

# Material Safety Data Sheet

## According to 91/155 EC

Printing date 13.10.2003

Reviewed on 17.04.2003

### 1 Identification of substance:

· **Product details:**

- **Trade name:** Crown&Bridge/Fixodont Plus/De Trey Zinc liq.
- **Application of the substance / the preparation:** Znic phosphate cement

· **Manufacturer/Supplier:**

DENTSPLY DeTrey GmbH  
De-Trey-Str. 1  
D-78467 Konstanz  
GERMANY  
Tel.:  
Fax:

+49-7531-583-0  
+49-7531-583-104

· **Further information obtainable from:**

- *Departement Analytical Research / Research & Development for* technical information
- *Departement Marketing & Sales for distribution of the safety data* sheets

### 2 Composition/Data on components:

· **Chemical characterization**

- **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 7664-38-2	phosphoric acid	C; R 34	50-100%
EINECS: 231-633-2			

- **Additional information** For the wording of the listed risk phrases refer to section 16.

### 3 Hazard identification

· **Hazard description:**

C Corrosive

· **Information concerning to particular hazards to man and environment**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 34 Causes burns.

· **Classification system**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

### 4 First aid measures

- **General information** Immediately remove any clothing soiled by the product.
- **After inhalation** Void
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing** Drink plenty of water and provide fresh air. Call for a doctor immediately.

### 5 Fire fighting measures

· **Suitable extinguishing agents**

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents** Water with full jet.

- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Person-related safety precautions:** Wear protective clothing.

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**Trade name:** Crown&Bridge/Fixodont Plus/De Trey Zinc liq.

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- **Measures for environmental protection:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.

### 7 Handling and storage

- **Handling** Product is intended for dental use only.
- **Information for safe handling:** Observe normal care for working with chemicals.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.

### 8 Exposure controls and personal protection gear

- **Additional information about design of technical facilities:** No further data; see item 7.

- **Ingredients with limit values that require monitoring at the workplace:**

7664-38-2 phosphoric acid

OEL Short-term value: 3 mg/m<sup>3</sup>

Long-term value: 1 mg/m<sup>3</sup>

- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures**  
Keep away from foodstuffs, beverages and feed.  
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:** Not required.
- **Protection of hands:**  
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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles.

- **Body protection:** Protective work clothing.

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Trade name: Crown&amp;Bridge/Fixodont Plus/De Trey Zinc liq.

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### 9 Physical and chemical properties:

#### · General Information

<b>Form:</b>	Liquid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Odourless

#### · Change in condition

**Melting point/Melting range:** undetermined  
**Boiling point/Boiling range:** 213°C

· **Flash point:** Not applicable

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Vapour pressure at 20°C:** 0 hPa

· **Density at 20°C:** 1.88 g/cm<sup>3</sup>

#### · Solubility in / Miscibility with

**Water:** Fully miscible

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known
- **Dangerous decomposition products:** No dangerous decomposition products known

### 11 Toxicological information

#### · Acute toxicity:

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

##### 7664-38-2 phosphoric acid

Oral	LD50	1530 mg/kg (rat)
Dermal	LD50	2740 mg/kg (rabbit)

#### · Primary irritant effect:

- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.

· **Sensitization:** No sensitizing effects known.

#### · Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

Corrosive

Swallowing will lead to a burning respectively to a caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

### 12 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.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

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Trade name: *Crown&Bridge/Fixodont Plus/De Trey Zinc liq.*

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### 13 Disposal considerations

- **Product:**
- **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.

### 14 Transport information

- **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 8 (C1) Corrosive substances.
- **Danger code (Kemler):** 80
- **UN-Number:** 1805
- **Packaging group:** III
- **Hazard label:** 8
- **Description of goods:** 1805 Phosphoric acid, mixture

- **Maritime transport IMDG:**



- **IMDG Class:** 8
- **UN Number:** 1805
- **Label:** 8
- **Packaging group:** III
- **EMS Number:** F-A,S-B
- **Marine pollutant:** No
- **Proper shipping name:** PHOSPHORIC ACID, LIQUID, mixture

- **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 8
- **UN/ID Number:** 1805
- **Label:** 8
- **Packaging group:** III
- **Proper shipping name:** PHOSPHORIC ACID, LIQUID, mixture

### 15 Regulations

- **Labelling according to EU guidelines:**  
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

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**Trade name: Crown&Bridge/Fixodont Plus/De Trey Zinc liq.**

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**· Code letter and hazard designation of product:**

C Corrosive

**· Hazard-determining components of labelling:**

phosphoric acid

**· Risk phrases:**

34 Causes burns.

**· Safety phrases:**

20 When using do not eat or drink.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**· National regulations****· Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.**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 R-phrases**

34 Causes burns.

**· Department issuing MSDS:** Analytical Research**· Contact:** HotLine for urgent technical support: +49-7531-583-333

# Material Safety Data Sheet

## According to 91/155 EC

Printing date 13.10.2003

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### 1 Identification of substance:

· **Product details:**

· **Trade name:** Crown&Bridge/Fixodont Plus/De Trey Zinc powd.

· **Application:** Zinc phosphate cement

· **Application of the substance / the preparation** Znic phosphate cement

· **Manufacturer/Supplier:**

DENTSPLY DeTrey GmbH

De-Trey-Str. 1

D-78467 Konstanz

GERMANY

Tel.:

+49-7531-583-0

Fax:

+49-7531-583-104

· **Further information obtainable from:**

- Departement Analytical Research / Research & Development for technical information

- Departement Marketing & Sales for distribution of the safety data sheets

### 2 Composition/Data on components:

· **Chemical characterization**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 1314-13-2 EINECS: 215-222-5	zinc oxide	N; R 50/53	50-100%
CAS: 1309-48-4 EINECS: 215-171-9	magnesium oxide		2.5-10%

· **Additional information** For the wording of the listed risk phrases refer to section 16.

### 3 Hazard identification

· **Hazard description:**

N Dangerous for the environment

· **Information concerning to particular hazards to man and environment**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Classification system**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

### 4 First aid measures

· **After inhalation** Supply fresh air; consult doctor in case of complaints.

· **After skin contact** Immediately rinse with water

· **After eye contact** Rinse opened eye for several minutes under running water.

· **After swallowing** If symptoms persist consult doctor.

### 5 Fire fighting measures

· **Suitable extinguishing agents**

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **Protective equipment:** Wear self-contained respiratory protective device

### 6 Accidental release measures

· **Person-related safety precautions:** Avoid formation of dust.

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**Trade name: Crown&Bridge/Fixodont Plus/De Trey Zinc powd.**

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- **Measures for environmental protection:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:** Pick up mechanically.
- **Additional information:** No dangerous substances are released.

### 7 Handling and storage

- **Handling** Product is intended for dental use only.
- **Information for safe handling:** Observe normal care for working with chemicals.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

### 8 Exposure controls and personal protection gear

- **Additional information about design of technical facilities:** No further data; see item 7.

- **Ingredients with limit values that require monitoring at the workplace:**

**1314-13-2 zinc oxide**

OEL	Short-term value: 10 mg/m <sup>3</sup>
	Long-term value: 5 mg/m <sup>3</sup>

**1309-48-4 magnesium oxide**

OEL	10 mg/m <sup>3</sup>
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- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures** Wash hands before breaks and at the end of work.
- **Respiratory protection:** Not required.
- **Protection of hands:**  
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:** Safety glasses
- **Body protection:** Protective work clothing.

### 9 Physical and chemical properties:

- **General Information**

<b>Form:</b>	Powder
<b>Colour:</b>	Yellowish
<b>Odour:</b>	Odourless

- **Change in condition**  
**Melting point/Melting range:** undetermined

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Trade name: *Crown&Bridge/Fixodont Plus/De Trey Zinc powd.*

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<b>Boiling point/Boiling range:</b>	<i>undetermined</i>
<b>Flash point:</b>	<i>Not applicable</i>
<b>Self-igniting:</b>	<i>Product is not selfigniting.</i>
<b>Danger of explosion:</b>	<i>Product does not present an explosion hazard.</i>
<b>Density:</b>	<i>Not determined</i>
<b>Solubility in / Miscibility with Water:</b>	<i>Insoluble</i>
<b>Solvent content:</b>	
<b>Organic solvents:</b>	<i>0.0 %</i>
<b>Solids content:</b>	<i>100.0 %</i>

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- **Dangerous reactions** *No dangerous reactions known*
- **Dangerous decomposition products:** *No dangerous decomposition products known*

### 11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** *No irritant effect.*
- **on the eye:** *No irritating effect.*
- **Sensitization:** *No sensitizing effects known.*

### 12 Ecological information:

- **Ecotoxicological effects:**
- **Remark:** *Very toxic for fish*
- **General notes:**  
*Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
Also poisonous for fish and plankton in water bodies.  
Very toxic for aquatic organisms*

### 13 Disposal considerations

- **Product:**
- **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.*

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Trade name: *Crown&Bridge/Fixodont Plus/De Trey Zinc powd.*

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### 14 Transport information

· Land transport ADR/RID (cross-border)



- ADR/RID class: 9 (M7) Miscellaneous dangerous substances and articles.
- Danger code (Kemler): 90
- UN-Number: 3077
- Packaging group: III
- Hazard label: 9

· Maritime transport IMDG:



- IMDG Class: 9
- UN Number: 3077
- Label: 9
- Packaging group: III
- EMS Number: F-A,S-F
- Marine pollutant: Yes
- Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide)

· Air transport ICAO-TI and IATA-DGR:



- ICAO/IATA Class: 9
- UN/ID Number: 3077
- Label: 9
- Packaging group: III
- Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide)

### 15 Regulations

· Labelling according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

· Code letter and hazard designation of product:



N Dangerous for the environment

· Risk phrases:

50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· Safety phrases:

57 Use appropriate container to avoid environmental contamination.

60 This material and its container must be disposed of as hazardous waste.

· National regulations

- Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

GB

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**Trade name: Crown&Bridge/Fixodont Plus/De Trey Zinc powd.**

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**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 R-phrases**

50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Department issuing MSDS:** Analytical Research

· **Contact:** HotLine for urgent technical support: +49-7531-583-333

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