

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

1.1. Product identifier

Product name : Nexus Universal and Nexus Universal Chroma (all colors)

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

Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Preparation intended for dental medical use

Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

KERRHAWE S.A.
Via Strecce n°4
6934 Bioggio (Switzerland)
T +41916100505
safety@kavokerr.com

Manufacturer

Kerr Italia S.r.l.
Via Passanti, 332
84018 Scafati (SA) - Italy
T +39-081-850-8311
safety@kavokerr.com

1.4. Emergency telephone number

Emergency number : CHEMTREC® Emergency Call Center. Emergency Telephone Number (for USA only) 001-800-424-9300 International and Maritime Telephone Number +1 (703) 527-3887

Country	Official advisory body	Address	Emergency number	Comment
Gibraltar	GHA Call Centre Zone 2, Level3, St Bernard's Hospital	Harbour Views Road	+350 200 79700 +350 200 72266	
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital MSD Msida	+356 2545 6504	
United Kingdom	National Poisons Information Service (Newcastle Unit)	Claremont Place Newcastle-upon-Tyne, Newcastle	+44 191 2606182 +44 191 2606180	Hours of operation: 24hrs

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 2 H319
Skin sensitisation, Category 1 H317
Specific target organ toxicity — Single exposure, Category 3,
Respiratory tract irritation H335

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) : Warning

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Hazardous ingredients	: 2-hydroxyethyl methacrylate; Propylidynetrimethanol, ethoxylated, esters with acrylic acid; Peppermint Oil; 7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate; 2,2'-ethylenedioxydiethyl dimethacrylate
Hazard statements (CLP)	: H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation.
Precautionary statements (CLP)	: P261 - Avoid breathing spray, vapours, mist. P264 - Wash hands thoroughly after handling. P280 - Wear protective gloves. P302+P352 - IF ON SKIN: Wash with plenty of water/... P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 - Call a POISON CENTER/doctor if you feel unwell. 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. P362+P364 - Take off contaminated clothing and wash it before reuse. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up. P501 - Dispose of contents/container to an approved waste disposal plant.

2.3. Other hazards

Other hazards not contributing to the classification : None under normal conditions.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	(CAS-No.) 1565-94-2 (EC-No.) 216-367-7 (REACH-no) N/A	5 - 10	Skin Irrit. 2, H315 Eye Irrit. 2, H319
2-hydroxy-1,3-propanediyl bismethacrylate	(CAS-No.) 1830-78-0 (EC-No.) 217-388-4 (REACH-no) N/A	5 - 10	Eye Irrit. 2, H319 Skin Irrit. 2, H315 STOT SE 3, H335
2-hydroxyethyl methacrylate (Note D)	(CAS-No.) 868-77-9 (EC-No.) 212-782-2 (EC Index-No.) 607-124-00-X (REACH-no) 01-2119490169-29	1 - 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica substance with a Community workplace exposure limit substance with national workplace exposure limit(s) (GB)	(CAS-No.) 68909-20-6 (EC-No.) 272-697-1 (REACH-no) n/a	1 - 5	Not classified
2,2'-ethylenedioxydiethyl dimethacrylate	(CAS-No.) 109-16-0 (EC-No.) 203-652-6 (REACH-no) 01-2119969287-21	1 - 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335
Ytterbium trifluorid	(CAS-No.) 13760-80-0 (EC-No.) 237-354-2 (REACH-no) N/A	1 - 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
Propylidynetrimethanol, ethoxylated, esters with acrylic acid	(CAS-No.) 28961-43-5 (EC-No.) 500-066-5 (REACH-no) 01-2119489900-30	1 - 3	Eye Irrit. 2, H319 Skin Sens. 1, H317
7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate	(CAS-No.) 72869-86-4 (EC-No.) 276-957-5 (REACH-no) 01-2119408252-52	1 - 3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335
ethoxylated Bisphenol A-dimethacrylate	(CAS-No.) 41637-38-1 (EC-No.) 609-946-4 (REACH-no) 01-2119980659-17	1 - 3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
Peppermint Oil	(CAS-No.) 68917-18-0	< 1	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411

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Note D : Certain substances which are susceptible to spontaneous polymerisation or decomposition are generally placed on the market in a stabilised form. It is in this form that they are listed in Part 3. However, such substances are sometimes placed on the market in a non-stabilised form. In this case, the supplier must state on the label the name of the substance followed by the words 'non-stabilised'.

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If medical advice is needed, have product container or label at hand. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Allow affected person to breathe fresh air. Allow the patient to rest.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
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	: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell.

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

Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: May cause an allergic skin reaction. Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: May cause a light irritation of the linings of the mouth, throat, and gastrointestinal tract.

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

Treat symptomatically. In all cases of doubt, or when symptoms persist, seek medical attention.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Non-flammable.
Explosion hazard	: Product is not explosive.
Hazardous decomposition products in case of fire	: Carbon dioxide. Carbon monoxide. Acrylates.

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not enter fire area without proper personal protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Avoid contact with skin and eyes. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8. Provide good ventilation in process area to prevent formation of vapour.
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6.1.1. For non-emergency personnel

Protective equipment	: See Heading 8.
Emergency procedures	: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	: Equip cleanup and emergency crew with proper protection.
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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6.3. Methods and material for containment and cleaning up

For containment : Collect all waste in suitable and labelled containers and dispose according to local legislation.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

For further information refer to section 13. See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Provide good ventilation in process area to prevent formation of vapour. Avoid breathing mist, spray, vapours. Avoid contact with skin and eyes. Wear personal protective equipment.

Hygiene measures : Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Store in original container. Keep cool. Store in a dry place. Keep container closed when not in use.

Incompatible materials : Oxidizing substances. Heat.

Storage area : Store in a well-ventilated place.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica (68909-20-6)		
EU	Local name	Respirable crystalline silica dust
EU	IOELV TWA (mg/m ³)	0.1 mg/m ³ Respirable fraction
EU	Regulatory reference	DIRECTIVE (EU) 2017/2398; DIRECTIVE (EU) 2019/130
United Kingdom	Local name	Silica, amorphous
United Kingdom	WEL TWA (mg/m ³)	6 mg/m ³ inhalable dust 2.4 mg/m ³ respirable dust
United Kingdom	Regulatory reference	EH40/2005 (Third edition, 2018). HSE

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

Hand protection:

Wear protective gloves. Butylrubber protective gloves. Layer thickness : 0,2 - 0,4 mm. Breakthrough time : >480 min. STANDARD EN 374.

Eye protection:

Use splash goggles when eye contact due to splashing is possible. STANDARD EN 166.

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Not required. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Extra personal protection: A/P2 filter respirator for organic vapour and harmful dust. Standard EN 141.

Other information:

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke during use.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Paste.
Colour	: Various.
Odour	: Acrylates.
Odour threshold	: Not determined.
pH	: Not determined.
Relative evaporation rate (butylacetate=1)	: Not determined.
Melting point	: Not determined.
Freezing point	: Not determined.
Boiling point	: Not determined.
Flash point	: Not determined.
Auto-ignition temperature	: Not determined.
Decomposition temperature	: Not determined.
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: Not determined.
Relative vapour density at 20 °C	: Not determined.
Relative density	: Not determined.
Solubility	: Insoluble in water.
Log Pow	: Not determined.
Viscosity, kinematic	: Not determined.
Viscosity, dynamic	: Not determined.
Explosive properties	: Product is not explosive.
Oxidising properties	: Non flammable.
Explosive limits	: Not determined.

9.2. Other information

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

Heat.

10.5. Incompatible materials

oxidizing materials. reducing materials. Acids.

10.6. Hazardous decomposition products

No hazardous decomposition products known at room temperature.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

2-hydroxyethyl methacrylate (868-77-9)

LD50 oral rat	5050 mg/kg
LD50 dermal rabbit	> 3000 mg/kg

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2,2'-ethylenedioxydiethyl dimethacrylate (109-16-0)	
LD50 oral rat	10837 mg/kg
Skin corrosion/irritation	: Causes skin irritation. pH: Not determined.
Serious eye damage/irritation	: Causes serious eye irritation. pH: Not determined.
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

2-hydroxyethyl methacrylate (868-77-9)	
LC50 fish 1	227 mg/l (96 hours - Pimephales promelas)
EC50 Daphnia 1	> 280 mg/l Daphnia magna, 48 hours

12.2. Persistence and degradability

Nexus Universal and Nexus Universal Chroma (all colors)	
Persistence and degradability	Not established.

2-hydroxyethyl methacrylate (868-77-9)	
Biodegradation	84 % (OECD 301D method)

7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate (72869-86-4)	
Biodegradation	22 % (OECD 301F method)

12.3. Bioaccumulative potential

Nexus Universal and Nexus Universal Chroma (all colors)	
Log Pow	Not determined.
Bioaccumulative potential	Not established.

2-hydroxyethyl methacrylate (868-77-9)	
Bioconcentration factor (BCF REACH)	1,3 - 1,5
Log Pow	0.47

7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate (72869-86-4)	
Bioconcentration factor (BCF REACH)	1.91
Log Pow	4.69

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate (1565-94-2)	
Bioconcentration factor (BCF REACH)	2.46
Log Pow	4.94

12.4. Mobility in soil

Nexus Universal and Nexus Universal Chroma (all colors)	
Ecology - soil	Material insoluble in water.

12.5. Results of PBT and vPvB assessment

Nexus Universal and Nexus Universal Chroma (all colors)	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

12.6. Other adverse effects

Other adverse effects : None to our knowledge.
Additional information : No other effects known. Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Dispose as hazardous waste.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions. Do not discharge into drains.
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Ecology - waste materials : Avoid release to the environment.
European List of Waste (LoW) code : 18 01 06* - chemicals consisting of or containing dangerous substances

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Rail transport

Not regulated

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

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

National regulations

EC-regulation 2015/830 /EC, 1907/2006/EC (REACH), 1272/2008/EC (CLP), 790/2009/EC. Transport of dangerous goods (ADR/RID, IMDG, IATA/ICAO). Workplace exposure limits.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

SDS ID : 304503

Data sources : EC-regulation 2015/830 /EC, 1907/2006/EC (REACH), 1272/2008/EC (CLP), 790/2009/EC. Transport of dangerous goods (ADR/RID, IMDG, IATA/ICAO). Workplace exposure limits.

Other information : None.

Full text of H- and EUH-statements:	
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
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
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H411	Toxic to aquatic life with long lasting effects.



Safety Data Sheet OptiBond Universal

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

1.1. Product identifier

Product name : OptiBond Universal

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

Relevant identified uses

Use of the substance/mixture : Dental Adhesive

Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

KERRHAWE S.A.
Via Strecce n°4
6934 Bioggio (Switzerland)
T +41916100505

Manufacturer

Kerr Corporation
1717 West Collins Avenue
92867 Orange – CALIFORNIA (U.S.A.)
T +41916100505

Contact person : safety@kerrhawe.com - tel. 00-800-41-050-505 (08.00-17.00)

1.4. Emergency telephone number

Emergency number : CHEMTREC® Emergency Call Center. Emergency Telephone Number (for USA only) 001-800-424-9300 International and Maritime Telephone Number +1 (703) 527-3887

Country	Organisation/Company	Address	Emergency number
Gibraltar	GHA Call Centre Zone 2, Level3, St Bernard's Hospital	Harbour Views Road	+350 200 79700 +350 200 72266
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)
Malta	Medicines & Poisons Info Office	Mater Dei Hospital MSD Msida	+356 2545 6504
United Kingdom	National Poisons Information Service (Newcastle Unit)	Claremont Place Newcastle-upon-Tyne, Newcastle	+44 191 2606182/+44 191 2606180 24H

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

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

Flam. Liq. 2	H225
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Skin Sens. 1	H317
STOT SE 3	H335
STOT SE 3	H336

Full text of H statements : see section 16

2.2. Label elements**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP)

:



GHS02

GHS07

Signal word (CLP)

: Danger

Hazard statements (CLP)

: 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.
 EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements (CLP)

: 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, ventilating and lighting equipment.
 P242 Use non-sparking tools.
 P243 Take action to prevent static discharge.
 P261 Avoid breathing vapors or mists.
 P264 Wash thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P280 Wear protective gloves and eye protection.
 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 attention.
 P363 Wash contaminated clothing before reuse.
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P312 Call a POISON CENTER or doctor if you feel unwell.
 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 attention.
 P370 + P378 In case of fire: Use water fog, alcohol foam carbon dioxide or dry chemical to extinguish.
 P403 + P235 Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
 P501 Dispose of contents and container in accordance with local and national regulations.

2.3. Other hazards

None identified

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]
acetone	(CAS-No.) 67-64-1 (EC-No.) 200-662-2	30 - 60	Flam. Liq. 2, H335 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066
2-hydroxyethyl methacrylate	(CAS-No.) 868-77-9 (EC-No.) 212-782-2	1 - 10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
Glycerol Dimethacrylate	(CAS-No.) 1830-78-0 (EC-No.) 217-388-4	1 - 10	Eye Irrit. 2, H319 Skin Irrit. 2, H315 STOT SE 3, H335
ethanol	(CAS-No.) 64-17-5 (EC-No.) 200-578-6	1 - 10	Flam. Liq. 2, H335
Glycerol Phosphate Dimethacrylate	Proprietary	1 - 10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

Inhalation: Move to fresh air. If breathing is difficult have qualified personnel administer oxygen. If breathing has stopped, administer artificial respiration. Get medical attention if breathing is difficult or symptoms of exposure persist.

Skin Contact: Immediately flush skin with water for several minutes while removing contaminated clothing. Wash with soap and water. Get medical attention if irritation or rash develops. Launder contaminated clothing before reuse.

Eye Contact: Flush eyes with water for 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Get medical attention if irritation persists.

Ingestion: If conscious, rinse mouth with water. Do not induce vomiting unless directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed: Causes eye irritation. Prolonged skin contact may cause irritation, drying and cracking of the skin. May cause allergic skin reaction. Inhalation of mists may cause upper respiratory tract irritation and central nervous system effects such as dizziness and drowsiness. Ingestion may cause gastrointestinal irritation, nausea and vomiting.

4.3 Indication of any immediate medical attention and special treatment needed: Immediate medical attention is not required.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing Media: Use water fog, alcohol foam, carbon dioxide or dry chemical to extinguish. Cool fire exposed containers with water.

5.2 Special Hazards arising from the Substance or Mixture: This product is highly flammable and forms explosive mixtures with air. Vapors are heavier than air and will travel along surfaces to remote ignition sources and flash back. Closed containers may explode if exposed to extreme heat. Combustion may produce carbon and phosphorous oxides

5.3 Advice for Firefighters: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures: Wear appropriate protective clothing and equipment. Remove all sources of ignition. Avoid breathing vapors or mists. Ventilate area with explosion proof equipment. Avoid contact with the eyes, skin and clothing.

6.2 Environmental Precautions: Avoid release to the environment. Report spill as required by local and federal regulations.

6.3 Methods and Material for Containment and Cleaning Up: Contain and collect using inert absorbent materials and place in appropriate containers for disposal. Use non-sparking tools and equipment. If spill has not ignited, use water spray to disperse the vapors and protect personnel attempting to stop leak. Do not flush to sewer!

6.4 Reference to Other Sections:

Refer to Section 8 for personal protective equipment and Section 13 for disposal information.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling: Avoid contact with eyes, skin and clothing. Wear appropriate eye protection and gloves when handling (see Section 8). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Keep product away from heat, sparks, flames and all other sources of ignition. Do not permit smoking in use or storage areas. Use with non-sparking tools and explosion proof equipment. Electrically bond and ground containers for transfer.

Empty containers retain product residues which can be hazardous. Follow all SDS precautions when handling empty containers.

7.2 Conditions for Safe Storage, including any Incompatibilities: Store in accordance with regulations for the storage of flammable liquids. Store in a cool, dry, well-ventilated area away from heat, direct sunlight and all sources of ignition. Store away from oxidizers and other incompatible materials.

7.3 Specific end use(s): Dental Composite Restorative

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Chemical	Exposure Limit
Acetone	250 ppm TWA, 500 ppm STEL ACGIH TLV 500 ppm TWA EU IOEL 500 ppm TWA, 1000 ppm STEL France OEL 500 ppm TWA, 1000 ppm STEL Germany OEL 500 ppm TWA Italy OEL 600 mg/m ³ TWA, 1800 mg/m ³ STEL Poland OEL 500 ppm TWA Spain OEL 500 ppm TWA, 1500 ppm STEL UK OEL
Ethanol	1000 ppm STEL ACGIH TLV 1000 ppm TWA, 5000 ppm STEL France OEL 500 ppm TWA, 1000 ppm STEL Germany OEL 1900 mg/m ³ TWA Poland OEL 1000 ppm STEL Spain OEL 1000 ppm TWA UK OEL
2-Hydroxyethyl methacrylate	None Established
Glycerol Phosphate Dimethacrylate	None Established
Glycerol Dimethacrylate	None Established

8.2 Exposure Controls:

Recommended Monitoring Procedures: None identified.

Appropriate Engineering Controls: Use with adequate general or local exhaust ventilation to maintain exposures below the occupational exposure limits. Use explosion proof equipment where required.

Personal Protective Measures

Respiratory Protection: None needed under normal use conditions. In operations where exposure levels are exceeded, an approved respirator with organic vapor cartridges or supplied air respirator should be used. Equipment selection depends on contaminant type and concentration. Select in accordance with applicable regulations and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus. Follow EN 374.

Eye Protection: Chemical safety goggles are recommended if contact is possible. Follow EN 166.

Skin Protection: Impervious gloves such as butyl rubber are recommended if contact is possible. Follow EN 374.

Other protection: Wear protective clothing as needed to avoid skin contact and contamination of personal clothing. Suitable eye and skin washing facilities should be available in the work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	: Light Yellow liquid
Odour	: Fruity odor
Odour threshold	: 4.58 ppm (acetone)
pH	: Not available
Relative evaporation rate	: Not available
Melting point	: Not determined
Freezing point	: Not determined
Boiling point	: 58.08 °C (133°F) (acetone)
Flash point	: -22 °C (-4°F) (acetone)

Auto-ignition temperature	: 363 °C (685°F) (ethanol)
Decomposition temperature	: Not available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: Not available
Relative vapour density	: Not available
Relative density	: Not available
Solubility	: Insoluble in water. In water, material is partially soluble.
Partition Coefficient: (n-octanol/water)	: Not determined
Viscosity, kinematic	: Not available
Viscosity, dynamic	: Not available
Explosive properties	: None.
Oxidising properties	: None
Explosive limits	: LEL: 2.5 (acetone) UEL: 19 (ethanol)

9.2. Other information

None

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity: Loss of inhibitor may allow the product to polymerize.

10.2 Chemical Stability: Stable

10.3 Possibility of Hazardous Reactions: Excessive heat and ultraviolet light may allow the product to polymerize.

10.4 Conditions To Avoid: Highly flammable liquid. Keep product away from heat, sparks, flames and all other sources of ignition.

10.5 Incompatible Materials: Strong oxidizing agents, reducing agents, alkalis, amines, sulfur compounds, peroxides, free radical initiators, inert gases and oxygen scavengers.

10.6 Hazardous Decomposition Products: Thermal decomposition will produce carbon and phosphorus oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects:

Potential Health Effects:

Inhalation: Inhalation of vapors or mists may cause respiratory tract irritation and central nervous system effect such headache, dizziness and drowsiness.

Skin Contact: Causes skin irritation with redness. Repeated exposure may cause skin dryness or cracking of the skin. May cause an allergic skin reaction.

Eye Contact: Causes eye irritation with redness, tearing and pain.

Ingestion: Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Acute Toxicity Values:

Acute Toxicity Estimate (ATE): Oral: >5000 mg/kg, Dermal: >2000 mg/kg

Acetone: Oral rat LD50 58 mg/kg, Inhalation rat LC50 76 mg/L/4 hr, Dermal rabbit LD50 >7426 mg/kg

Ethanol: Oral rat LD50 10470 mg/kg, Inhalation rat LC50 116.9 mg/L/4 hr,

2-Hydroxyethyl methacrylate: Oral rat LD50 5564 mg/kg, Dermal rabbit LD50 >5000 mg/kg

Glycerol Phosphate Dimethacrylate: No toxicity data available

Glycerol Dimethacrylate: No toxicity data available

Skin corrosion/irritation: 2-Hydroxyethyl methacrylate, glycerol phosphate dimethacrylate and glycerol dimethacrylate are irritating to rabbit skin.

Eye damage/ irritation: Acetone, 2-hydroxyethyl methacrylate, glycerol phosphate dimethacrylate and glycerol dimethacrylate are irritating to rabbit eyes.

Skin Sensitization: 2-Hydroxyethyl methacrylate was positive in a guinea pig maximization test.

Respiratory Sensitization: No data available. This product is not expected to cause respiratory sensitization.

Germ Cell Mutagenicity: None of the components are germ cell mutagens.

Carcinogenicity: None of the components is listed as a carcinogen or potential carcinogen by EU CLP.

Developmental / Reproductive Toxicity: None of the components have been shown to cause reproductive or developmental effects.

Specific Target Organ Toxicity (Single Exposure): Acetone has been shown to cause central nervous effects including headache, dizziness and drowsiness. Glycerol phosphate dimethacrylate and glycerol dimethacrylate have been shown to cause respiratory irritation.

Specific Target Organ Toxicity (Repeated Exposure): Acetone was found to be mildly toxic to rats when administered in the drinking water for 13 weeks. The minimal toxic dose (LOAEL) was 1,700 mg/kg for male rats with the testis, kidneys, and blood cell system as target organs.

Aspiration Toxicity: **Not an aspiration hazard.**

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity: No toxicity data available for product

Acetone: 96 hr LC50 *Oncorhynchus mykiss* 5540 mg/L, 48 hr LC50 *Artemia salina* 2100 mg/L

Ethanol: 96 hr LC50 *Pimephales promelas* 13.8 mg/L, 48 hr EC50 *daphnia magna* 12340 mg/L, 72 hr EC50 *Selenastrum capricornutum* 12900 mg/L

2-Hydroxyethyl Methacrylate: 96 hr LC50 *Oryzias latipes* >100 mg/kg, 48 hr EC50 *daphnia magna* 380 mg/L, 72 hr EC50 *Pseudokirchneriella subcapitata* 345 mg/L

Glycerol Phosphate Dimethacrylate: No data available

Glycerol Dimethacrylate: No data available

12.2 Persistence and Degradability: 2-Hydroxyethyl methacrylate, acetone and ethanol are readily biodegradable.

12.3 Bioaccumulative Potential: 2-Hydroxyethyl methacrylate has a logKow of 0.42 and ethanol has a log Kow of 3. Acetone has a BCF of 3. This suggest the potential for bioaccumulation is low.

12.4 Mobility in Soil: Acetone and ethanol are highly mobile in soil.

12.5 Results of PBT and vPvB assessment: Components are not PBT or vPvB.

12.6 Other Adverse Effects: None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods:

Disposal: For unused product, dispose of in accordance with Federal, State, and local regulations. For used Product, the waste solution must be characterized by the generator and disposed of in accordance with Federal, State, and local regulations.

Container Disposal: Rinse empty container thoroughly with water and offer for recycling, if available.

SECTION 14: TRANSPORT INFORMATION

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Transport Hazard Class(es)	14.4 Packing Group	14.5 Environmental Hazards
US DOT	UN1133	Adhesives, flammable (ethanol, acetone)	3	II	None
EU ADR/RID	UN1133	Adhesives, flammable (ethanol, acetone)	3	II	None
IMDG	UN1133	Adhesives, flammable (ethanol, acetone)	3	II	None
IATA/ICAO	UN1133	Adhesives, flammable (ethanol, acetone)	3	II	None

14.6 Special Precautions for User: None identified

14.7 Transport in Bulk According to Annex III MARPOL 73/78 and the IBC Code:): Not applicable – product is transported only in packaged form.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

European Regulations:

Water Hazard Class: 1

Other EU Regulations: This product is classified and labeled in accordance with CLP Regulation. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006 (REACH) and its amendment regulation (EU) 2015/830.

VOC content : 460 g/l

International Inventories

US EPA TSCA Inventory: This product is regulated under the Federal Drug Administration (FDA) so it is exempt from the TSCA regulation.

15.2 Chemical Safety Assessment: None required

SECTION 16: OTHER INFORMATION

Data sources : EC-regulation 2015/830 /EC, 1907/2006/EC (REACH), 1272/2008/EC (CLP), 790/2009/EC. Transport of dangerous goods (ADR/RID, IMDG, IATA/ICAO). Workplace exposure limits.

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Full text of H- and EUH-statements:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
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
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
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.

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