



## Safety Data Sheet OPTIBOND FL PRIME

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

#### 1.1. Product identifier

Product name : OPTIBOND FL PRIME

#### 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 00-800-41-050-505

##### Manufacturer

Kerr Corporation  
1717 West Collins Avenue  
92867 Orange – CALIFORNIA (U.S.A.)  
T 00-800-41-050-505

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 Corr. 1B H314  
Eye Dam. 1 H318  
Skin Sens. 1 H317

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

**2.2. Label elements**

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

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazardous ingredients :

Glycerol Phosphate dimethacrylate; 2-[2-(methacryloyloxy)ethoxycarbonyl]benzoic acid; 2-hydroxyethyl methacrylate

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour.  
H314 - Causes severe skin burns and eye damage.  
H317 - May cause an allergic skin reaction.

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, open flames, sparks. No smoking.  
P233 - Keep container tightly closed.  
P260 - Do not breathe mist, spray, vapours.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P280 - Wear eye protection, protective gloves.  
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
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.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 - Immediately call a POISON CENTER/doctor  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P403+P235 - Store in a well-ventilated place. Keep cool.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

Extra phrases :

The product is seen as a medical device 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 Information Sheet has been created on a voluntary basis

**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	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ethanol, ethyl alcohol substance with national workplace exposure limit(s) (GB, IE)	(CAS-No.) 64-17-5 (EC-No.) 200-578-6 (EC Index-No.) 603-002-00-5 (REACH-no) 01-2119457610-43	1 - 30	Flam. Liq. 2, H225
silica, amorphous, crystalline-free substance with national workplace exposure limit(s) (GB, IE)	(CAS-No.) 112945-52-5 (EC-No.) 601-216-3 (REACH-no) N/A	1 - 30	Not classified
Glycerol Phosphate dimethacrylate	(CAS-No.) N/A (EC-No.) N/A	1 - 30	Flam. Liq. 3, H226 Skin Corr. 1B, H314 Eye Dam. 1, H318
2-[2-(methacryloyloxy)ethoxycarbonyl]benzoic acid	(CAS-No.) 27697-00-3 (EC-No.) 248-616-0	1 - 30	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
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 - 30	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317

Full text of H-statements: see section 16

**SECTION 4: FIRST AID MEASURES****4.1. Description of first aid measures**

First-aid measures general	: 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	: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
First-aid measures after skin contact	: Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER/doctor. 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. Immediately call a POISON CENTER/doctor.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

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

Symptoms/effects	: Causes severe skin burns and eye damage.
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Causes serious eye damage.

**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	: Use extinguishing media appropriate for surrounding fire. Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

**5.2. Special hazards arising from the substance or mixture**

Fire hazard	: Highly flammable liquid and vapour.
Explosion hazard	: May form flammable/explosive vapour-air mixture.
Hazardous decomposition products in case of fire	: Carbon dioxide. Carbon monoxide. Phosphorus oxides.

**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	: Provide good ventilation in process area to prevent formation of vapour. Avoid all eye and skin contact and do not breathe vapour and mist. Use personal protective equipment as required. Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. Do not eat, drink or smoke in areas where product is used.
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**For non-emergency personnel**

Emergency procedures	: Evacuate unnecessary personnel.
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**For emergency responders**

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

**6.2. Environmental precautions**

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

**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	: Large spills: scoop solid spill into closing containers. Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters. 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**

- Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.
- Precautions for safe handling : Do not eat, drink or smoke when using this product. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. No open flames. No smoking. Use only non-sparking tools. Provide good ventilation in process area to prevent formation of vapour. Do not breathe mist, spray, vapours. Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
- 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**

- Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical equipment.
- Storage conditions : Store in a well-ventilated place. Keep cool. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep in fireproof place. Keep only in original container. Keep container tightly closed.
- Incompatible materials : Oxidizing substances. Sources of ignition. Direct sunlight. Heat sources.
- 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**

ethanol, ethyl alcohol (64-17-5)		
Ireland	Local name	Ethanol
Ireland	OEL (15 min ref) (ppm)	1000 ppm
United Kingdom	Local name	Ethanol
United Kingdom	WEL TWA (mg/m³)	1920 mg/m³
United Kingdom	WEL TWA (ppm)	1000 ppm
silica, amorphous, crystalline-free (112945-52-5)		
Ireland	Local name	Silica, amorphous respirable dust
Ireland	OEL (8 hours ref) (mg/m³)	2.4 mg/m³
United Kingdom	Local name	Silica, amorphous
United Kingdom	WEL TWA (mg/m³)	6 mg/m³ inhalable dust 2.4 mg/m³ respirable dust

**8.2. Exposure controls**

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Personal protective equipment : Gloves. Safety glasses. Avoid all unnecessary exposure.
- Hand protection : Wear suitable gloves. Nitrile rubber gloves. Polyvinylalcohol (PVA). Layer thickness : 0,2 - 0,4 mm. Breakthrough time : >480 min. STANDARD EN 374.
- Eye protection : Chemical goggles or face shield. STANDARD EN 166.
- Skin and body protection : Wear suitable protective clothing
- Respiratory protection : Respiratory protection not applicable. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Gas mask with filter type. A2. EN 140



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

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1. Information on basic physical and chemical properties**

- Physical state : Liquid
- Colour : Pale yellow.

Odour	: Fruity.
Odour threshold	: Not determined
pH	: 2
Relative evaporation rate (butylacetate=1)	: Not determined
Melting point	: Not determined
Freezing point	: Not determined
Boiling point	: 78 °C Ethanol
Flash point	: 14 °C Ethanol
Auto-ignition temperature	: Not determined
Decomposition temperature	: Not determined
Flammability (solid, gas)	: Highly flammable liquid and vapour.
Vapour pressure	: Not determined
Relative vapour density at 20 °C	: Not determined
Relative density	: 0.96
Solubility	: In water, material soluble.
Log Pow	: Not determined
Viscosity, kinematic	: Not determined
Viscosity, dynamic	: Not determined
Explosive properties	: Not explosive.
Oxidising properties	: Highly flammable liquid and vapour.
Explosive limits	: Not determined

**9.2. Other information**

No additional information available

**SECTION 10: STABILITY AND REACTIVITY****10.1. Reactivity**

Thermal decomposition generates : Corrosive vapours.

**10.2. Chemical stability**

Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

**10.3. Possibility of hazardous reactions**

No dangerous reactions known under normal conditions of use.

**10.4. Conditions to avoid**

No flames, no sparks. Eliminate all sources of ignition. Direct sunlight. Extremely high or low temperatures. Open flame.

**10.5. Incompatible materials**

Oxidizing agent.

**10.6. Hazardous decomposition products**

May release flammable gases.

**SECTION 11: TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects**

Acute toxicity : Not classified

<b>ethanol, ethyl alcohol (64-17-5)</b>	
LD50 oral rat	7060 mg/kg
LD50 dermal rabbit	> 20000 mg/m <sup>3</sup>
LC50 inhalation rat (Vapours - mg/l/4h)	124.7 mg/l/4h
<b>silica, amorphous, crystalline-free (112945-52-5)</b>	
LD50 oral rat	> 3160 mg/kg
<b>2-hydroxyethyl methacrylate (868-77-9)</b>	
LD50 oral rat	5050 mg/kg
LD50 dermal rabbit	> 3000 mg/kg

Skin corrosion/irritation : Causes severe skin burns and eye damage.

pH: 2

Serious eye damage/irritation : Causes serious eye damage.

pH: 2

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified 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

ethanol, ethyl alcohol (64-17-5)	
LC50 fish 1	13500 mg/l (96 hours - Pimephales promelas)
EC50 Daphnia 1	54000 mg/l (48 hours - Daphnia magna)
IC50 algae	> 10.9 mg/l (IC50, 72 hours - Skeletonema costatum)
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
IC50 algae	836 mg/l 72 hours - Pseudokirchnerella subcapitata

### 12.2. Persistence and degradability

OPTIBOND FL PRIME	
Persistence and degradability	Not established.
ethanol, ethyl alcohol (64-17-5)	
BOD (% of ThOD)	≥ 0.4 % ThOD BOD5/COD
Biodegradation	85 % (OECD 301D method)
2-hydroxyethyl methacrylate (868-77-9)	
Biodegradation	84 % (OECD 301D method)

### 12.3. Bioaccumulative potential

OPTIBOND FL PRIME	
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

### 12.4. Mobility in soil

OPTIBOND FL PRIME	
Ecology - soil	soluble in water.

### 12.5. Results of PBT and vPvB assessment

OPTIBOND FL PRIME	
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.

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.

Additional information : Handle empty containers with care because residual vapours are flammable.

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	RID
<b>14.1. UN number</b>			
2924	2924	2924	2924
<b>14.2. UN proper shipping name</b>			
FLAMMABLE LIQUID, CORROSIVE, N.O.S.	FLAMMABLE LIQUID, CORROSIVE, N.O.S.	Flammable liquid, corrosive, n.o.s.	FLAMMABLE LIQUID, CORROSIVE, N.O.S.
<b>Transport document description</b>			
UN 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Glycerol Phosphate dimethacrylate ; ethanol, ethyl alcohol), 3 (8), II, (D/E)	UN 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S., 3 (8), II		
<b>14.3. Transport hazard class(es)</b>			
3 (8)	3 (8)	3 (8)	3 (8)
<b>14.4. Packing group</b>			
II	II	II	II
<b>14.5. Environmental hazards</b>			
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : 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) : FC

Special provisions (ADR) : 274

Limited quantities (ADR) : 1I

Excepted quantities (ADR) : E2

Packing instructions (ADR) : P001, IBC02

Mixed packing provisions (ADR) : MP19

Portable tank and bulk container instructions (ADR) : T11

Portable tank and bulk container special provisions (ADR) : TP2, TP27

Tank code (ADR) : L4BH

Vehicle for tank carriage : FL

Transport category (ADR) : 2

Special provisions for carriage - Operation (ADR) : S2, S20

Hazard identification number (Kemler No.) : 338

Orange plates :



Tunnel restriction code (ADR) : D/E

**- 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)	: T11
Tank special provisions (IMDG)	: TP2, TP27
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-C
Stowage category (IMDG)	: B
Flash point (IMDG)	: 14°C
Properties and observations (IMDG)	: Causes burns to skin, eyes and mucous membranes.

**- Air transport**

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y340
PCA limited quantity max net quantity (IATA)	: 0.5L
PCA packing instructions (IATA)	: 352
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 363
CAO max net quantity (IATA)	: 5L
Special provisions (IATA)	: A3
ERG code (IATA)	: 3CH

**Rail transport**

No data available

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 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**

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008	ethanol, ethyl alcohol
3(a) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F	OPTIBOND FL PRIME - ethanol, ethyl alcohol - Glycerol Phosphate dimethacrylate
3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	OPTIBOND FL PRIME - Glycerol Phosphate dimethacrylate - 2-[2-(methacryloyloxy)ethoxycarbonyl]benzoic acid
40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.	ethanol, ethyl alcohol

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

**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**

Indication of changes:



## Composition/information on ingredients. Hazards identification.

1.2	Industrial/Professional use spec	Modified	
1.2	Use of the substance/mixture	Added	
1.2	Function or use category	Removed	
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified	
2.2	Signal word (CLP)	Added	
2.2	Hazard pictograms (CLP)	Modified	
2.2	Precautionary statements (CLP)	Modified	
3	Composition/information on ingredients	Modified	
4.1	First-aid measures after ingestion	Modified	
4.1	First-aid measures after skin contact	Modified	
4.1	First-aid measures after inhalation	Modified	
4.1	First-aid measures after eye contact	Modified	
4.1	First-aid measures general	Modified	
4.2	Symptoms/effects after skin contact	Modified	
4.3	Other medical advice or treatment	Added	
5.1	Suitable extinguishing media	Modified	
5.2	Hazardous decomposition products in case of fire	Modified	
5.3	Firefighting instructions	Modified	
6.1	General measures	Modified	
6.1	Protective equipment	Added	
6.1	Emergency procedures	Added	
6.2	Environmental precautions	Modified	
6.3	Methods for cleaning up	Modified	
6.4	Reference to other sections (8, 13)	Modified	
7.1	Hygiene measures	Modified	
7.1	Precautions for safe handling	Modified	
7.2	Storage area	Removed	
11.1	Additional information	Added	
11.1	Potential adverse human health effects and symptoms	Modified	
12.1	Ecology - general	Removed	
13.1	Waste treatment methods	Modified	
13.1	Waste disposal recommendations	Modified	
14.1	UN-No. (ADR)	Modified	
14.1	UN-No. (IMDG)	Modified	
14.1	UN-No. (IATA)	Modified	
14.1	UN-No. (ADN)	Modified	
14.2	Proper Shipping Name (ADN)	Modified	
14.2	Proper Shipping Name (ADR)	Modified	
15.1	Regulatory reference	Added	

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.

Date of issue : 15/04/2003

Revision date : 30/06/2017

Supersedes : 17/09/2015

Date of total revision : 30/06/2017

Version : 6.0

Signature : A. Åsebø Murel

Full text of H- and EUH-statements:

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage
H319	Causes serious eye irritation.

*The information in this safety data sheet is based on information from the manufacturer/supplier, present european and national legislation, and presupposes that the product is used within the specified area of application.*



## Safety Data Sheet OPTIBOND FL ADHESIVE

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

#### 1.1. Product identifier

Product name : OPTIBOND FL ADHESIVE

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

##### Relevant identified uses

Main use category : Professional use

Function or use category : Dental materials.

##### Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety datasheet

##### Supplier

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

##### Manufacturer

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

Contact person : safety@kavokerr.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
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]

Skin Irrit. 2 H315

Eye Irrit. 2 H319

Skin Sens. 1 H317

Full text of classification categories and H statements : see section 16

#### 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) : Warning

Hazardous ingredients : 2-hydroxyethyl methacrylate

Hazard statements (CLP) : H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H319 - Causes serious eye irritation

Precautionary statements (CLP) : P261 - Avoid breathing spray, vapours, gas, fume, mist  
P264 - Wash hands, forearms and face thoroughly after handling

P272 - Contaminated work clothing should not be allowed out of the workplace  
 P280 - Wear eye protection, protective gloves  
 P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P332+P313 - If skin irritation occurs: Get medical advice/attention  
 P333+P313 - If skin irritation or rash occurs: Get medical advice/attention  
 P337+P313 - If eye irritation persists: Get medical advice/attention  
 P362+P364 - Take off contaminated clothing and wash it before reuse  
 P501 - Dispose of contents/container to ...

Extra phrases : The product is seen as a medical device and therefore not subject to labelling (EU-regulation 1907/2006, article 2, paragraph 6c).

### 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. Substance

Not applicable

### 3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-hydroxyethyl methacrylate	(CAS No) 868-77-9 (EC no) 212-782-2 (EC index no) 607-124-00-X (REACH-no) 01-2119490169-29	=>15-<20	Eye Irrit. 2, H319 Skin Irrit. 2, H315 Skin Sens. 1, H317
alkali fluorosilicates(Na)	(CAS No) 16893-85-9 (EC no) 240-934-8 (EC index no) 009-012-00-0 (REACH-no) 01-2119519245-43	=>1-<2	Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Oral), H301

Full text of H-statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

First-aid measures general : No particular/specific measures required.  
 First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.  
 First-aid measures after skin contact : Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.  
 First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention if you feel unwell.  
 First-aid measures after ingestion : If swallowed, rinse mouth with water (only if the person is conscious). Call a POISON CENTER or doctor/physician if you feel unwell.

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

Symptoms/injuries after skin contact : Causes skin irritation. May cause an allergic skin reaction.  
 Symptoms/injuries after eye contact : Causes serious eye irritation.

### 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 : Use extinguishing media appropriate for surrounding fire. Foam, carbon dioxide (CO2) and powder.  
 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.

**5.3. Advice for firefighters**

- Firefighting instructions : Use water spray or fog for cooling exposed containers.  
 Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

- General measures : Avoid all eye and skin contact and do not breathe vapour and mist.

**For non-emergency personnel**

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

**For emergency responders**

No additional information available

**6.2. Environmental precautions**

Avoid release to the environment.

**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.

**6.4. Reference to other sections**

For further information refer to section 13.

**SECTION 7: HANDLING AND STORAGE****7.1. Precautions for safe handling**

- Precautions for safe handling : Do not eat, drink or smoke when using this product. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 Hygiene measures : Do not eat, drink or smoke when using this product.

**7.2. Conditions for safe storage, including any incompatibilities**

- Storage conditions : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed.  
 Incompatible products : Oxidizing agent. Strong acids.  
 Incompatible materials : Strong acids. Oxidizing substances.  
 Storage area : Store in a well-ventilated place.

**7.3. Specific end use(s)**

Consult the supplier for further information.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters**

No additional information available

**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.  
 Personal protective equipment : Gloves. Safety glasses.  
 Hand protection : Nitrile rubber gloves. PVC gloves. Polyvinylalcohol (PVA). Breakthrough time : 6 (> 480 minutes). Layer thickness : 0,2 - 0,4 mm. STANDARD EN374.  
 Eye protection : Safety glasses. STANDARD EN 166.  
 Skin and body protection : Wear suitable protective clothing  
 Respiratory protection : No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation



- Other information : Do not eat, drink or smoke during use.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1. Information on basic physical and chemical properties**

Physical state	: Liquid
Colour	: Pale yellow.
Odour	: Fruity.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.1 g/cm <sup>3</sup>
Solubility	: In water, material is partially soluble.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Product is not explosive.
Oxidising properties	: No data available
Explosive limits	: No data available

**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 polymerization.

**10.4. Conditions to avoid**

No flames, no sparks. Eliminate all sources of ignition.

**10.5. Incompatible materials**

Oxidizing agent. Strong acids.

**10.6. Hazardous decomposition products**

No decomposition if stored normally.

**SECTION 11: TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects**

Acute toxicity : Not classified

**2-hydroxyethyl methacrylate (868-77-9)**

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

**alkali fluorosilicates(Na) (16893-85-9)**

LD50 oral rat	125 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	: Not classified
Carcinogenicity	: Not classified

Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

<b>2-hydroxyethyl methacrylate (868-77-9)</b>	
LC50 fish 1	227 mg/l (96 hours - Pimephales promelas)
<b>alkali fluorosilicates(Na) (16893-85-9)</b>	
LC50 fish 1	49 mg/l (96 hours - Lepomis macrochirus)

### 12.2. Persistence and degradability

<b>OPTIBOND FL ADHESIVE</b>	
Persistence and degradability	No data available.
<b>2-hydroxyethyl methacrylate (868-77-9)</b>	
Biodegradation	84 % (OECD 301D method)

### 12.3. Bioaccumulative potential

<b>OPTIBOND FL ADHESIVE</b>	
Bioaccumulative potential	No data.
<b>2-hydroxyethyl methacrylate (868-77-9)</b>	
Bioconcentration factor (BCF REACH)	1,3 - 1,5
Log Pow	0.47

### 12.4. Mobility in soil

<b>OPTIBOND FL ADHESIVE</b>	
Ecology - soil	In water, material is partially soluble.

### 12.5. Results of PBT and vPvB assessment

<b>OPTIBOND FL ADHESIVE</b>	
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

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

Regional legislation (waste) : Dispose as hazardous waste.  
Waste treatment methods : Recover the product with absorbent material. Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.  
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

### 14.1. UN number

Not regulated for transport

### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable  
Proper Shipping Name (IMDG) : Not applicable  
Proper Shipping Name (IATA) : Not applicable  
Proper Shipping Name (RID) : Not applicable

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR) : Not applicable



**IMDG**

Transport hazard class(es) (IMDG) : Not applicable

**IATA**

Transport hazard class(es) (IATA) : Not applicable

**RID**

Transport hazard class(es) (RID) : Not applicable

**14.4. Packing group**

Packing group (ADR) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

Packing group (RID) : Not applicable

**14.5. Environmental hazards**

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

**14.6. Special precautions for user****- Overland transport**

No data available

**- Transport by sea**

No data available

**- Air transport**

No data available

**Rail transport**

No data available

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBCCode**

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

**National regulations**

EC-regulation 453/2010/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 for the substance or the mixture by the supplier

**SECTION 16: OTHER INFORMATION**

Indication of changes:

Hazards identification. Regulatory information.

1.3	Contact information	Updated	
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Data sources	: EC-regulation 453/2010/EC, 1907/2006/EC (REACH), 1272/2008/EC (CLP), 790/2009/EC. Transport of dangerous goods (ADR/RID, IMDG, IATA/ICAO). Workplace exposure limits.
Date of issue	: 19/09/2003
Revision date	: 06/06/2019
Supersedes	: 17/09/2015
Version	: 3.0

Full text of H- and EUH-statements:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Sensitisation — Skin, category 1
H301	Toxic if swallowed
H311	Toxic in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H331	Toxic if inhaled

*The information in this safety data sheet is based on information from the manufacturer/supplier, present European and national legislation, and presupposes that the product is used within the specified area of application.*



## Safety Data Sheet Gel Etchant

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

#### 1.1. Product identifier

Product name : Gel Etchant

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

##### Relevant identified uses

Main use category : Professional use

Function or use category : Dental materials.

##### 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 00-800-41-050-505

##### Manufacturer

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

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]

Skin Corr. 1A H314

Eye Dam. 1 H318

Full text of H statements : see section 16

#### 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) : Danger

Hazardous ingredients	: phosphoric acid, orthophosphoric acid
Hazard statements (CLP)	: H314 - Causes severe skin burns and eye damage.
Precautionary statements (CLP)	: P264 - Wash hands thoroughly after handling. P280 - Wear protective gloves, eye protection. P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/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. P310 - Immediately call a POISON CENTER/doctor P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation
Extra phrases	: The product is seen as a medical device and therefore not subject to labelling (EU-regulation 1272/2008, article 1, paragraph 5d).

**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	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
phosphoric acid, orthophosphoric acid (Note B)	(CAS-No.) 7664-38-2 (EC-No.) 231-633-2 (EC Index-No.) 015-011-00-6 (REACH-no) 01-2119485924-24	36 - 39	Skin Corr. 1B, H314

**Specific concentration limits:**

Name	Product identifier	Specific concentration limits
phosphoric acid, orthophosphoric acid	(CAS-No.) 7664-38-2 (EC-No.) 231-633-2 (EC Index-No.) 015-011-00-6 (REACH-no) 01-2119485924-24	( 10 =<C < 25) Eye Irrit. 2, H319 ( 10 =<C < 25) Skin Irrit. 2, H315 ( C >= 25) Skin Corr. 1B, H314

Full text of H-statements: see section 16

**SECTION 4: FIRST AID MEASURES**

**4.1. Description of first aid measures**

First-aid measures general	: 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	: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
First-aid measures after skin contact	: Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER/doctor.
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

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

Symptoms/effects	: Causes severe skin burns and eye damage.
Symptoms/effects after inhalation	: Inhalation may cause irritation, cough, shortness of breath.
Symptoms/effects after ingestion	: If ingested may cause corrosion of gastrointestinal tract.

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

No specific measures identified.

**SECTION 5: FIREFIGHTING MEASURES**

**5.1. Extinguishing media**

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire. Foam. Dry powder. Carbon dioxide. Water spray. Sand.
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	: Phosphorus oxides. Hazardous vapours may be released. Phosphoric acid.

**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	: Concerning personal protective equipment to use, see section 8. Avoid contact with skin and eyes. Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact.
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**For non-emergency personnel**

Emergency procedures	: Evacuate unnecessary personnel.
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**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.

**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.

**6.4. Reference to other sections**

For further information refer to section 13.

**SECTION 7: HANDLING AND STORAGE****7.1. Precautions for safe handling**

Precautions for safe handling	: Do not eat, drink or smoke when using this product. Provide good ventilation in process area to prevent formation of vapour. Do not breathe vapours. Avoid contact with skin and eyes.
Hygiene measures	: Wash hands thoroughly after handling. Wash contaminated clothing before reuse.

**7.2. Conditions for safe storage, including any incompatibilities**

Technical measures	: Comply with applicable regulations.
Storage conditions	: Keep container tightly closed. Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.
Incompatible products	: Oxidizing agent. Strong acids. Strong bases.
Incompatible materials	: Metals. Sulfites. Bases.
Storage area	: Store at room temperature.

**7.3. Specific end use(s)**

Consult the supplier for further information.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters**

phosphoric acid, orthophosphoric acid (7664-38-2)		
EU	Local name	Orthophosphoric acid
EU	IOELV TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
EU	IOELV STEL (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Gibraltar	Eight hours mg/m <sup>3</sup>	1 mg/m <sup>3</sup>
Gibraltar	Short-term mg/m <sup>3</sup>	2 mg/m <sup>3</sup>
Ireland	Local name	Orthophosphoric acid
Ireland	OEL (8 hours ref) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Ireland	OEL (15 min ref) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Ireland	Notes (IE)	IOELV

phosphoric acid, orthophosphoric acid (7664-38-2)		
Malta	Local name	Orthophosphoric acid
Malta	OEL TWA (mg/m³)	1 mg/m³
Malta	OEL STEL (mg/m³)	2 mg/m³
United Kingdom	Local name	Orthophosphoric acid
United Kingdom	WEL TWA (mg/m³)	1 mg/m³
United Kingdom	WEL STEL (mg/m³)	2 mg/m³

**8.2. Exposure controls**

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Personal protective equipment : Gloves. Safety glasses. Avoid all unnecessary exposure.
- Hand protection : Wear suitable gloves. Neoprene or nitrile rubber gloves. Layer thickness : 0,09mm. Breakthrough time : >480 min. STANDARD EN 374.
- Eye protection : Chemical goggles or face shield. STANDARD EN 166.
- Skin and body protection : Wear suitable protective clothing
- Respiratory protection : Respiratory protection not applicable. In case of insufficient ventilation, wear suitable respiratory equipment. Extra personal protection: A/P2 filter respirator for organic vapour and harmful dust. Standard EN 149.



- Other information : Do not eat, drink or smoke during use. Remove contaminated clothing. Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the protective equipment. For even minor contact, immediately remove contaminated clothing. Wash skin thoroughly with mild soap and water.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1. Information on basic physical and chemical properties**

- Physical state : Solid
- Appearance : gel.
- Colour : Violet.
- Odour : none to slight.
- Odour threshold : No data available
- pH : 0.5 - 1.5
- Relative evaporation rate (butylacetate=1) : No data available
- Melting point : No data available
- Freezing point : No data available
- Boiling point : 100 °C
- Flash point : No data available
- Auto-ignition temperature : No data available
- Decomposition temperature : No data available
- Flammability (solid, gas) : Non flammable.
- Vapour pressure : 760 mm Hg
- Relative vapour density at 20 °C : ≈
- Relative density : No data available
- Density : 1.2 g/cm³
- Solubility : In water, material soluble.
- Log Pow : No data available
- Viscosity, kinematic : No data available
- Viscosity, dynamic : No data available
- Explosive properties : Product is not explosive.
- Oxidising properties : No data available
- Explosive limits : No data available

**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 of use.

**10.3. Possibility of hazardous reactions**

No dangerous reactions known under normal conditions of use.

**10.4. Conditions to avoid**

Extremely high or low temperatures.

**10.5. Incompatible materials**

Bases. Strong acids.

**10.6. Hazardous decomposition products**

No decomposition if stored and used normally.

**SECTION 11: TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects**

Acute toxicity	: Not classified
Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 0.5 - 1.5
Serious eye damage/irritation	: Causes serious eye damage. pH: 0.5 - 1.5
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

**SECTION 12: ECOLOGICAL INFORMATION****12.1. Toxicity**

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

**12.2. Persistence and degradability**

Gel Etchant	
Persistence and degradability	No data available.

**12.3. Bioaccumulative potential**

No additional information available

**12.4. Mobility in soil**

Gel Etchant	
Ecology - soil	Slightly soluble.

**12.5. Results of PBT and vPvB assessment**

Gel Etchant	
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 : Recover the product with absorbent material. Dispose of contents/container in accordance with licensed collector's sorting instructions.








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**

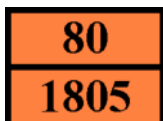
In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
1805	1805	1805	1805	1805
<b>14.2. UN proper shipping name</b>				
PHOSPHORIC ACID, SOLUTION	PHOSPHORIC ACID SOLUTION	Phosphoric acid, solution	PHOSPHORIC ACID, SOLUTION	PHOSPHORIC ACID, SOLUTION
<b>Transport document description</b>				
UN 1805 PHOSPHORIC ACID, SOLUTION, 8, III, (E)	UN 1805 PHOSPHORIC ACID SOLUTION, 8, III			
<b>14.3. Transport hazard class(es)</b>				
8	8	8	8	8
				
<b>14.4. Packing group</b>				
III	III	III	III	III
<b>14.5. Environmental hazards</b>				
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**

Limited quantities (ADR) : 5I  
 Excepted quantities (ADR) : E1  
 Hazard identification number (Kemler No.) : 80  
 Orange plates :



EAC code : 2R

**- Transport by sea**

Special provisions (IMDG) : 223  
 EmS-No. (Fire) : F-A  
 EmS-No. (Spillage) : S-B

**- Air transport**

PCA Excepted quantities (IATA) : E1  
 PCA Limited quantities (IATA) : Y841  
 Special provisions (IATA) : A3

**Rail transport**

No data available

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 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

**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 for the substance or the mixture by the supplier

**SECTION 16: OTHER INFORMATION**

Other information : None.  
 Date of issue : 27/11/2008  
 Revision date : 17/07/2017  
 Supersedes : 15/07/2015  
 Version : 5.0  
 Signature : K. Dyreskog

Full text of H- and EUH-statements:

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

*The information in this safety data sheet is based on information from the manufacturer/supplier, present european and national legislation, and presupposes that the product is used within the specified area of application.*