

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 06.09.2016

Version number 5

Revision: 01.09.2016

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

- **1.1 Product identifier**
- **Trade name:** CLEARFIL PHOTO BOND ; CATALYST
- **Article number:** 023-C
- **Registration number** Not applicable
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Dental bonding material
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer:**  
Kuraray Europe GmbH  
Philipp-Reis-Str. 4,  
65795 Hattersheim am Main  
Germany  
Phone: +49 (0)69 305 35 840  
Fax: +49 (0)69 305 35 640  
E-mail: dental@kuraray.de
- **Supplier:**  
J & S Davis  
5 Whitworth Road, Stevenage,  
Hertfordshire, SG1 4QS  
Great Britain  
Tel: +44- (0) 1438 747344  
Fax: +44- (0)1438 758909  
E-mail: jsdsales@js-davis.co.uk
- **Further information obtainable from:** Manufacturer or Supplier
- **1.4 Emergency telephone number:**  
National Poisons information Service (London Centre)  
Guy's & St. Thomas' Hospital Trust  
Medical Toxicology Unit  
Avonley Road  
LONDON  
SE14 5ER  
Emergency telephone: (local) 0870 600 6266 or +44 20 7771 5394  
Administrative telephone: +44 20 7 771 53 10  
Facsimile number: +44 20 7 771 53 09

\*

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS07

- Skin Irrit. 2 H315 Causes skin irritation.  
Eye Irrit. 2 H319 Causes serious eye irritation.  
Skin Sens. 1 H317 May cause an allergic skin reaction.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms** GHS07
- **Signal word** Warning
- **Hazard-determining components of labelling:**  
2-hydroxyethyl methacrylate  
benzoyl peroxide

(Contd. on page 2)

GB

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 06.09.2016

Version number 5

Revision: 01.09.2016

**Trade name: CLEARFIL PHOTO BOND ; CATALYST**

(Contd. of page 1)

**· Hazard statements**

- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H317 May cause an allergic skin reaction.

**· Precautionary statements**

- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P264 Wash thoroughly after handling.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P321 Specific treatment (see on this label).
- P362 Take off contaminated clothing.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P302+P352 IF ON SKIN: Wash with plenty of water.

**· Labelling of packages where the contents do not exceed 125 ml****· Hazard-determining components of labelling: bisphenol A diglycidylmethacrylate****· 2.3 Other hazards****· Results of PBT and vPvB assessment**

- PBT:** Not applicable.
- vPvB:** Not applicable.

**SECTION 3: Composition/information on ingredients****· 3.1 Chemical characterisation: Substances** None**· 3.2 Chemical characterisation: Mixtures****· Description:** Mixture of substances listed below with nonhazardous additions.**· Dangerous components:**

|                   |                                                                                    |        |
|-------------------|------------------------------------------------------------------------------------|--------|
| CAS: 1565-94-2    | bisphenol A diglycidylmethacrylate                                                 | 20-40% |
| EINECS: 216-367-7 | ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319                                          |        |
| CAS: 868-77-9     | 2-hydroxyethyl methacrylate                                                        | 5-25%  |
| EINECS: 212-782-2 | ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317                      |        |
| CAS: 94-36-0      | benzoyl peroxide                                                                   | <2.5%  |
| EINECS: 202-327-6 | ⚠ Unst. Expl., H200; ⚠ Eye Irrit. 2, H319; Skin Sens. 1, H317; Org. Perox. E, H242 |        |

**· Other ingredients:**

- 10-Methacryloyloxydecyl dihydrogen phosphate
- Hydrophobic aliphatic methacrylate
- dl-Camphorquinone

**SECTION 4: First aid measures****· 4.1 Description of first aid measures****· After inhalation:**

- Supply fresh air and to be sure call for a doctor.
- In case of unconsciousness place patient stably in side position for transportation.
- After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**· After eye contact:**

- Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**· After swallowing:**

- Do not induce vomiting; call for medical help immediately.
- If symptoms persist consult doctor.

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

- No further relevant information available.

(Contd. on page 3)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 06.09.2016

Version number 5

Revision: 01.09.2016

**Trade name: CLEARFIL PHOTO BOND ; CATALYST**

(Contd. of page 2)

- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures** See 6.4.
- **6.2 Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Ensure adequate ventilation.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

**SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a refrigerator (2-8 °C).
- **Information about storage in one common storage facility:**  
Store away from oxidising agents.  
Store away from reducing agents.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

(Contd. on page 4)

GB

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 06.09.2016

Version number 5

Revision: 01.09.2016

Trade name: CLEARFIL PHOTO BOND ; CATALYST

(Contd. of page 3)

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Respiratory protection:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

## SECTION 9: Physical and chemical properties

### · 9.1 Information on basic physical and chemical properties

#### · General Information

##### · Appearance:

|                |             |
|----------------|-------------|
| <b>Form:</b>   | Liquid      |
| <b>Colour:</b> | Transparent |
|                | Yellow      |
| <b>Odour:</b>  | Odourless   |

|                    |                |
|--------------------|----------------|
| <b>· pH-value:</b> | Not determined |
|--------------------|----------------|

#### · Change in condition

|                                     |                                      |
|-------------------------------------|--------------------------------------|
| <b>Melting point/Melting range:</b> | -12 °C (2-hydroxyethyl methacrylate) |
| <b>Boiling point/Boiling range:</b> | 205 °C (2-hydroxyethyl methacrylate) |

|                       |                                     |
|-----------------------|-------------------------------------|
| <b>· Flash point:</b> | 97 °C (2-hydroxyethyl methacrylate) |
|-----------------------|-------------------------------------|

|                                |                |
|--------------------------------|----------------|
| <b>· Ignition temperature:</b> | Not determined |
|--------------------------------|----------------|

|                                     |                |
|-------------------------------------|----------------|
| <b>· Decomposition temperature:</b> | Not determined |
|-------------------------------------|----------------|

(Contd. on page 5)

GB

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.09.2016

Version number 5

Revision: 01.09.2016

**Trade name: CLEARFIL PHOTO BOND ; CATALYST**

(Contd. of page 4)

|                                                   |                                               |
|---------------------------------------------------|-----------------------------------------------|
| · <b>Danger of explosion:</b>                     | Product does not present an explosion hazard. |
| · <b>Explosion limits:</b>                        |                                               |
| Lower:                                            | Not determined                                |
| Upper:                                            | Not determined                                |
| · <b>Oxidising properties</b>                     | Not determined                                |
| · <b>Vapour pressure:</b>                         | Not determined                                |
| · <b>Density:</b>                                 | 1.1 g/cm <sup>3</sup>                         |
| · <b>Relative density</b>                         | Not determined                                |
| · <b>Vapour density</b>                           | Not determined                                |
| · <b>Evaporation rate</b>                         | Not determined                                |
| · <b>Solubility in / Miscibility with water:</b>  | Fully miscible.                               |
| · <b>Partition coefficient (n-octanol/water):</b> | Not applicable                                |
| · <b>Viscosity:</b>                               | Not determined                                |
| · <b>9.2 Other information</b>                    | No further relevant information available.    |

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

#### · LD/LC50 values relevant for classification:

##### 868-77-9 2-hydroxyethyl methacrylate

|      |      |                         |
|------|------|-------------------------|
| Oral | LD50 | 4680 mg/kg (guinea pig) |
|      |      | 3275 mg/kg (mouse)      |
|      |      | 5050 mg/kg (rat)        |

##### 94-36-0 benzoyl peroxide

|      |      |                                     |
|------|------|-------------------------------------|
| Oral | LD50 | 5700 mg/kg (mouse)                  |
|      |      | 7710 mg/kg (rat)                    |
|      | LD50 | 250 mg/kg (mouse - intraperitoneal) |

- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes skin irritation.
- **Serious eye damage/irritation**  
Causes serious eye irritation.
- **Respiratory or skin sensitisation**  
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

(Contd. on page 6)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 06.09.2016

Version number 5

Revision: 01.09.2016

**Trade name: CLEARFIL PHOTO BOND ; CATALYST**

(Contd. of page 5)

- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

- |                                                                                                                                                           |                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| <ul style="list-style-type: none"> <li>· <b>14.1 UN-Number</b></li> <li>· <b>ADR, ADN, IMDG, IATA</b></li> </ul>                                          | Void            |
| <ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>ADR, ADN, IMDG, IATA</b></li> </ul>                            | Void            |
| <ul style="list-style-type: none"> <li>· <b>14.3 Transport hazard class(es)</b></li> <li>· <b>ADR, ADN, IMDG, IATA</b></li> <li>· <b>Class</b></li> </ul> | Void            |
| <ul style="list-style-type: none"> <li>· <b>14.4 Packing group</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>                                           | Void            |
| <ul style="list-style-type: none"> <li>· <b>14.5 Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> </ul>                                | No              |
| <ul style="list-style-type: none"> <li>· <b>14.6 Special precautions for user</b></li> </ul>                                                              | Not applicable. |
| <ul style="list-style-type: none"> <li>· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b></li> </ul>                        | Not applicable. |

(Contd. on page 7)

GB

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 06.09.2016

Version number 5

Revision: 01.09.2016

**Trade name: CLEARFIL PHOTO BOND ; CATALYST**

(Contd. of page 6)

· UN "Model Regulation": Void

**SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**  
H200 Unstable explosives.  
H242 Heating may cause a fire.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.
- **Abbreviations and acronyms:**  
Unst. Expl.: Explosives – Unstable explosive  
Org. Perox. E: Organic peroxides – Type E/F  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
Skin Sens. 1: Skin sensitisation – Category 1
- **\* Data compared to the previous version altered.**

GB