SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2020/878

Version: 1 **Date of compilation: 29.07.2022**
Revision: -

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

1.1. Product identifier	
Product Name **Item number**	**Kinetics Green Shark Hardener** **KGSH01**
1.2. Relevant identified uses of the substance or mixture and uses advised against	
Identified uses	Cosmetic. Professional/ Consumer use.
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) 6 7295 260 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:	**Flam. Liq. 2 (H225) – Flammable liquids, Hazard Category 2.** **Eye Irrit. 2 (H319) – Serious eye damage/eye irritation, Hazard Category 2.** **STOT SE 3 (H336) – Specific target organ toxicity — Single exposure, Hazard Category 3, Narcosis.** **EUH066**
Important adverse physicochemical, human health and environmental effects:	**Highly flammable liquid and vapour.** **Causes serious eye irritation.** **May cause drowsiness or dizziness.** **Repeated exposure may cause skin dryness or cracking.**
2.2. Label elements	
According to regulation (EC) No 1272/2008:	 **Danger!** **H225 Highly flammable liquid and vapour.** **H319 Causes serious eye irritation.** **H336 May cause drowsiness or dizziness.**

	EUH066 Repeated exposure may cause skin dryness or cracking. Contain: Ethyl acetate; n-Butyl acetate; Isopropanol. P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking. P233 Keep container tightly closed. P261 Avoid breathing mist/vapours. P264 Wash affected body parts/ hands thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/eye protection. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/ attention. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTER or doctor/physician if you feel unwell. P403+P235 Store in a well-ventilated place. Keep cool. P501 Dispose of contents/container to in accordance with local 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).

Toxicological information/Ecological information: Oxybenzone is under development under SEV for having endocrine disruptive properties by Denmark. At the date of compilation of this MSDS there was no hazard assessment outcome available to the best knowledge of the compiler of this MSDS.

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

SECTION 3: Composition/information on ingredients

3.1. Substances

Not relevant.

3.2. Mixtures

Ingredient name [INCI]	INDEX Number	CAS Number	EINECS/ EC Number	Conc. (%)	Classification Regulation (EC) 1272/2008 (CLP)	Type
Ethyl acetate [ETHYL ACETATE]	607-022-00-5	141-78-6	205-500-4	35-45	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	[1] [2] [5]
n-Butyl acetate [BUTYL ACETATE]	607-025-00-1	123-86-4	204-658-1	25-30	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	[1] [2] [5]
Cellulose nitrate [NITROCELLULOSE]	N/A	9004-70-0	618-392-2	10-20	Flam. Sol. 1, H228	
Propan-2-ol Isopropyl alcohol Isopropanol [ISOPROPYL ALCOHOL]	603-117-00-0	67-63-0	200-661-7	5-10	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	[1] [2] [5]
Glycollic acid [GLYCOLIC ACID]	N/A	79-14-1	201-180-5	<1	Skin Corr. 1B, H314 Eye Dam. 1, H318	[1]

					Acute Tox. 4, H332 EUH071	
Oxybenzone [BENZOPHENONE-3]	N/A	131-57-7	205-031-5	<0.2	Aquatic Acute 1, H400 Aquatic Chronic 2, H411	[1]
Butan-1-ol n-Butanol [N-BUTYL ALCOHOL]	603-004-00-6	71-36-3	200-751-6	<0.2	Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	[1] [2] [5]

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. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.
Skin contact:	Wash with plenty of soap and water. Remove contaminated clothing and shoes. In the event of any complaints or symptoms, avoid further exposure. 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. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.
4.2. Most important symptoms and effects, both acute and delayed	
Inhalation:	Harmful if inhaled - may cause effect on the brain or nervous system. Possible symptoms might be: Dizziness, headache or nausea, narcosis, loss of coordination, vomiting, difficulty with speech, reduced visibility, fatigue, cough, unconsciousness.
Skin contact:	May cause skin dryness or cracking after repeated exposure. Symptoms might be as follows: Redness, inflammation, rash, urticaria, pain or irritation, skin cracking.
Eye contact:	May cause serious eye irritation.

	Symptoms might be as follows: Conjunctivitis, lacrimation, redness, pain or irritation, reversible cornea damage and swelling of eyes.
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.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:	Alcohol-resistant foam, dry chemical powder, carbon dioxide, water mist.
Unsuitable extinguishing media:	Do not use full power water jet.

5.2. Special hazards arising from the substance or mixture

	Highly flammable liquid. Vapours may form explosive mixtures with air. Vapour may cause flash fires. Vapours may accumulate in low or confined areas, travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create a fire or explosion hazard. Containers may explode when heated. Hazardous combustion products: Oxides of carbon, oxides of nitrogen, irritating organic vapours.

5.3. Advice for firefighters

	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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Immediately contact emergency services. Eliminate all sources of ignition. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. Be aware of possible accumulation of vapour. Follow fire-fighting measures. Avoid release to the environment.
6.1.2. 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).

6.3. Methods and material for containment and cleaning up

Small spill:	Stop leak if without risk. Move containers from spill area. Eliminate sources of ignition. Use non-sparking and explosion proof equipment. 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. Eliminate sources of ignition. Use non-sparking and explosion proof equipment. 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"). Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour. Eliminate sources of ignition. Only use in well ventilated areas. Keep container tightly closed when not in use. Provide emergency eye washing and shower facilities. Take precautions against static discharge by earthing and bonding all containers and equipment before transferring material. Use explosion proof electrical (ventilating, lighting and material handling) equipment. 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:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. All equipment should be grounded. 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:	Not available.

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.

EU (Indicative Occupational Exposure Limit Value (IOELV)):

Substance name	Limit value 8 hours		Limit value short term	
	mg/m³	ppm	mg/m³	ppm
Ethyl acetate[1] [ETHYL ACETATE]	734	200	1468	400
n-Butyl acetate[2] [BUTYL ACETATE]	241	50	723	150

[1] COMMISSION DIRECTIVE (EU) 2017/164 of 31 January 2017 establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU
[2] COMMISSION DIRECTIVE (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC

Latvia (AER, reg. 325/2011):

Substance name	Limit value 8 hours		Limit value short term	
	mg/m³	ppm	mg/m³	ppm
Ethyl acetate [ETHYL ACETATE]	200	54	1468	400
n-Butyl acetate [BUTYL ACETATE]	241	50	723	150
Propan-2-ol Isopropyl alcohol Isopropanol [ISOPROPYL ALCOHOL]	350	-	600	-
Butan-1-ol n-Butanol [N-BUTYL ALCOHOL] (Skin)	-	-	154	50

Germany (TRGS 900):

Substance name	Limit value 8 hours		Limit value short term	
	mg/m³	ppm	mg/m³	ppm
Ethyl acetate [ETHYL ACETATE]	1500	400	-	-
n-Butyl acetate [BUTYL ACETATE]	300	62	-	-
Propan-2-ol Isopropyl alcohol Isopropanol [ISOPROPYL ALCOHOL]	500	200	-	-
Butan-1-ol n-Butanol [N-BUTYL ALCOHOL]	310	100	-	-

United Kingdom (HSE, 2011):

Substance name	Limit value 8 hours		Limit value short term	
	mg/m³	ppm	mg/m³	mg/m³
Ethyl acetate [ETHYL ACETATE]	734	200	1468	400
n-Butyl acetate [BUTYL ACETATE]	724	150	966	200
Propan-2-ol	999	400	1250	500

Isopropyl alcohol Isopropanol [ISOPROPYL ALCOHOL]				
Butan-1-ol n-Butanol [N-BUTYL ALCOHOL] (Skin)	-	-	154	50

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:	Use local exhaust ventilation if concentrations in air could exceed occupational exposure standard.
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.
Eye/face protection:	 Safety glasses with side shields or chemical safety goggles should be worn if there is a risk of splashing.
Hand Protection:	 Chemical-resistant protective gloves (EN 374). 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.
Skin protection:	 Wear suitable protective clothing.
Environmental exposure controls:	
	If possible, use in closed systems. If leakage cannot be prevented, the substance needs to be suck off at the emersion point, if possible, without danger. Observe the exposure limits, clean exhaust air if needed. If recycling is not practicable, dispose of in compliance with local regulations. Inform the responsible authorities in case of leakage into the atmosphere, or of entry into waterways, soil or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties	
a) Physical state	Liquid.
b) Colour	Transparent.
c) Odour	Not available.
d) Melting point/freezing point	Not available.
e) Initial boiling point and boiling range	> 35 °C
f) Flammability	The product has not been tested but based on constituent classification and relevant concentration, the product is considered to be highly flammable liquid.
g) Lower and upper explosion limit	Not available.
h) Flash point	< 23°C
i) Auto-ignition temperature	Not available.
j) Decomposition temperature	Not available.
k) pH	Not available.
l) Kinematic viscosity	Not available.
m) Solubility (-ies)	Not available.
n) Partition coefficient n-octanol/water (log value)	Not available.
o) Vapour pressure	Not available.
p) Density and/or relative density	Not available.
q) Relative vapour density	Not available.
r) Particle characteristics	Not available.
9.2. Other information	
9.2.1. Information with regard to physical hazard classes	
Flammable liquids	Highly flammable liquid (Flam. Liq. 2, H225) - The product has not been tested but based on constituent classification and relevant concentration, the product is considered to be highly flammable liquid.
9.2.2. Other safety characteristics	
Impurity	Not available.
Explosive properties	Not available.
Oxidising properties	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. On storage, it is slowly decomposed by water.
10.3. Possibility of hazardous reactions	
	Stable under recommended storage conditions. Vapours may form explosive mixture with air.
10.4. Conditions to avoid	
	Avoid any source of ignition.
10.5. Incompatible materials	
	Oxidizing agents, acids, alkalis.
10.6. Hazardous decomposition products	

	Fumes produced when heated to decomposition may include: Oxides of carbon and various organic and inorganic compounds.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Data on the product or its components:

Mixture/ Ingredient name	Result	Species	Dose	Exposure
Ethyl acetate [ETHYL ACETATE]	LD_{50} Oral	Rabbit	4 934 mg/kg bw	-
	LC_{50} Inhalation	Mouse	33.5 mg/L air	2 h
	LD_{50} Dermal	Rabbit	> 20 000 mg/kg bw	-
n-Butyl acetate [BUTYL ACETATE]	LD_{50} Oral	Rat - female	12.2 mL/kg bw (calculated 10760 mg/kg)	-
		Rat - male	14.5 mL/kg (calculated 12 789 mg/kg)	-
	LD_{50} Dermal	Rabbit	16 mL/kg bw (calculated 14112 mg/kg)	-
Propan-2-ol Isopropyl alcohol Isopropanol [ISOPROPYL ALCOHOL]	LD_{50} Oral	Rat	5.84 g/kg bw	-
	LC_{50} Inhalation: Vapour	Rat	> 10 000 ppm	6 h
	LD_{50} Dermal	Rabbit	16.4 mL/kg bw	-
Glycollic acid [GLYCOLIC ACID]	LD_{50} Oral	Rat	2 040 mg/kg bw	-
	LC_{50} Inhalation: Aerosol	Rat	3.6 mg/L air	4
Oxybenzone [BENZOPHENONE-3]	LD_{50} Oral	Rat	> 12 800 mg/kg bw	-
	LD_{50} Dermal	Rabbit	> 16 000 mg/kg bw	-
Butan-1-ol n-Butanol [N-BUTYL ALCOHOL]	LD_{50} Oral	Rat	ca. 2 292 mg/kg bw	-
	LC_0 Inhalation: Vapour	Rat	> 17.76 mg/L air	4 h
	LD_{50} Dermal	Rabbit	ca. 3 430 mg/kg bw	-
Conclusion/Summary:	**Based on available data, classification criteria not met.**			

Serious eye damage/irritation

Data on the product or its components:

Mixture/ Ingredient name	Effect
Ethyl acetate [ETHYL ACETATE]	Slightly irritating, Guideline: OECD Guideline 405 (Acute Eye Irritation / Corrosion) Species: Rabbit Amount applied (volume): 0.1 ml Concentration: 100%, 30%, 10%, 3% Duration of treatment / exposure: Single application Observation period (in vivo): Observations at 24, 48, 72 hours then 7, 10, 14, 21 days

Irritation parameter	Time point	Score	Max score	Notes
Overall irritation score	24 h	15	110	Fully reversible within: 14 days
% Corneal swelling	24 h	106	-	Coefficient of variation 7.5%

Propan-2-ol Isopropyl alcohol Isopropanol [ISOPROPYL ALCOHOL]	Category II - Causes serious eye irritation. Guideline: OECD Guideline 405 (Acute Eye Irritation / Corrosion) Species: Rabbit Amount applied (volume): 0.1 ml Concentration: 100% Duration of treatment / exposure: Single application

	Observation period (in vivo): 14 days

Irritation parameter	Time point	Score	Max score	Notes
Maximum mean total score (MMTS)	24 h	0-25	110	Might not be fully reversible within: 14 days
Cornea opacity score	24/48/72 h	2.67	4	Fully reversible within: 7 days
Iris score	24/48/72 h	1	2	Fully reversible within: 7 days
Conjunctivae score	24/48/72 h	3	3	Not fully reversible within: 10 days

Glycollic acid [GLYCOLIC ACID]

Category 1 (irreversible effects on the eye) based on GHS criteria.
Guideline: OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Species: Rabbit
Amount applied (volume): 0.1 ml
Concentration: 100%
Observation period (in vivo): 14 days

Irritation parameter	Time point	Score	Max score	Notes
Cornea opacity score	24/48/72 h	>=3	3	Not fully reversible
Conjunctivae score	24/48/72 h	>=3	3	Not fully reversible
Iris score	24/48/72 h	>= 1.5	1.5	Not fully reversible
Chemosis score	24/48/72 h	>= 0	0	Not specified

Butan-1-ol
n-Butanol
[N-BUTYL ALCOHOL]

Category 1 (irreversible effects on the eye) based on GHS criteria.
Guideline: OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Species: Rabbit
Amount applied (volume): 0.1 ml
Concentration: 100%
Duration of treatment / exposure: Single application
Observation period (in vivo): 7 days

Irritation parameter	Time point	Score	Max score	Notes
Cornea opacity score	24/48/72 h	2.11	4	Not fully reversible within: 7 days
Iris score	24/48/72 h	1	2	Not fully reversible within: 7 days
Conjunctivae score	24/48/72 h	2.89	3	Not fully reversible within: 7 days
Chemosis score	24/48/72 h	3	4	Not fully reversible within: 7 days

Conclusion/Summary: **According to classification method described in CLP regulation, this product is classified as irritating to the eyes (Eye Irrit. 2, H319).**

Skin corrosion/irritation
Data on the product or its components:

Mixture/ Ingredient name	Effect
Ethyl acetate [ETHYL ACETATE]	Repeated exposure may cause skin dryness or cracking.
n-Butyl acetate [BUTYL ACETATE]	Repeated exposure may cause skin dryness or cracking.
Glycollic acid [GLYCOLIC ACID]	Category 1B (corrosive) based on GHS criteria Guideline: OECD Guideline 404 (Acute Dermal Irritation / Corrosion) Species: Rabbit Amount applied (volume): 0.5 g Concentration: 99% Duration of treatment / exposure: 3 minutes, 1 hour and 4 hours Observation period (in vivo): 14 days

	Irritation parameter	**Time point**	**Score**	**Max score**	**Notes**
	Erythema score	24/48/72 h	1-4	-	-
	Edema score	24/48/72 h	0-3	-	-
Butan-1-ol n-Butanol [N-BUTYL ALCOHOL]	Category 2 (irritant) based on GHS criteria Species: Rabbit Amount applied (volume): 0.1 ml Concentration: 100% Duration of treatment / exposure: Single application Observation period (in vivo): 7 days				
	Irritation parameter	**Time point**	**Score**	**Max score**	**Notes**
	Erythema score	24/48/72 h	1.7-4	4	Not always fully reversible within: 8 days
	Edema score	24/48/72 h	0.7-2	4	Not always fully reversible within: 8 days
Conclusion/Summary:	**Based on available data, classification criteria not met. Supplemental hazard phrase EUH066 is applicable to the product.**				

Respiratory or skin sensitisation
Data on the product or its components:

	No data on adverse effects on humans or animals are available.
Conclusion/Summary:	**Based on available data, classification criteria not met.**

Germ cell mutagenicity
Data on the product or its components:

	No data on adverse effects on humans or animals are available.
Conclusion/Summary:	**Based on available data, classification criteria not met.**

Carcinogenicity
Data on the product or its components:

	No data on adverse effects on humans or animals are available.
Conclusion/Summary:	**Based on available data, classification criteria not met.**

Reproductive toxicity
Data on the product or its components:

	No data on adverse effects on humans or animals are available.
Conclusion/Summary:	**Based on available data, classification criteria not met.**

Specific target organ toxicity - Single exposure
Data on the product or its components:

Mixture/ Ingredient name	**Effect**
Ethyl acetate [ETHYL ACETATE]	Hazard category: Specific target organ toxicity — Single exposure, Hazard Category 3, Narcosis. Hazard statement: May cause drowsiness or dizziness. Affected organs: Central nervous system (CNS).

n-Butyl acetate [BUTYL ACETATE]	Hazard category: Specific target organ toxicity — Single exposure, Hazard Category 3, Narcosis. Hazard statement: May cause drowsiness or dizziness. Affected organs: Central nervous system (CNS).
Propan-2-ol Isopropyl alcohol Isopropanol [ISOPROPYL ALCOHOL]	Hazard category: Specific target organ toxicity — Single exposure, Hazard Category 3, Narcosis. Hazard statement: May cause drowsiness or dizziness. Affected organs: Central nervous system (CNS).
Butan-1-ol n-Butanol [N-BUTYL ALCOHOL]	Hazard category: Specific target organ toxicity — Single exposure, Hazard Category 3, Narcosis. Hazard statement: May cause drowsiness or dizziness. Affected organs: Central nervous system (CNS).
	Hazard category: Specific target organ toxicity — Single exposure, Hazard Category 3, Respiratory tract irritation. Hazard statement: May cause respiratory irritation. Affected organs: respiratory tract, skin, eyes
Conclusion/Summary:	**According to classification method described in CLP regulation, this product may cause drowsiness or dizziness (STOT SE 3, H336).**

Specific target organ toxicity - Repeated exposure
Data on the product or its components:

	No data on adverse effects on humans or animals are available.
Conclusion/Summary:	**Based on available data, classification criteria not met.**

Aspiration hazard
Data on the product or its components:

	No data on adverse effects on humans or animals are available.
Conclusion/Summary:	**Based on available data, classification criteria not met.**

Potential acute health effects

Inhalation:	Harmful if inhaled - may cause effect on the brain or nervous system.
Skin contact:	May cause skin dryness or cracking after repeated exposure.
Eye contact:	May cause serious eye irritation.
Ingestion:	May be harmful if ingested.

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:	Dizziness, headache or nausea, narcosis, loss of coordination, vomiting, difficulty with speech, reduced visibility, fatigue, cough, unconsciousness.
Skin contact:	Redness, inflammation, rash, urticaria, pain or irritation, skin cracking.
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 delayed effects:	Not available.
Long term exposure:	
Potential delayed effects:	Not available.

11.2. Information on other hazards	
Endocrine disrupting properties	
	Oxybenzone is under development under SEV for having endocrine disruptive properties by Denmark. At the date of compilation of this MSDS there was no hazard assessment outcome available to the best knowledge of the compiler of this MSDS.
Other information	
	No additional information is available.

SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity

Data on the product or its components:

Mixture/ Ingredient name	Species	Exposure	Dose	Effect conc.
Oxybenzone [BENZOPHENONE-3]	Fish - Oryzias latipes	96 h	LC_{50}	3.8 mg/L
	Crustaceans - Daphnia magna	48 h	EC_{50}	1.87 mg/L
	Algae - Raphidocelis subcapitata	72 h	EC_{50}	0.41 mg/L
	Microorganisms - activated sludge	3 h	EC_{50}	> 100 mg/L
Conclusion/Summary:	**Based on available data, classification criteria not met.**			

12.2. Persistence and degradability

Data on the product or its components:

Mixture/ Ingredient name	CAS no.	Degradability	Test method/ Guideline
Oxybenzone [BENZOPHENONE-3]	131-57-7	Biodegradable. Degradation (O_2 consumption), 28 d: 60 - 70%	EEC Directive 79-831, Annex V (Part IV Manometric Respirometry)

12.3. Bioaccumulative potential

Data on the product or its components:

Mixture/ Ingredient name	Effect
Oxybenzone [BENZOPHENONE-3]	The bioaccumulation potential in aquatic species is considered to be low. BCF (aquatic species): 36-158

12.4. Mobility in soil

Data on the product or its components:

Mixture/ Ingredient name	Effect
Oxybenzone [BENZOPHENONE-3]	Koc : 954.8 L/kg (MCI method); Koc : 2753 L/kg (Kow method) Log Koc: 2.980 (MCI method); Log Koc: 3.440 (Kow method)

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

Data on the product or its components:

	No data on adverse effects on aquatic animals/plants are available.
Conclusion/Summary:	Oxybenzone is under development under SEV for having endocrine disruptive properties by Denmark. At the date of compilation of this MSDS 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:	The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
Hazardous waste:	Within the present knowledge of the supplier, this product IS regarded as hazardous waste, as defined by Directive 2008/98/EC and EU regulation 1357/2014.
European waste catalogue (EWC):	20 01 27* paint, inks, adhesives and resins containing dangerous substances Note: Always check the given waste codes according to the actual conditions of manufacturing, formulation or use.
Packaging:	
Methods of disposal:	The generation of waste should be avoided or minimised wherever possible. Special precautions: This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
Special precautions:	This material and its container must be disposed of in a safe way.

SECTION 14: Transport information

	ADR/RID	**ADN**	**IMDG**	**IATA**
14.1. UN number or ID number	UN1993	UN1993	UN1993	UN1993
14.2. UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (Ethyl acetate)			
14.3. Transport hazard class(es)	3 	3 	3 	3 
14.4. Packing group	II	II	II	II
14.5. Environmental hazards	NO	NO	NO	NO
14.6. Special precautions for user	*Classification code:* F1 *Special provisions:* 274; 601; 640C *Limited quantity:* 1 L	*Classification code:* F1 *Special provisions:* 274; 601; 640C *Limited quantity:* 1 L	*Special provisions:* 274; 330; 944 *Limited quantity:* 1 L *Packaging: Instructions:*	*Passenger Aircraft (PAX):* *IATA Limited quantities packaging instructions*:

	Excepted quantity: E2 (inner packaging: 30 mL/ outer packaging: 500 mL) *Packaging:* *Packaging instructions:* P001 *Mixed packaging provisions:* MP19 *Portable tanks and bulk containers:* *Instructions:* T7 *Special provisions:* TP1; TP8; TP28 *ADR tank:* *Tank code:* L1.5BN *Vehicle for tank carriage:* FL *Transport category:* 2 *Tunnel restriction code:* (D/E) *Special provisions for carriage:* *Operation:* S2; S20 *Hazard identification:* 33	*Excepted quantity:* E2 (inner packaging: 30 mL/ outer packaging: 500 mL *Packaging:* *Packaging instructions:* P001 *Mixed packaging provisions:* MP19 *Portable tanks and bulk containers:* *Instructions:* T7 *Special provisions:* TP1; TP8; TP28 *RID tank:* *Tank code:* L1.5BN *Transport category:* 2 *Colis express (express parcels):* CE7 *Hazard identification:* 33	P001 *IBC:* *Instructions:* IBC02 *Portable tanks and bulk containers:* *IMO Tank instructions:* T4 *UN Tank instructions:* T7 *Provisions:* TP1; TP8; TP28 *EmS code:* F-E, S-E *Stowage and segregation:* Category B *Properties and observations:* -	Y341 *IATA Max Limited Quantities per package*: 1 L *IATA Packaging instructions*: 353 *Cargo Aircraft (CAO):* *Packaging instructions*: 364 *Max Limited Quantities per package*: 30 L *IATA Special provisions:* A3
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

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures.
ADR - the European Agreement concerning the International Carriage of Dangerous Goods by Road, concluded at Geneva on 30 September 1957, as amended.
RID - the Regulations concerning the International Carriage of Dangerous Goods by Rail, appearing as Appendix C to the Convention concerning International Carriage by Rail (COTIF) concluded at Vilnius on 3 June 1999, as amended.
ADN - the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways concluded at Geneva on 26 May 2000, as amended.
IMDG Code - International Maritime Dangerous Goods Code.
IATA/ICAO: ICAO - International Civil Aviation Organization. IATA - International Air Transport Association.
MARPOL 73/78 - International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978.
COUNCIL DIRECTIVE 1999/13/EC of 11 March 1999 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations, with amendments (2004/42/CE).
Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Text with EEA relevance).

Commission Regulation (EU) No 1357/2014 of 18 December 2014 replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives Text with EEA relevance. REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (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:	
	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]:	
	Flam. Liq. 2, Flammable liquids, Hazard Category 2; H225 Highly flammable liquid and vapour. Flam. Liq. 3, Flammable liquids, Hazard Category 3; H226 Flammable liquid and vapour. Flam. Sol. 1, Flammable solids, Hazard Category 1; H228 Flammable solid. Acute Tox. 4, Acute toxicity (oral), Hazard Category 4; H302 Harmful if swallowed. Skin Corr. 1B, Skin corrosion/ irritation, Hazard Category 1B; H314 Causes severe skin burns and eye damage. Skin Irrit. 2, Skin corrosion/ irritation, Hazard Category 2; H315 Causes skin irritation. Eye Dam. 1, Serious eye damage/eye irritation, Hazard Category 1; H318 Causes serious eye damage. Eye Irrit. 2, Serious eye damage/eye irritation, Hazard Category 2; H319 Causes serious eye irritation. Acute Tox. 4, Acute toxicity (inhal.), Hazard Category 4; H332 Harmful if inhaled. STOT SE 3, Specific target organ toxicity — Single exposure, Hazard Category 3, Respiratory tract irritation; H335 May cause respiratory irritation. STOT SE 3, Specific target organ toxicity — Single exposure, Hazard Category 3, Narcosis; H336 May cause drowsiness or dizziness.

	Aquatic Acute 1, Short-term (acute) aquatic hazard — Acute Hazard, Category 1; H400 Very toxic to aquatic life. Aquatic Chronic 2, Long-term (chronic) aquatic hazard, Category 2; H411 Toxic to aquatic life with long lasting effects. EUH066 Repeated exposure may cause skin dryness or cracking. EUH071 Corrosive to the respiratory tract.
Classification system:	
	Classification for health effects: conventional (calculation) method is used or generic/specific concentration limits: Eye Irrit. 2, H319 STOT SE 3, H336 EUH066 **Classification for physico-chemical effects:** expert judgment: Flam. Liq. 2, H225 **Classification for environmental effects:** Not applicable
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