	III	III	III
14.5. Environmental hazards	YES	YES	Marine pollutant	YES
14.6. Special precautions for user	Hazard identification number 90 Limited quantity 5 L Special provisions 274, 335, 601, 375 Tunnel code (-)	-	EmS code: F-A, S-F Special provisions 274, 335, 969	Quantity limitation Passenger and Cargo Aircraft: 450 L. Packaging instructions: 964. Cargo Aircraft Only: 450 L. Packaging instructions: 964. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y964. Special provisions A97, A158, A197
14.7. Maritime transport in bulk according to IMO instruments	Not applicable.			

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH):

Annex XIV - List of substances subject to authorization:	Substances of very high concern: None of the components are listed.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles:	Not applicable.
15.2. Chemical safety assessment	
	A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Abbreviations and acronyms:	
Full text of abbreviations	CLP: Classification, Labelling and Packaging Regulation [Regulation (EC) No.1272/2008] ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road RID: International Rule for Transport of Dangerous Substances by Railway IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association CAS: Chemical Abstracts Service EINECS: European Inventory of Existing Commercial Chemical Substances LC50: Median lethal concentration LD50: Median lethal dose REACH: Registration, Evaluation and Authorisation of Chemicals PBT: Persistent, bio-accumulative and toxic vPvB: Very persistent, very bio-accumulative
Full text of classifications and H statements [CLP/GHS]:	Acute Tox. 4, Acute toxicity (oral), Hazard Category 4; H302 Harmful if swallowed. Skin Irrit. 2, Skin corrosion/ irritation, Hazard Category 2; H315 Causes skin irritation. Skin Sens. 1A, 1, 1B - Sensitisation — Skin, Hazard Category 1A, 1, 1B; H317 May cause an allergic skin reaction Eye Irrit. 2 - Serious eye damage/eye irritation: Hazard Category 2; H319 Causes serious eye irritation. STOT SE 3, Specific target organ toxicity — Single exposure, Hazard Category 3, Respiratory tract irritation; H335 May cause respiratory irritation. Repr. 2, Reproductive toxicity, Hazard Category 2; H361f Suspected of damaging fertility or the unborn child <state specific effect if known> <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>. Aquatic Acute 1, Short-term (acute) aquatic hazard — Acute Hazard, Category 1; H400 Very toxic to aquatic life. Aquatic Chronic 1 - Hazardous to the aquatic environment — Chronic Hazard, Category 1; H410 Very toxic to aquatic life with long lasting effects. Aquatic Chronic 2 - Hazardous to the aquatic environment — Chronic Hazard, Category 2; H411 Toxic to aquatic life with long lasting effects. Aquatic Chronic 3 - Hazardous to the aquatic environment — Chronic Hazard, Category 3; H412 Harmful to aquatic life with long lasting effects.
Classification system	**Classification for health effects:** conventional (calculation) method is used or generic/specific concentration limits: Skin Irrit. 2, H315 Skin Sens. 1A, H317 Eye Irrit. 2, H319 STOT SE 3, H335 **Classification for physico-chemical effects:** No applicable. **Classification for environmental effects:** conventional (calculation) method is used. Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Training advice:	

	In addition to health, safety and environmental training programs for their workers, companies must ensure that workers read, understand and apply the requirements of this SDS.
Used literature:	
	European Chemical Agency's homepage (http://echa.europa.eu/). Safety data sheets of individual components.
DISCLAIMER OF LIABILITY:	
	The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or method of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS/SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS/SDS information may not be applicable.

END OF SAFETY DATA SHEET