

Date of print: 2011-06-28
 Date of last alteration: 2011-05-31 - Version: 2.0 English
 Art. -No., product name: **02054 Fermin**



1 Identification of the substance or preparation and of the company


- 1.1 Identification of the substance/the preparation:
 Commercial Product Name: Fermin
- 1.2 Use of the substance/the preparation: Professional.
 Provisional filling material for use in dentistry.
- 1.3 Company / undertaking identification:
 Manufacturer / distributor: DETAX GmbH & Co. KG
 Street / POB-No.: Carl-Zeiss-Str. 4
 State / postal code / city: D-76275 Ettlingen
 Telephone: +49 7243/510-0 Telefax: +49 7243/510-100
 E-Mail: post@detax.de
- 1.4 Emergency number: +49 7243/510-0
 This number is only obtainable during office hours (Monday - Thursday 8.00 a.m. - 5.00 p.m., Friday 8.00 a.m. - 4.00 p.m.).

2 Hazards identification

- 2.1 Classification
 Classification (67/548/EEC, 1999/45/EC):

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

- 2.2 Labelling
 Labelling (67/548/EEC, 1999/45/EC):

| | | |
|---|---|---------------------------|
|  | N | Environmentally hazardous |
|---|---|---------------------------|


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

| S-Phrases | Indication |
|-----------|---|
| S 60 | This material and its container must be disposed of as hazardous waste. |
| S 61 | Avoid release to the environment. Refer to special instructions / Safety data sheets. |

Hazardous ingredients (Labelling according to EC): Contains Zinc oxide.



3 Composition / information on ingredients

- 3.1 Chemical characterisation (preparation):
 Description: Dental temporary filling cement.
- 3.2 Hazardous ingredients

| Ingredient | CAS-No. | EC-No. | Index-No. | Concentration | Hazard symbols | R-Phrases |
|------------|-----------|-----------|--------------|---------------|---|-----------|
| Zinc oxide | 1314-13-2 | 215-222-5 | 030-013-00-7 | 20 - 40% |  | 50/53 |

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| Ingredient | CAS-No. | EG-No. | Index-No. | Concentration | Hazard symbols | R-Phrases |
|---------------|-----------|-----------|--------------|---------------|---|-------------|
| Zinc sulphate | 7446-19-7 | 231-793-3 | 030-006-00-9 | < 10% |   | 22-41-50/53 |

3.3 Further information: The identification letters and the R-Phrases are described in section 16.

4 First aid measures

- 4.1 General information: In case of persistent complaints, seek medical advice (if possible, show the label or this MSDS). Take off all contaminated clothing.
- 4.2 After inhalation: Move to fresh air. In case of persistent irritation, seek medical advice.
- 4.3 After contact with the skin: Remove the product mechanically by means of a cloth or paper. Wash with plenty of water and soap. In case of visible skin reaction or complaints, seek medical advice (if possible, show the label or this MSDS).
- 4.4 After contact with the eyes: Rinse the open eyes immediately with plenty of water for at least 15 minutes, seek immediately medical advice.
- 4.5 After swallowing: Immediately rinse mouth well with water and drink plenty of water. If you feel unwell, seek medical advice.
- 4.6 Autoprotection of the first assistant: Take care of a sufficient autoprotection (hand protection, foil mask "Life key").

5 Fire fighting measures

- 5.1 Suitable extinguishing media: The product itself is not combustible. Extinguishing media depend on environmental fire.
- 5.2 Extinguishing media which must not be used for safety reasons: Depending on the combustible materials in the surrounding area.
- 5.3 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases: ZnO-fumes and sulphur oxides may occur. Do not breathe combustion gases.
- 5.4 Special protective equipment for fire fighting: Use respiratory protection independent of recirculated air.
- 5.5 Further information: Collect contaminated extinguishing water separately. Prevent it running into in-shore waters, ground water and earth.

6 Accidental release measures

- 6.1 Personal precautions: If material is accidentally spilled, refer to the possible danger of skidding. Do not pass through the spilled material.
- 6.2 Environmental precautions: Keep away from sewage treatment plants, in-shore waters and earth. Observe local byelaws.
- 6.3 Methods for cleaning up: Pick up the product mechanically by means of a cloth or paper and collect it in a suitable container, labelled according to regulations (for disposal see section 13).

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7 Handling and storage

- 7.1 Handling:
 Precautions for safe handling: The usual precautions in handling with chemicals are to be observed. When using to not eat, drink or smoke. Avoid contact with eyes.
 Precautions against fire and explosion: Remove all containers not yet affected by fire. Cool endangered containers with water mist or cover them with foam.
- 7.2 Storage:
 Conditions for storage rooms and vessels: Keep the product in the original container in a cool and dry place, away from foodstuffs.
 Advice for storage of incompatible materials: Keep away from acids and lyes.
 Further information for storage:
 Storage class (Germany): 13 (Non-flammable solid substances).
 Keep at temperature not exceeding 25 °C / 77 °F.
 Keep away from humidity.
- 7.3 Definite use: Dental provisional filling cement for use by trained specialist staff.

8 Exposure controls and personal protection

- 8.1 Exposition limit values:
 Associate substances with specific control parameters such as limit values
 Recommendations of the MAK-Commission:
 Zinc oxide fume
 1 mg/m³
 with reference to the alveolar fraction.
 Peak limitation: Excursion factor 1; duration 15 min, mean; 4 times per shift; interval 1 hour.
- 8.2 Limitation and control of the exposition
 8.2.1 Limitation and control of the exposition at the place of work: Exposition limit values must be supervised by means of appropriate analytical equipment.
 General protection and hygiene measures: The usual precautions in handling with chemicals must be respected. When using to not eat, drink or smoke. Take off all contaminated clothing.
 Personal protection equipment:
 Respiratory protection: Under the usual working conditions not necessary.
 Hand protection: Protective gloves are recommended, e.g. such as gloves of nitrile rubber.
 Eye protection: To avoid mechanical injuring of the eyes, wear protective glasses.
 Body protection: Wear working clothing.
- 8.2.2 Limitation and control of the environmental exposition: Prevent the material getting into in-shore waters and earth.

9 Physical and chemical properties

- 9.1 Appearance
 Form: paste
 Colour: white
 Odour: almost odourless
- 9.2 Important information on health and environmental protection and on safety Method (67/ 548/EEC)
- | | | |
|----------------------------|------|-----------|
| pH-value | n.a. | |
| Boiling point | n.a. | DIN 51356 |
| Flash point | n.a. | DIN 51755 |
| Ignition temperature | n.a. | DIN 51794 |

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| | | |
|---|---|------------|
| Vapour pressure | n.a. | |
| Density | approx. 2.44 g/cm ³ at 20 °C / 68 °F | DIN 51757 |
| Solubility in water | virtually insoluble | |
| Distribution coefficient octanol / water: | n.a. | |
| Viscosity, dynamic | > 15 Mio. mPa.s at 23 °C / 73 °F | Brookfield |
| Explosion limits | n.a. | |

9.3 Further information:
 Thermal decomposition: not tested

10 Stability and reactivity

10.1 Conditions to avoid: Moisture uptake causes a quality defect of the paste.
 10.2 Materials to avoid: Reacts with acids and lyes forming the corresponding salts, -complexes.
 10.3 Hazardous decomposition products: No decomposition, if stored and handled in accordance with standard industrial practices. In case of fire, ZnO-fumes and sulphur oxides may occur.

11 Toxicological information

11.0 General information: According to present experience, the material shows no health risk if handled appropriately, observing the usual hygiene at place of work.
 11.1 Toxicological tests
 Acute toxicity
 Acute oral toxicity (LD₅₀): species rat > 15 000 mg/kg
 origin: literature
 these data refer to the ingredient zinc oxide.
 Acute inhalative toxicity (LC₅₀): species rat 5.7 mg/l 4 hours
 origin: literature
 these data refer to the ingredient zinc oxide.

12 Ecological information

12.1 Ecological toxicity:
 Effects in sewage treatment plants (bacteria toxicity: respiration-/reproduction inhibition):
 Do not introduce into purification plants.
 12.2 Mobility: No data available.
 12.3 Persistence and degradability
 Biodegradation / further information: May cause long-term adverse effects in the aquatic environment.
 12.4 Potential of biological accumulation: No data available.
 12.5 Other harmful effects: Very toxic to aquatic organisms.
 12.6 Further ecotoxicological effects: Avoid escape into water, drainage, sewer, or the ground. Do not dispose of to a public disposal site.

13 Disposal considerations

13.1 Waste management (product): Recommendation: Dispose of according to regulations by handing over to a special waste disposal company. Observe the local byelaws.
 European Waste Catalogue Ref.No.: Please ask your local waste disposal company about the correct Ref.No. according to the European Waste Catalogue.
 13.2 Contaminated packaging: Recommendation: Fully empty containers (scraped carefully).

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Containers may be recycled or re-used.
 Uncleaned containers must be disposed of as hazardous waste.
 Observe local/national byelaws.

14 Transportation information

- 14.1 Land transportation ADR/RDI and GGVS/GGVE:
 - GGVS/GGVE-class..... : 9 cl.-code M7
 - ADR/RID-class..... : 9 cl.-code M7
 - Transportation emergency card number: 9 + Label ENVIRONMENTAL POLLUTANT
 - Warning board - Hazard No.: 90 Substance No.: 3077 PG: III
 - Nomenclature..... : Environmentally hazardous substance, solid, n.o.s.
 - Further information..... : Contains zinc oxide
 - Tunnel restriction code : E
 - Limited Quantities : 5 kg / 30 kg

- 14.2 Inland navigation ADN/ADNR:
 - Further information: No data available.

- 14.3 Transportation by sea IMDG/GGVsea:
 - IMDG/GGVsea-class .. : 9 Label 9 + Label MARINE POLLUTANT UN-No.: 3077 PG: III
 - EmS-No..... : F-A, S-F
 - Marine pollutant : P
 - Proper shipping name.. : Environmentally hazardous substance, solid, n.o.s.
 - Technical name..... : Contains zinc oxide
 - LTD. QTY. : 5 kg / 30 kg

- 14.4 Air transportation ICAO-TI and IATA-DGR transportation by air:
 - ICAO/IATA-class..... : 9 Label 9 + Label ENVIRONMENTAL POLLUTANT UN-No.: 3077
 - PG: III Page: 320 (52 edition)
 - Proper shipping name.. : Environmentally hazardous substance, solid, n.o.s.
 - Technical name..... : Contains zinc oxide
 - Packing regulations..... : PAC: 956 Max. net.: 400 kg
 - CAO: 956 Max. net.: 400 kg
 - EQ E1..... : 30 g / 1 kg
 - LTD.QTY..... : 30 kg gross weight (Y956)

15 Regulatory information

- 15.1 National regulations (Germany):
 - Observe local/national byelaws.
 - Information for labelling is given in section 2 of this document.
 - Occupational restrictions:
 - Observe the restrictions on juvenile employment as defined in the „Jugendarbeitsschutzgesetz“.
 - Observe the restrictions on the employment of expectant and nursing mothers as defined in the „Mutterschutzverordnung“.
 - Classification of possible adverse effects in the aquatic environment (Wassergefährdungsklasse):
 - Class 2 (adverse effects in the aquatic environment).

16 Other information

- 16.1 Wording of the R-phrases under section 3:
 - R-Phrases and identification letters
 - R-Phrases:
 - R 22 Harmful if swallowed
 - R 41 Risk of serious damage to eyes
 - R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 - Identification letters:
 - N Environmentally hazardous Xn Harmful

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DETAX**16.2 Further information**

Explanation of the abbreviations:

n.a. = not applicable

n.s. = not subject to

16.3 Literature register

Richtlinie 1999/45/EG für die Einstufung, Verpackung und Kennzeichnung gefährlicher Zubereitungen

Richtlinie 67/548/EWG für die Einstufung, Verpackung und Kennzeichnung gefährlicher Stoffe, Anhang I

Neue Datenblätter für gefährliche Arbeitsstoffe nach der Gefahrstoffverordnung, WEKA-Verlag, Loseblattsammlung mit Ergänzungslieferungen

Sicherheitstechnische Kenndaten chemischer Stoffe, ecomed-Verlag, Loseblattsammlung mit Ergänzungslieferungen

Handbuch der Abfallentsorgung, ecomed-Verlag, Loseblattsammlung mit Ergänzungslieferungen

Erste Allgemeine Verwaltungsvorschrift zum Bundes-Immissionsschutzgesetz (Technische Anleitung zur Reinhaltung der Luft – TA Luft)

VCI: Leitfaden für die Zusammenlagerung von Chemikalien

DFG Deutsche Forschungsgemeinschaft: MAK- und BAT-Werte – Liste 2007

Allgemeine Verwaltungsvorschrift zur Änderung der Verwaltungsvorschrift wassergefährdender Stoffe - VwVwS vom 27. Juli 2005

Safety data sheets and further information from manufacturers / distributors

BGIA GESTIS-Stoffdatenbank, Online research

ADR 2011, Verkehrsverlag Fischer Düsseldorf

IMDG-Code 2011, Amendment 35-10, Verkehrsverlag Fischer Düsseldorf

IATA Gefahrgutvorschriften, 52. Ausgabe, International Air Transport Association Montreal

16.4 Product:

The given information describes exclusively the safety requirements of the product(s) and is based on our present-day knowledge. It does not represent a guarantee for the properties of the product(s) described in terms of the legal warranty regulations.

This Safety Data Sheet has been adjusted to the Directive (EC) 453/2010.