

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

1.1. Product identifier

Product form : Mixture
Product name : OptiBond Universal 360

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Dental product

1.2.2. Uses advised against

Restrictions on use : Restricted to professional users

1.3. Details of the supplier of the safety data sheet

Manufacturer

Kerr Corporation
1717 W. Collins Ave.
Orange, CA 92867-5422
T 1-800-841-1428
safety@envistaco.com

Supplier

Kerr Italia, S.r.L.
Via Passanti, 174
Scafati (SA) 84018, Italy
T +39 081 850 3511
safety@envistaco.com

1.4. Emergency telephone number

Emergency number : (Chemical Spills, Leaks, Fire, Exposure or Accident only): CHEMTREC 1-800-424-9300 (in the US), 1-703-527-3887 (Outside the US)

Country	Organisation/Company	Address	Emergency number	Comment
Germany	Informationszentrale gegen Vergiftungen Klinik und Poliklinik für Allgemeine Pädiatrie, Zentrum für Kinderheilkunde, Universitätsklinikum Bonn	Gebäude 30, ELKI (Eltern- Kind-Zentrum) Venusberg-Campus 1 53127 Bonn	+49 (0) 228 19 240	
Italy	Centro Antiveneni di Roma CAV Policlinico "A. Gemelli", Dipartimento di Tossicologia Clinica Universita Cattolica del Sacro Cuore	Largo Agostino Gemelli, 8 00168 Roma	+39 06 305 4343	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH	0344 892 0111	Only for healthcare professionals

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 2	H225
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Skin sensitisation, Category 1	H317
Reproductive toxicity, Category 1B	H360
Hazardous to the aquatic environment – Chronic Hazard, Category 3	H412

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Highly flammable liquid and vapour. May damage fertility or the unborn child. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful to aquatic life with long lasting effects.

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

Contains

Hazard statements (CLP)

Precautionary statements (CLP)

Extra Phrases

- : Danger
- : 2-Hydroxyethyl methacrylate; Ethyl 4-dimethylaminobenzoate
- : H225 - Highly flammable liquid and vapour.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H360 - May damage fertility or the unborn child (if swallowed).
H412 - Harmful to aquatic life with long lasting effects.
- : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground and bond container and receiving equipment.
P241 - Use explosion-proof electrical, lighting, ventilating equipment.
P242 - Use non-sparking tools.
P243 - Take action to prevent static discharges.
P261 - Avoid breathing mist, vapours.
P264 - Wash hands thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear eye protection, protective gloves, protective clothing.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .
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.
P370+P378 - In case of fire: Use alcohol resistant foam, dry extinguishing powder, carbon dioxide (CO2) to extinguish.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents and container to a hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
- : The product is seen as a medical device (Directive 90/EEC, 93/42/EEC, 98/79/EC) and therefore not subject to labelling (EU-regulation 1272/2008, article 1, paragraph 5d). A safety data sheet is not required for this product under Article 31 of REACH. This product safety data sheet has been created on a voluntary basis.

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethanol	CAS-No.: 64-17-5 EC-No.: 200-578-6 EC Index-No.: 603-002-00-5	20 – 30	Flam. Liq. 2, H225
2-Hydroxyethyl methacrylate	CAS-No.: 868-77-9 EC-No.: 212-782-2 EC Index-No.: 607-124-00-X	12 – 19	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
10-Methacryloyl-oxydecyl-dihydrogenphosphate	CAS-No.: 85590-00-7	3 – 7	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
Silicon dioxide	CAS-No.: 7631-86-9 EC-No.: 231-545-4	0 – 5	Not classified
Glyceryl dimethacrylate	CAS-No.: 1830-78-0 EC-No.: 217-388-4	1 – 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
Acetone	CAS-No.: 67-64-1 EC-No.: 200-662-2 EC Index-No.: 606-001-00-8	0.5 – 3	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
2-(Phosphonooxy)propane-1,3-diylbismethacrylate	CAS-No.: 67829-13-4	0.5 – 1.5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
Ethyl 4-dimethylaminobenzoate	CAS-No.: 10287-53-3 EC-No.: 233-634-3	0.5 – 1.5	Repr. 1B, H360 Aquatic Chronic 2, H411
Butylated Hydroxytoluene	CAS-No.: 128-37-0 EC-No.: 204-881-4	0.01 – 0.15	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Ethanol	CAS-No.: 64-17-5 EC-No.: 200-578-6 EC Index-No.: 603-002-00-5	(50 ≤C < 100) Eye Irrit. 2, H319

Full text of H- and EUH-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	: Move the affected person to fresh air. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off contaminated clothing and wash it before reuse. 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 or a doctor if you feel unwell.

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4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/effects : May cause moderate irritation to the eyes. Causes skin irritation. May cause an allergic skin reaction. Inhalation of vapours may cause respiratory irritation. This product may cause reproductive harm and/or developmental effects.
- Chronic symptoms : This product may cause reproductive harm and/or developmental effects.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂).

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Highly flammable liquid and vapour. Vapours are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapours.
- Hazardous decomposition products in case of fire : Thermal decomposition generates: Carbon oxides (CO, CO₂). Nitrogen oxides.

5.3. Advice for firefighters

- Firefighting instructions : Eliminate all ignition sources if safe to do so. Cool down the containers exposed to heat with a water spray. Prevent runoff from entering water courses, sewers and basements.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Eliminate ignition sources. Avoid contact with eyes, skin and clothing. Wear suitable protective clothing. Do not breathe vapours. Ventilate area.

6.1.1. For non-emergency personnel

- Emergency procedures : No open flames, no sparks, and no smoking. Avoid breathing mist, vapours. Only qualified personnel equipped with suitable protective equipment may intervene.

6.1.2. For emergency responders

- Protective 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 release 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 : Take up liquid spill into absorbent material. Use non-sparking tools.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with eyes, skin and clothing. Wear personal protective equipment. Wash hands with water and soap. Avoid breathing mist, vapours. Ensure adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container closed when not in use.
- Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Separate working clothes from town clothes. Launder separately. 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

- Technical measures : Does not require any specific or particular technical measures.
- Storage conditions : Store in dry, cool, well-ventilated area. Keep container closed when not in use.

7.3. Specific end use(s)

Intermediate.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Acetone (67-64-1)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Acetone
IOEL TWA	1210 mg/m ³
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA) [1]	1200 mg/m ³
AGW (OEL TWA) [2]	500 ppm
Peak exposure limitation factor	2(l)
Remark	AGS - Ausschuss für Gefahrstoffe; DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); EU - Europäische Union (Von der EU wurde ein Luftgrenzwert festgelegt: Abweichungen bei Wert und Spitzenbegrenzung sind möglich); Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Regulatory reference	TRGS900
Germany - Biological limit values (TRGS 903)	
Local name	Aceton
Biological limit value	80 mg/l Parameter: Aceton - Untersuchungsmaterial: U = Urin - Probenahmezeitpunkt: b) Expositionsende, bzw. Schichtende - Festlegung/Begründung: 11/2012 DFG
Regulatory reference	TRGS 903
United Kingdom - Occupational Exposure Limits	
Local name	Acetone
WEL TWA (OEL TWA) [1]	1210 mg/m ³

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Acetone (67-64-1)	
WEL TWA (OEL TWA) [2]	500 ppm
WEL STEL (OEL STEL)	3620 mg/m ³
WEL STEL (OEL STEL) [ppm]	1500 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Ethanol (64-17-5)	
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA) [1]	380 mg/m ³
AGW (OEL TWA) [2]	200 ppm
Peak exposure limitation factor	2(II)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Regulatory reference	TRGS900
United Kingdom - Occupational Exposure Limits	
Local name	Ethanol
WEL TWA (OEL TWA) [1]	1920 mg/m ³
WEL TWA (OEL TWA) [2]	1000 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Butylated Hydroxytoluene (128-37-0)	
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA) [1]	10 mg/m ³ (E)
Peak exposure limitation factor	4(II)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden; 11 - Summe aus Dampf und Aerosolen
Regulatory reference	TRGS900
United Kingdom - Occupational Exposure Limits	
Local name	2,6-Di-tert-butyl-p-cresol
WEL TWA (OEL TWA) [1]	10 mg/m ³
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Silicon dioxide (7631-86-9)	
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA) [1]	4 mg/m ³ (E)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); 2 - Kolloidale amorphe Kieselsäure (7631-86-9) einschließlich pyrogener Kieselsäure und im Nassverfahren hergestellter Kieselsäure (Fällungskieselsäure, Kieselgel; Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Regulatory reference	TRGS900

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Silicon dioxide (7631-86-9)	
United Kingdom - Occupational Exposure Limits	
Local name	Silica, amorphous
WEL TWA (OEL TWA) [1]	6 mg/m ³ inhalable dust 2.4 mg/m ³ respirable dust
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

Wear safety goggles or other eye protection to prevent eye contact. Use eye protection according to EN 166.

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Wear suitable gloves tested to EN374. Consult supplier for specific recommendations.

8.2.2.3. Respiratory protection

Respiratory protection:

In operations where exposure limits are exceeded or exposure levels are excessive, an approved respirator should be used. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.

8.2.2.4. Thermal hazards

Thermal hazard protection:

Not applicable.

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Light yellow.
Appearance	: Light yellow. Liquid.
Odour	: Fruity. Ester.
Odour threshold	: Not available

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Melting point	: Not applicable
Freezing point	: No available data
Boiling point	: Not available
Flammability	: Not applicable
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

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

Keep away from open flames, hot surfaces and 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.

SECTION 11: Toxicological information

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

Acute toxicity (oral)	: Based on available data, the classification criteria are not met
Acute toxicity (dermal)	: Based on available data, the classification criteria are not met
Acute toxicity (inhalation)	: Based on available data, the classification criteria are not met

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2-Hydroxyethyl methacrylate (868-77-9)	
LD50 oral rat	5564 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg bodyweight
Acetone (67-64-1)	
LD50 oral rat	5800 mg/kg
LC50 Inhalation - Rat	76 mg/l
Ethanol (64-17-5)	
LD50 oral rat	15010 mg/kg bodyweight
LD50 oral	8300 mg/kg bodyweight
LC50 Inhalation - Rat (Vapours)	≈ 116.9 mg/l/4h
Ethyl 4-dimethylaminobenzoate (10287-53-3)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg
Butylated Hydroxytoluene (128-37-0)	
LD50 oral rat	> 2930 mg/kg
LD50 dermal rat	> 2000 mg/kg
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Based on available data, the classification criteria are not met
Carcinogenicity	: Based on available data, the classification criteria are not met
Butylated Hydroxytoluene (128-37-0)	
IARC group	3 - Not classifiable
Silicon dioxide (7631-86-9)	
IARC group	3 - Not classifiable
Butylated Hydroxytoluene (128-37-0)	
NOAEL (chronic, oral, animal/male, 2 years)	25 mg/kg bodyweight (rat)
Reproductive toxicity	: May damage fertility or the unborn child (if swallowed).
Acetone (67-64-1)	
LOAEL (animal/female, F0/P)	11298 mg/kg bodyweight mouse
NOAEL (animal/male, F0/P)	900 mg/kg bodyweight rat
STOT-single exposure	: Based on available data, the classification criteria are not met
2-(Phosphonoxy)propane-1,3-diylbismethacrylate (67829-13-4)	
STOT-single exposure	May cause respiratory irritation.
10-Methacryloyl-oxydecyl-dihydrogenphosphate (85590-00-7)	
STOT-single exposure	May cause respiratory irritation.
Glyceryl dimethacrylate (1830-78-0)	
STOT-single exposure	May cause respiratory irritation.
Acetone (67-64-1)	
STOT-single exposure	May cause drowsiness or dizziness.

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STOT-repeated exposure : Based on available data, the classification criteria are not met

Ethanol (64-17-5)	
NOAEL (subchronic, oral, animal/male, 90 days)	< 9700 mg/kg bodyweight
NOAEL (subchronic, oral, animal/female, 90 days)	> 9400 mg/kg bodyweight

Butylated Hydroxytoluene (128-37-0)	
LOAEL (oral, rat, 90 days)	100 mg/kg bodyweight
NOAEL (oral, rat, 90 days)	25 mg/kg bodyweight

Aspiration hazard : Based on available data, the classification criteria are not met

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : None known

11.2.2. Other information

Potential adverse human health effects and symptoms : None known

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Harmful to aquatic life with long lasting effects.

2-Hydroxyethyl methacrylate (868-77-9)	
LC50 - Fish [1]	> 100 mg/l <i>Oryzias latipes</i> (Ricefish)
EC50 - Crustacea [1]	380 mg/l <i>Daphnia magna</i> (Water flea)
EC50 72h - Algae [1]	836 mg/l <i>Pseudokirchneriella subcapitata</i>
EC50 72h - Algae [2]	345 mg/l <i>Pseudokirchneriella subcapitata</i>
LOEC (chronic)	49.6 mg/l <i>Daphnia magna</i> (Water flea)
NOEC (chronic)	24.1 mg/l <i>Daphnia magna</i> (Water flea)

Acetone (67-64-1)	
NOEC (chronic)	≥ 79 mg/l <i>Daphnia magna</i> (Water flea)

Ethanol (64-17-5)	
LC50 - Fish [1]	14.2 g/l <i>Pimephales promelas</i> (Fathead minnow)
EC50 - Crustacea [1]	> 100 mg/l
NOEC (chronic)	9.6 mg/l <i>Daphnia magna</i> (Water flea)

Ethyl 4-dimethylaminobenzoate (10287-53-3)	
LC50 - Fish [1]	1.9 mg/l <i>Oncorhynchus mykiss</i> (Rainbow trout)
EC50 - Crustacea [1]	4.5 mg/l <i>Daphnia magna</i> (Water flea)
ErC50 algae	2.8 mg/l <i>Pseudokirchneriella subcapitata</i>

Butylated Hydroxytoluene (128-37-0)	
LC50 - Fish [1]	0.199 mg/l Quantitative structure-activity relationship (QSAR)

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Butylated Hydroxytoluene (128-37-0)	
EC50 - Crustacea [1]	0.48 mg/l
EC50 72h - Algae [1]	> 0.4 mg/l <i>Desmodesmus subspicatus</i>
ErC50 algae	0.758 mg/l
LOEC (chronic)	1 mg/l <i>Daphnia magna</i> (Water flea)
NOEC (chronic)	0.069 mg/l
NOEC chronic fish	0.053 mg/l

12.2. Persistence and degradability

Ethanol (64-17-5)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

Ethanol (64-17-5)	
Bioaccumulative potential	Low bioaccumulation potential.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information






In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 1993	UN 1993	UN 1993	UN 1993	UN 1993
14.2. UN proper shipping name				
FLAMMABLE LIQUID, N.O.S. (Ethanol ; Acetone)	FLAMMABLE LIQUID, N.O.S. (Ethanol ; Acetone)	Flammable liquid, n.o.s. (Ethanol ; Acetone)	FLAMMABLE LIQUID, N.O.S. (Ethanol ; Acetone)	FLAMMABLE LIQUID, N.O.S. (Ethanol ; Acetone)
Transport document description				
UN 1993 FLAMMABLE LIQUID, N.O.S. (Ethanol ; Acetone), 3, II, (D/E)	UN 1993 FLAMMABLE LIQUID, N.O.S. (Ethanol ; Acetone), 3, II	UN 1993 Flammable liquid, n.o.s. (Ethanol ; Acetone), 3, II	UN 1993 FLAMMABLE LIQUID, N.O.S. (Ethanol ; Acetone), 3, II	UN 1993 FLAMMABLE LIQUID, N.O.S. (Ethanol ; Acetone), 3, II

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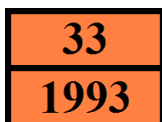
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ADR	IMDG	IATA	ADN	RID
14.3. Transport hazard class(es)				
3	3	3	3	3
				
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR) : F1
Special provisions (ADR) : 274, 601, 640D
Limited quantities (ADR) : 1I
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P001, IBC02, R001
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T7
Portable tank and bulk container special provisions (ADR) : TP1, TP8, TP28
Tank code (ADR) : LGBF
Vehicle for tank carriage : FL
Transport category (ADR) : 2
Special provisions for carriage - Operation (ADR) : S2, S20
Hazard identification number (Kemler No.) : 33
Orange plates :



Tunnel restriction code (ADR) : D/E
EAC code : •3YE

Transport by sea

Special provisions (IMDG) : 274
Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T7
Tank special provisions (IMDG) : TP1, TP28, TP8
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-E
Stowage category (IMDG) : B

Air transport

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y341
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 353

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PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 364
CAO max net quantity (IATA)	: 60L
Special provisions (IATA)	: A3
ERG code (IATA)	: 3H

Inland waterway transport

Classification code (ADN)	: F1
Special provisions (ADN)	: 274, 601, 640D
Limited quantities (ADN)	: 1 L
Excepted quantities (ADN)	: E2
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 1

Rail transport

Classification code (RID)	: F1
Special provisions (RID)	: 274, 601, 640D
Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P001, IBC02, R001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T7
Portable tank and bulk container special provisions (RID)	: TP1, TP8, TP28
Tank codes for RID tanks (RID)	: LGBF
Transport category (RID)	: 2
Colis express (express parcels) (RID)	: CE7
Hazard identification number (RID)	: 33

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)

Contains substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

ANNEX II REPORTABLE EXPLOSIVES PRECURSORS

List of substances on their own or in mixtures or in substances for which suspicious transactions and significant disappearances and thefts are to be reported to the relevant national contact point within 24 hours.

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Name	CAS-No.	Combined Nomenclature code (CN)	Combined Nomenclature code for mixture without constituents which would determine classification under another CN code
Acetone	67-64-1	2914 11 00	ex 3824 99 92

Please see https://ec.europa.eu/home-affairs/system/files/2021-11/list_of_competent_authorities_and_national_contact_points_en.pdf

Drug Precursors Regulation (273/2004)

Contains substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

Name	CN designation	CAS-No.	CN code	Category	Threshold	Annex
Acetone		67-64-1	2914 11 00	Category 3		Annex I

15.1.2. National regulations

Germany

- Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG).
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).
- Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1).
- Chemicals Prohibition Ordinance (ChemVerbotsV) : This product is subject to ChemVerbotsV Annex 2 Entry 1. The following requirements must be observed: authorization requirement (according to § 6 paragraph 1 sentence 1), basic requirements for carrying out the delivery (according to § 8 paragraph 1, 3 and 4), identification and documentation (according to § 9 paragraph 1 to 3) and exclusion of the shipping route (according to § 10).
- Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:	
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H360	May damage fertility or the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

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Full text of H- and EUH-statements:	
Repr. 1B	Reproductive toxicity, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Flam. Liq. 2	H225	Calculation method
Skin Irrit. 2	H315	Calculation method
Eye Irrit. 2	H319	Calculation method
Skin Sens. 1	H317	Calculation method
Repr. 1B	H360	Calculation method
Aquatic Chronic 3	H412	Calculation method

Safety Data Sheet (SDS), EU

The information and recommendations set forth herein are taken from sources believed to be accurate as of the date of preparation, however, KERR Corporation makes no warranty with respect to the accuracy or suitability of the recommendations, and assumes no liability to any use thereof.