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 Date of last alteration: 25.09.2009 - Version 1.0 : english  
 Art.-Nr., product name: **7023 PERMAFIX-KOHLER® glaze**



## 1. Identification of the substance / preparation and of the company / undertaking

- 1.1 Identification of the substance or preparation:
- 1.1.1 Commercial Product Name: PERMAFIX-KOHLER® glaze
- 1.2 Application of substance/preparation: commercial glaze for dental use
- 1.3 Company / undertaking identification:
- Manufacturer / distributor: Kohdent Roland Kohler Medizintechnik GmbH & Co. KG  
 Street / POB-No.: Bodenseeallee 14-16  
 State / postal code / city: D-78333 Stockach  
 Telephone: +49 7771 / 64999-0 Telefax: +49 7771 / 64999-50  
 E-Mail: info@kohler-medizintechnik.de
- 1.4 Emergency telephone: +49 7771 / 64999-0  
 This number is busy only to office hours  
 (Mo.- Do 7.00 – 17.30, Fr. 7.00 – 12.30)

## 2. Hazards identification

- 2.1 Classification: R-Phrases: 10-20/21-38
- 2.2 Critical hazards to man and environment: Highly flammable. Injurious to health with the inhalation and during contact with the skin. The skin provokes.

## 3. Composition / information on ingredients

- 3.1 Chemical characterisation (preparation): Alkyl silicone resin in organic solvent.
- 3.2 Hazards ingredient
- Description: xylene  
 CAS-No.: 1330-20-7  
 EG-No.: 215-535-7  
 Index-No.: 601-022-00-9  
 Concentration: 20 – 40 %  
 Hazard symbol: F Xn  
 R-Phrases: 11-20/21-38  
 Additional information: The wording of the Hazard symbol and the R-Phrases is specified in chapter 16.

## 4. First aid measures

- 4.1 General information: With accident or indisposition take to medical advice (if possible, label or SDB present). Remove dirty clothes immediately.
- 4.2 After inhalation: Provide fresh air, if sickness consult doctor. Peace, warmth, lying transport to the physician, with difficulty in breathing in half-sitting position. In the case of danger of the unconsciousness storage and transport in stable side situation, if necessary breath donation.

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4.3	After contact with the skin:	Immediately with much water and soap thoroughly wash off. Catch up medical advice in the case of visible skin changes or continuous provoking. (if possible, label or SDB present).
4.4	After contact with the eyes::	Eyes with opened eyelid gap immediately 15 minutes with flowing water rinse out. Optician doctor consult.
4.5	After swallowing:	Rinse mouth out immediately and plenty water after-drink. No vomiting cause. With spontaneous vomiting for the fact it ensures that vomit can flow off because of danger of suffocation unhindered.
4.6	Self protection of the first-aider:	Take to medical advice with illness. To self protection pay attention (hand guard, foil masks („Life keys “).
4.7	Note for the doctor:	Decontamination, symptomatic treatment. No specific antidote admits. Regulation of xylene in the blood and Methylhippursäure in the urine for exposition estimation. Control of blood cell count, liver and kidney function. Gift of Glucocorticoiden and monitoring with danger of a pulmonary edema.

## 5. Fire fighting measures

5.1	Suitable extinguishing media:	Water mist, dry powder, foam, carbon dioxide
5.2	Extinguishing media which must not be used for safety reasons:	Jet of water
5.3	Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:	Strong soot formation, incineration gases do not inhale.
5.4	Special protective equipment for fire fighting:	Use self-contained breathing apparatus. Carry chemistry protection suit during substantial pollutant effect. Disposal work with explosion-proof devices would drive through.
5.5	Further Information:	B (Liquid or liquid becoming materials). Contaminated fire fighting water separately collect; may not arrive in surface waters or groundwaters.

## 6. Accidental release measures:

6.1	Personal precautions:	Unprotected contact avoids. Suitable protective clothing carry. All ignition sources remove.
6.2	Environmental precautions:	Do not leave waste water and into the ground in waters, to arrive. Local official regulations consider.
6.3	Methods for cleaning up:	Take up mechanically or with liquid-binding material (sand, kieselguhr, sawdust) and in suitable, according to

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characterized container collect; To disposal see point 13

## 7. Handling and storage:

- 7.1 Handling:  
 Handling procedures: The steam air mixture is combustible. Ignition sources avoid. Contact with the eyes, the skin and the clothes avoid. Steams do not inhale.
- Recommendation for fire and explosion protection: Measures against electrostatic loading meet. From open flames, warming or ignition sources keep away - do not smoke. Yet of the fire do not eliminate container concerned. Endangered containers with spray water cool.
- 7.2 Storage:  
 technical measures and storage conditions:  
 Requirements at storerooms and containers: Store drying separately in closely closed original bundles cooly and from food. Provide to good room ventilation.
- Requirements for storage with other products: With inflammatory or fire-promoting materials do not together-store.
- Additional storage conditions: With inflammatory or fire-promoting materials do not together-store
- Storage class:  
 Further Information to storage conditions:  
 Storage class: 3 (inflammatory liquid substances)  
 Keep at temperature not exceeding 25°C / 77 °F.
- 7.3 Specified use: Protect for moisture  
 Component B of a silicone lacquer for dental purposes; to the use by trained technical personnel

## 8. Exposure controls / personal protection

- 8.1 Exposition limit values  
 Assigned material with workstation-furnished, to supervising limit values.
- Air limit value after TRGS900/recommendation of the MAK commission:  
 CAS-No. 1330-20-7  
 Xylol  
 50 ppm = 221 mg/m<sup>3</sup> (8 hour midpoint)  
 100 ppm = 442 mg/m<sup>3</sup> (short-time limit)
- Air limit value TRGS900:  
 CAS-Nr. 1330-20-7  
 Xylol  
 100 ppm = 400 mg/m<sup>3</sup>  
 Trop limit: crossing faktor 2; period 15 min, midpoint; 4 times per layer; distance 1 h.  
 Kategorie II – Absorptively effective materials.  
 Danger of the skin absorption  
 Pregnancy: Group of D.
- Biological limit values of BAT values: Measured parameter: xylene

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<p>BG-principles for preventive medical examinations according to industrial medicine consider:</p> <p>8.2 Components with limits of values:</p> <p>8.2.1 Components with limits of values to be supervised at the workplace:</p> <p>General protection and hygiene measures:</p> <p>Personal protective equipment: Respiration:</p> <p>Hands:</p>	<p>Limit: 1,5 mg/l</p> <p>Sampling point: Expositionsend, or rather layer end</p> <p>Testing material: Whole blood</p> <p>Measured parameter: Methyhippur- (Tolur-)säure</p> <p>Limit value: 2000 mg/l</p> <p>Sampling point time: Expositionsend, bzw. layer end; at longtimeexposition: afer more preceding layer</p> <p>Testingmaterial: Urine</p> <p>G29: Benzolhomologe (Toluol, xylene).</p> <p>Exposition limit values must be supervised with suitable analytic equipment.</p> <p>General hygiene measures while handling chemical materials consider. Do not eat with the work and drink. Soiled or impregnated clothes change. Inhales from steams avoid. For sufficient ventilation and/or exhaust provide.</p> <p>In exceptional cases (e.g. unintentional free of the product setting, job limit value excess) carrying of respiratory protection is indicated (respirator: Gas filter A, identification colour code: brown). Stretcher time delimitations consider.</p> <p>Protective gloves wear. Examine tightness before use. Gloves before taking off prepurify, afterwards well ventilated keep.</p> <p><u>Been suitable:</u> are protective gloves from the following materials: (Break-through time ≥8 hours): Fluorocarbon rubber - FKM (0.4 mm);</p> <p>The following glove materials are <u>not suitable:</u> Butyl rubber - Butyl (0.5 mm), Nitrile rubber/Nitrillatex - NBR (0.35 mm) Naturkautschuh/Naturalatex - NR; (Break-through time ≥ 4 hours) Polychloropren - CR (0.5 mm). Polyvinyl chloride - PVC</p> <p><u>completely suitable:</u> Material or leather gloves</p> <p>The numerical data are approximate values from measurements with 22 °C / 69°F and permanent contact. Increased temperatures by warmed up substances, body warmth etc. and a reduction of the effective layer strength</p>
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8.2.2 Delimitation and monitoring of the environmental exposition:

Eyes: by stretch can lead to a substantial decrease of the break-through time. Ask manufacturers in the case of doubt.  
 Personal: Eye protector/face protector carry  
 Work clothes wearing  
 In waters and into the ground to arrive do not leave.

## 9. Physical and chemical properties

9.1 Appearance  
 Form: Liquid  
 Colour: Transparent  
 Odour: biting

9.2 Important information to the health and environmental protection as well as for security Method (67/548/EWG)

Boiling point: = 95°C / 203 °F  
 Flashpoint: = > 10 °C / 50 °F DIN 51755  
 Ignition temperature: = > 450 °C / 842 °F DIN 51794  
 Oxidizing properties: n.a.  
 Explosive properties: n.a.  
 Explosive limits: = lower: approx. 4,0 vol.-%, upper: approx. 32 vol.-%  
 Vapour pressure: = < 29 hPa bei 20 °C / 68 °F DIN 51757  
 Density: = approx. 0,93 g/cm<sup>3</sup> bei 20 °C / 68 °F  
 Solubility in water: = vitually insoluble  
 pH-value: n.a.  
 Distribution coefficient octanol / water: n.a.  
 Viscosity (dynamic): = ca. 200 mPa-s bei 23 °C / 73 °F Brookfield

9.3 Further information::  
 Thermal decomposition: > 150 °C ( 302 °F)

## 10 Stability and reactivity

10.1 Incompatibility with other substances: Product not increased temperatures suspend, since the education of inflammatory steams is possible.

10.2 Avoiding materails Reacted violently with strong oxidizing agents. Attacks some plastics.

10.3 Hazardous discomposition products: During correct storage and handling none admits. For the silicone portion available in substance is valid: Measurements at temperatures starting from approx. 150 °C/ 302°F resulted in that by oxidative dismantling a small quantity formaldehyde becomes.

## 11 Toxicological information

11.1 General information The product can be inhaled, swallowed and taken up over the skin. Can the skin and the mucous membranes

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11.2	Toxicological Test Acute toxicity: Acute orale toxicity(LC <sub>50</sub> ):  (LC <sub>L0</sub> )  Acute inhalative toxicity (TC <sub>L0</sub> ):  Acute dermal toxicity (LD <sub>50</sub> ):  Mutagenicity/Kanzerogenität/Reproduktionstoxizität Mutagenicity:  Kanzerogenität:  Reproduktionstoxizität/Teratorgenität:	<p>provoke. Symptoms of intoxication can vary after kind and duration of the effect: Headache, nausea, vomiting, swindle, unconsciousness, haemolysis as well as liver and kidney malfunctions. With aspiration it can come to the pulmonary edema and to pneumonia.</p> <p>Species rat 4300-5800 g/m<sup>3</sup>        Origin: Literature        The data refer to the component xylene</p> <p>Species human 50 mg/kg        Origin: Literature        The data refer to the component xylene</p> <p>Human 200 ppm → Nose and eye irritations, breath complaints.        Origin: Literature        The data refer to the component xylene</p> <p>Species rabbit 2000 g/m<sup>3</sup>        Origin: Literature        The data refer to the component xylene</p> <p>Different tests with technical xylene and individual isomers at microorganisms and mammalian cells as well as available in-vivo-tests did not result in referring to genotoxische effect of xylene.</p> <p>With technical xylene isomer mixtures accomplished oral sustained testings at rodents did not result in notion for a Kanzerogenitätsverdacht for xylene.</p> <p>In animal experiments damages of the descendants showed up with high xylene expositions. Note DFG: A risk of the fruit damage does not need to be feared on adherence to of the job limit values (MAK values) and the biological limit values (asking values). The silicone portion available in substance is after the conditions of our present knowledge neither mutagen, carcinogenically still teratogen.</p>
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## 12. Ecological information

12.1	Ökotoxizität: Behavior in sewage plants (bacteria toxicity: Breathing/increase inhibition)	Do not bring larger quantities into sewage plants.
12.2	Mobilität:	None data
12.3	Persistence and degradableness	
	Biological attack/ further informaiton:	The solvent component xylene is biologically easily degradable. The silicone portion is biologically not degradable

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12.4 Bio accumulation potential: A bio accumulation is not to be expected.  
 12.5 Other harmful effects: Damaging effect on water organisms. Drinking water endangerment with the penetration of larger quantities in underground and waters possible.  
 12.6 Further ökologische behavior: In waste water to arrive do not leave. In soil and waters to arrive do not leave.

### 13 Disposal consideration

13.1 Disposal/waste (product): Recommendation: Correct removal by burning in a special refuse combustion plant. Local official regulations are to be considered.  
 EAK/AVV-waser-key: The allocation of a waste key number in accordance with European refuse catalogue is to be made in arrangement with the official regulator.  
 13.2 Uncleaned packaging: Recommendation: Packing is completely to empty (drip-free, free of material, putty clean). Packing is considering the valid in each case local/national regulations prefers a re-use and/or an utilization supplying.

### 14 Transport Information

14.1 Land transport ADR/RID and GGVS/GGVE (Germany): 3 Kl.Code F1  
 GGVS/GGVE class: 3 Kl.Code F1  
 ADR/RID class: 33 Material-No. 1866 VG:II  
 Warning sign – hazard no.: Resin solution (Vapour pressure 50°C/ 122 °F maxim. 110 kPa)  
 Identification product: flammable liquid substance  
 Notice: Harzard label 3  
 Shipping symbol: D/E  
 LQ LQ 6 (5L / 30kg)  
 14.2 Binnenschifftransport ADN/ADNR: No data  
 Note:  
 14.3 Sea transport IMDG/GGVSee: 3 Label 3 UN-Nr. 1866 PG: II  
 IMDG/GGVSee-class; F-E, S-E  
 EmS-No. no  
 Marine pollutant: Resin solution  
 Proper shipping Name Flammable liquid  
 Technical name: 5 L / 30 kg  
 LTD. QTY:  
 14.4 Air transport ICAO-TI and IATA-DGR: 3 Label 3 UN-Nr. 1866 PG: II page: 234 (50. Ausg.)  
 ICAO/IATA-class: Resin solution  
 Proper shipping name: Flammable liquid  
 Technical name: PAC: 305 Max.net.: 5 L  
 Packing instruction:

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Excepted Quantities:	CAO: 307 Max.net.: 60 L
LTD.QTY:	30 mL / 500 mL
Air post:	1 L / 30 kg (Y305)
	Not permitted

## 15 Regulatory information:

- 15.1 Classification according to EEC-guidelines:  
 Hazardous material symbols and hazardous name:  
 Hazardous material symbols  
 hazardous name: **F Xn**  
 hazardous-determining components for labelling: Light flammable, injurious to health  
 Contains: Xylene
- R-Phrase: 11-20/21-38  
 S-Phrase: 7/9-16-25-29-33  
 Light flammable. Injurious to health with the inhalation and during contact with the skin. The skin provokes. Containers closely closed at a well ventilated place keep. From ignition sources keep away - do not smoke. Contact with the eyes avoids. Into drains to arrive do not leave. Measures against electrostatic loading meet.
- 15.2 National Prescription (Germany)  
 References to the restriction of occupation:  
 Incident regulation (12. BImSchV):  
 Water hazard class:  
 Technic instruction air (TA-air)  
 Classification after vbf (waived)
- Restrictions of occupation for young people after the law for the protection of young workers consider. Restrictions of occupation for becoming and satisfying mothers after the maternity protection guideline consider.  
 Appendix I - No. 7b (area of application: easy-inflammatory liquids).  
 WGK 2 = water-endangering (classification in accordance with appendix 4 VwVwS of 17.05.1999 in the current version).  
 Chapter 5.2.5 (organic materials, excluded powdery materials).  
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## 16 Other information

- 16.1 Wording of the R-sentences under section 3: Look at section 15.  
 16.2 Further Information:  
 Explanation of the abbreviations: n.a. = not applicable n.u. = not subject to:

### 16.3 Data original:

Guideline 1999/45/EG for the classification, packing and marking of dangerous preparations.  
 Guideline 67/548/EWG for the classification, packing and marking of dangerous materials, appendix I.

New data sheets for dangerous working materials after the dangerous material regulation, WEKA publishing house, collection of sheets and auxiliary supplies

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Characteristic data in terms of safety of chemical materials, exomed publishing house, collection of sheets with auxiliary supplies.

Manual of the refuse disposal, ecomed publishing house, collection of sheets with auxiliary supplies.

First general administrative regulation to the federal immission control law (technical guidance for the keeping clean of air - TA air).

VCI: Manual for the clustering of chemicals.

DFG German research council: MAK and asking values - list 2007

General administrative regulation to the change of the administrative regulation of water-endangering materials - VwVwS from 27 July 2005

Safety data sheets and further data of suppliers/manufacturers.

BGIA GESTIS Material data bank, on-line search Addr 2009, traffic publishing house, Fischer Duesseldorf  
IMDG code, Amdt 34-08, Storck publishing house Hamburg IATA hazardous materials regulations, 50.  
Edition, internationally air transports Association Montreal.

Data the given the product describe excluding the safety requirements of the Product/the products and support themselves on the today's conditions of our knowledge. They do not represent a warranty of characteristics of the descriptive product/the descriptive products in the sense of the legal guarantee regulations.