

Material Safety Data Sheet

According to decree (EC) No. 1907/2006

1. Product- and Company Identification

<u>Product name:</u>	Etching gel for DC Fissuresseal, art. No. 702258
<u>Manufacturer:</u>	DC Dental Central Großhandelsges.mbH Carl-Zeiss-Str.2 D-22946 Trittau, Germany
<u>Contact:</u>	Tel.: ++49 (0)4154/8437 0 Fax: ++49 (0)4154/8437 33

2. Hazard Identification

<u>Hazard-denotation:</u>	C Corrosive
<u>Special hazard for human and environment:</u>	R34 Causes Corrosion
<u>Additional hazard advices for human and environment:</u>	None.

3. Composition/Information on Ingredients

<u>Chemical Characterization:</u> Phosphorus gel					
Hazardous Ingredients:					
<u>Description:</u>	<u>CAS-Nr.:</u>	<u>EG-No.:</u>	<u>Classification:</u>	<u>R-phrases</u>	<u>Percentage %</u>
Phosphoric acid 37 %	7664-38-2	231-633-2	C	R34	85
Mthylene Blue	--	200-515-2	Xn	R22	0,003

4. First-Aid-Measures

<u>After skin contact:</u>	Wash off skin with plenty of water. Dab off with polyethylene englycole 400.
<u>After eye contact:</u>	Rinse eyes an inefficient time (min. 10 minutes) with water whil holding lids open. Contact ophthalmologist.
<u>After swallowing:</u>	After swallowing drink a lot of water. Do not cause vomttng. Contact immediately a doctor. No neutralization trials.

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5. Fire-fighting-measures

Suitable extinguish media:

Coordinate to environment.

Special hazards:

Not flammable. Through burning at surrounding area formation of hazard steams are possible. In case of burning phosphoroxides could develop.

Special protective equipment while fire-fighting:

Staying in the danger only with self-contained breathing apparatus. Avoid skin contact through keeping safety distance or wearing adequate protection clothes.

Other advices:

Beat down leakage steams with water.

6. Accidental Release Measures

Personal precautions:

Do not breath steams / aerosols. Avoid substance contact. Arrane for fresh air in closed rooms.

Environmental precautions:

Do not allow to get into drains.

Methods for cleaning up:

Cleaning up with liquidbonding and neutralizing material, for example Chemizorb® H+. To admit recycling. Aftercleaning.

7. Handling and storage

Handling

Informaion for safe handling:

Do only use acid-proofed equipment. Protection of user and patient through using acid-proofed equipment. This means protective goggles, rubbergloves and lab coat.

Information about fire- and explosion protection:

No special measures necessary.

Storage

Storage conditions:

Storage temperature: room temperature.

Storage conditions: 3 years at room temperature.

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8. Exposure Controls / Personal Protection

Work station limit values (AGW) Germany:

The subsequent values only refer to pure phosphoric acid.

ORTHO-PHOSPHORIC ACID, CAS No. 7664-38-2

Specification: TRGS 900 – Workstation limit values (D)

Value: 1 mg/m³

Top limitation: 2 exceeding factor twice in 15 Min.

PNCE and DNCL-values as to be possibly worked out in a preparation safety report do not exist.

Personal protective equipment:

The type of personal protective equipment has to be chosen work station specific in dependency of hazardous substance concentration and amount.

Breathing protection:

Not necessary.

Hand protection:

At full contact: Glove material: nitrile natural rubber; strength of coat: 0,11 mm;

time of break through: >480 min

At spray contact: Glove material: nitrile natural rubber; strength of coat: 0,11 mm;

time of break through: >480 min

Other protection measures:

Acid-proof protection cloth

Advices for hygienic at work station:

Change contaminated clothes immediately. Preventive skin protection. Wash hands and skin after finishing work.

9. Physical and Chemical Properties

Appearance: Paste.

Colour: Blue.

Odour: Acidulous.

Die nachfolgenden Werte beziehen sich auf reine Phosphorsäure.

Melting point: Ca. 21° C

Boiling point: Ca. 158° C

Flash point: Not applicable.

Flammability: Not flammable.

Explosion limits: Not applicable.

Solubility in water: At 20° C soluble.

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<u>Density at 20° C:</u>	1,71 g/cm ³
<u>Bulk density at 20° C:</u>	700 – 1150 kg/m ³
<u>Steam pressure at 20° C:</u>	2 hPa
<u>pH value (at 100 g/l (H₂O)):</u>	<0,5
<u>Viscosity kinematic:</u>	30,5 mm ² /S at 25°C

10. Stability and Reactivity

Conditions to avoid:

Strong heating.

Substances to avoid:

Alkali, metal oxides, metals, metal alloy: hydrogen can arise.

Hazardous decomposition products:

At burning: look at chapter 5.

Further information:

Hygroscopic; Incompatible with iron/ ferrous compounds, steel, aluminium and its compounds. At contact with metal hydrogen gas could accumulate (hazard explosion!).

11. Toxicological Information

The subsequent values only refer to pure phosphoric acid.

Acute toxicity:

LC₅₀ (inhalative, rat): >0,21 mg/l (4h) (based on pure substance)

LD₅₀ (dermal, rabbit): 2740 mg/kg (based on pure substance)

LD₅₀ (oral, rat): 1530 mg/kg (based on pure substance)

Specific Symptomes in animal experience:

Test on eye irritation (rabbit): Corrosion.

Test on skin irritation (rabbit): Corrosion.

Bacterial mutagenicity: Ames-test: negative.

Subacute unto chronic toxicity:

Experience with human: no sensitizing potential.

Kinetic of the toxic reaction:

according the new MSDS according to REACH, specifications about kinetic of the toxic reaction, metabolism of the substance and allocation of the substance in the human body must be mentioned at this place. Data for this is not available.

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Additional toxicological advices:

For the toxicological decisive component effect:

After inhaling of vapours: irritation appearance at breathing apparatus.

After skin contact: Corrosion.

After eye contact: Inflammation of conjunctiva, corrosion, hazard of blindness!

After swallowing: Corrosion, strong pain (hazard of perforation!).

Systemic effects: Shock, convulsions.

Further details:

The product has to be handled with the usual care when handling chemicals.

12. Ecological Information

The subsequent values only refer to pure phosphoric acid.

Biological decomposition:

Inorganic substance. Causes no oxygen consumption.

Ecotoxic effects:

Biological effects: Harmful effect to water organism. In thinning also corrosive. Harmful effects through pH suspension.

Fish toxicity:

Gambusia affinis LC₅₀: 138 mg/l (96h) (referring to pure substance).

Water organism LC₅₀: 100-1000 mg/l (96h) (referring to pure substance).

Bacteria toxicity: activated sludge EC₅₀: 270 mg/l (referring to pure substance).

Further detail to ecology:

Do not allow product to reach ground water, body of waters or sewage system!

Bioaccumulation potential:

No data available.

Effects of the determination of the PTB- and vPvB-report:

Endocrine disruption potential

If the material causes hormonal effects or prevents them is unknown to us.

13. Disposal Considerations

Substance / preparation:

To dispose of accordingly with notice of the local regulations of authority.

Disposal key according to AVV regulation:

06 01 04 (phosphoric acid and phosphorous acid)

Package:

Packages that are not contaminated can be recycled.

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14. Transport Information / Rules

Land transport ADR/RID

Classification:

Class: 8

UN-Number: 1805

Classification code: C

Description of the good: Etching gel

Hazard cause: Ortho-Phosphoric acid

Package:

Packaging group: not applicable, because it is not a flammable substance.

Hazard sheet: not applicable, because of small quantities.

Limited quantities: no information.

Maritime transport IMDG/GGVSea

Classification:

Class: 8

UN-Number: 1805

EmS: F-A S-B

Marine Pollutant: No

Description of the good: Etching gel

Hazard cause: phosphoric acid

Package:

Packaging group: not applicable, because it is not a flammable substance.

Hazard sheet: not applicable, because of small quantities.

Air transport ICAO-TI und IATA-DGR

Classification:

Class: 8

UN-Number: 1805

Classification code: C

Description of the good: Etching gel

Hazard cause: Ortho-Phosphoric acid

Package:

Packaging group: not applicable, because it is not a flammable substance.

Hazard sheet: not applicable, because of small quantities.

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15. Regulatory Information

Labelling according EU guidelines:

The product is to be labelled according to the EG-Rules/GefStoffV.

Identification-letter and hazard denotation of the product:

C Corrosive

Hazardous components requiring declaration / special labeling:

Contains phosphoric acid.

R-phrases:

R 34 Causes corrosions.

S-phrases:

S 26 Avoid contact with eyes.

S 26 If contacted with eyes rinse immediately with plenty of water

S 36 Wear adequate protection cloth at work.

S 37 Wear protection gloves.

S 39 Protection glasses / wear face mask.

S 45: At accident or illness contact immediately a doctor (if possible show this label)

Safety assessments:

Safety assessments for substances in this preparation were not executed

Water hazard class:

Water hazard class 1 (low hazardous to waters) according to VwVwS, Annex 4

Limits for employment:

in Germany employment limits for teenager (§22 JArbSchG) have to be followed.

16. Further Information

Further applicable EG Guidelines:

Guideline for preparation (1999/45/EC), at last changed by the guideline 2006/8/EC.

Substance Guideline (67/548/EWG), at last changed by the guideline 2006/121 EC.

REACH-Guideline (EC) No. 1907/2006

Manufacturer's suggested application restriction:

For dental use only

R-phrases that refer to section 3:

R 34 Causes corrosions.

Additional Information:

Origin: ¹ <http://www.baua.de>

² <http://www.arbeitssicherheit.de>

Some of the information presented and conclusions drawn herein are from sources other than direct test-data on the product itself.

The contents and format of this MSDS are in accordance with EEC Commission (EC) No. 1907 / 2006.

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