



## Safety Data Sheet OPTIBOND SOLO PLUS

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

#### 1.1. Product identifier

Product name : OPTIBOND SOLO PLUS

#### 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

Kerr Italia S.r.l.  
Via Passanti, 332  
84018 Scafati (SA) - Italy  
T +39-081-850-8311  
[E-mail: safety@kerrhawe.com](mailto:safety@kerrhawe.com)

##### Manufacturer

Kerr Italia S.r.l.  
Via Passanti, 332  
84018 Scafati (SA) - Italy  
T +39-081-850-8311  
[E-mail: safety@kerrhawe.com](mailto:safety@kerrhawe.com)

Contact person : [safety@kerrhawe.com](mailto: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
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit	Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle	0844 892 0111

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the substance or mixture

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

Flam. Sol. 1 H228

Skin Irrit. 2 H315

Eye Irrit. 2 H319

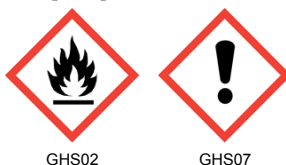
Skin Sens. 1 H317

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) :



GHS02

GHS07

Signal word (CLP) : Danger

Hazardous ingredients : 2-hydroxyethyl methacrylate

Hazard statements (CLP) : H228 - Flammable solid  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction

Precautionary statements (CLP)	: H319 - Causes serious eye irritation P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking P403+P233 - Store in a well-ventilated place. Keep container tightly closed P280 - Wear eye protection, protective gloves P273 - Avoid release to the environment P501 - Dispose of contents/container to an authorised waste collection point
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]
ethanol, ethyl alcohol	(CAS No) 64-17-5 (EC no) 200-578-6 (EC index no) 603-002-00-5 (REACH-no) 01-2119457610-43	20 - 25	Flam. Liq. 2, H225
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) 01-2119490169-29	>= 0,8 - <1,2	Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Oral), H301

Full text of H-phrases: 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.
Symptoms/injuries after eye contact	: Eye irritation.

### 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, carbon dioxide (CO<sub>2</sub>) and powder.

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

Fire hazard	: Flammable solid.
Hazardous decomposition products in case of fire	: Carbon dioxide. Carbon monoxide. Fluorides.

**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 : Do not eat, drink or smoke in areas where product is used. Avoid contact with skin and eyes.

**For non-emergency personnel**

- Emergency procedures : Evacuate unnecessary personnel.

**For emergency responders**

No additional information available

**6.2. Environmental precautions**

Discharging into rivers and drains is forbidden.

**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.

**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.

**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 only in original container. Keep container tightly closed.
- Incompatible products : Oxidizing agent. Strong acids.
- Incompatible materials : 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**

ethanol, ethyl alcohol (64-17-5)		
United Kingdom	Local name	Ethanol
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	1920 mg/m <sup>3</sup>
United Kingdom	WEL TWA (ppm)	1000 ppm

**8.2. Exposure controls**

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Personal protective equipment : Gloves. Safety glasses.
- Hand protection : Wear suitable gloves. Nitrile rubber gloves. Layer thickness : 0,09mm. Breakthrough time : >480 min. STANDARD EN 374.
- Eye protection : Safety glasses. 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. Wear a respirator conforming to EN140 with Type A/P2 filter or better



- 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	: Solid
Appearance	: Paste.
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	: 18 °C
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	: 1.25 g/cm <sup>3</sup>
Solubility	: Material insoluble in water.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
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 dangerous reactions known under normal conditions of use.

**10.4. Conditions to avoid**

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

**10.5. Incompatible materials**

Oxidizing agent.

**10.6. Hazardous decomposition products**

No decomposition if stored normally.

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

Acute toxicity : Ingestion of large amounts may cause discomfort. Uncured material may be harmful if swallowed.

<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>2-hydroxyethyl methacrylate (868-77-9)</b>	
LD50 oral rat	5050 mg/kg
LD50 dermal rabbit	> 3000 mg/kg
<b>alkali fluorosilicates(Na) (16893-85-9)</b>	
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 : Presents no particular risk to the environment, provided the disposal requirements (see section 13) and national or local regulations are complied with.

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)
alkali fluorosilicates(Na) (16893-85-9)	
LC50 fish 1	49 mg/l (96 hours - Lepomis macrochirus)

### 12.2. Persistence and degradability

OPTIBOND SOLO PLUS	
Persistence and degradability	No data available.
ethanol, ethyl alcohol (64-17-5)	
BOD (% of ThOD)	≥ 0.4 % ThOD BOD5/COD
Biodegradation	85 % (28 days, method: OECD 301D)
2-hydroxyethyl methacrylate (868-77-9)	
Biodegradation	84 % (OECD 301D method)

### 12.3. Bioaccumulative potential

OPTIBOND SOLO PLUS	
Bioaccumulative potential	No data.
2-hydroxyethyl methacrylate (868-77-9)	
Bioconcentration factor (BCF REACH)	1,3 - 1,5
Log Pow	0.47

### 12.4. Mobility in soil

OPTIBOND SOLO PLUS	
Ecology - soil	Slightly soluble.

### 12.5. Results of PBT and vPvB assessment

OPTIBOND SOLO PLUS	
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**

UN-No. (ADR)	: 1170
UN-No. (IMDG)	: 1170
UN-No. (IATA)	: 1170
UN-No. (ADN)	: 1170
UN-No. (RID)	: Not applicable

**14.2. UN proper shipping name**

Proper Shipping Name (ADR)	: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
Proper Shipping Name (IMDG)	: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
Proper Shipping Name (IATA)	: Ethyl alcohol solution
Proper Shipping Name (ADN)	: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
Proper Shipping Name (RID)	: Not applicable
Transport document description (ADR)	: UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) (ethanol, ethyl alcohol(64-17-5)), 3, III, (D/E)
Transport document description (IMDG)	: UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, III

**14.3. Transport hazard class(es)****ADR**

Transport hazard class(es) (ADR)	: 3
Danger labels (ADR)	: 3

**IMDG**

Transport hazard class(es) (IMDG)	: 3
Danger labels (IMDG)	: 3

**IATA**

Transport hazard class(es) (IATA)	: 3
Hazard labels (IATA)	: 3

**ADN**

Transport hazard class(es) (ADN)	: 3
Danger labels (ADN)	: 3

**RID**

Transport hazard class(es) (RID)	: Not applicable
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**14.4. Packing group**

Packing group (ADR)	: III
Packing group (IMDG)	: III
Packing group (IATA)	: III
Packing group (ADN)	: III
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**

Classification code (ADR)	: F1
Special provisions (ADR)	: 144, 601
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T2
Portable tank and bulk container special provisions (ADR)	: TP1
Tank code (ADR)	: LGBF
Vehicle for tank carriage	: FL
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Operation (ADR)	: S2
Hazard identification number (Kemler No.)	: 30
Orange plates	: 

Tunnel restriction code (ADR)	: D/E
EAC code	: •2YE

**- Transport by sea**

Special provisions (IMDG)	: 144, 223
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T2
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-D
Stowage category (IMDG)	: A
Properties and observations (IMDG)	: Colourless, volatile liquids. Pure ETHANOL: flashpoint 13°C c.c. Explosive limits: 3.3% to 19% Miscible with water.

**- Air transport**

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y344
PCA limited quantity max net quantity (IATA)	: 10L
PCA packing instructions (IATA)	: 355
PCA max net quantity (IATA)	: 60L
CAO packing instructions (IATA)	: 366
CAO max net quantity (IATA)	: 220L

Special provisions (IATA) : A3, A58, A180  
 ERG code (IATA) : 3L

#### 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 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

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 : 15/07/2015  
 Revision date : 15/07/2015  
 :  
 Signature : K. Dyreskog

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
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Sol. 1	Flammable solids, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Sensitisation — Skin, category 1
H225	Highly flammable liquid and vapour
H228	Flammable solid
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.*