

KERR

Material Safety Data Sheet

in accordance with Community Regulation 2006/1907/EC (R.E.A.Ch.)

Revision Date: 31rd August 2009

SECTION 1

Product & Company identification

1.1 Product name

PERMLASTIC ADHESIVE

1.2 Uses/Application:

Dental Adhesive for impression trays.

1.3 Company (Name, address and info phone number)

KERR ITALIA S.r.l.

Via Passanti, 332

84018 Scafati (SA) - Italy

Free phone: 00-800-41-050-505

1.4 Emergency phone (according to communitarian directive 99/45/EC, article 17)

+39.081.8508.325 (08.00-17.00, European time, GMT+1)

E-mail address: safety@kerrhawe.com

SECTION 2

Hazard identification

2.1 Hazard classification (according to communitarian directives 67/548/EEC & 99/45/EC)

Highly Flammable; Harmful; Dangerous for environment.

2.2 Other hazard

Irritating to eyes.

SECTION 3

Composition/Information on Ingredients

(according to communitarian directives 67/548/EEC, 99/45/EC & 2001/58/EC)

3.1 Hazardous ingredients

HAZARDOUS INGREDIENTS	%	HAZARD SYMBOLS	RISK PHRASES	CAS N.	EINECS N.
Acetone	45-50	F, Xi	11-36-66-67	67-64-1	200-662-2
2-Butanone (MEK)	10-15	F, Xi	11-36-66-67	78-93-3	201-159-0
Toluene	10-15	F, Xn	11-63-48/20-65-38-67	108-88-3	203-625-9
Zinc Oxide (ZnO)	1-5	N	50/53	1314-13-2	215-222-5

3.2 Other non-hazardous ingredients

None.

SECTION 4**First aid measures**

- 4.1 Treatment for eye contact: Wash immediately with plenty of water. Consult immediately a physician.
- 4.2 Treatment for skin contact: Wash with soap and plenty of water. If irritation persists, consult a physician.
- 4.3 Treatment for inhalation (breathing): Provide fresh air. If not breathing, give artificial respiration. If breathing is difficult, consult immediately a physician.
- 4.4 Treatment for ingestion (swallowing): Consult immediately a physician. Induce vomiting only under physician instruction. Do not give anything to drink to unconscious persons; if conscious, administer milk or water.

SECTION 5**Fire-fighting Measures**

- 5.1 Suitable extinguishing media: Dry chemical, carbon dioxide, foam.
- 5.2 Forbidden extinguishing media: Unknown.
- 5.3 Special fire fighting measures: Fire-fighters should wear self contained breathing apparatus and full protective clothing.
- 5.4 Unusual fire and explosion hazards: Vapours are heavier than air, can travel distances along the ground and flashback at the source.
- 5.5 Special protection equipment: Helmet with safety shield and neck protection, positive pressure self-breathing apparatus, fire-proof clothes with bandages around arms, legs and waist.

SECTION 6**Accidental Release Measures**

- 6.1 Personal Precautions: Use precautions recommended in section 8.
- 6.2 Environmental Precautions: Due to small size of product package, spillage of high quantities of the material is an unlikely event. However the material should not be allowed to drain into sewers. Being hazardous for environment, contamination of water and soil has to be prevented.
- 6.3 Reclaiming Methods: Extinguish all ignition sources. Collect spilled material, cleanup residue and store in closed metal container. Dispose of in accordance with local regulations.

SECTION 7**Handling and Storage** (according to article 5 of communitarian directive 98/24/EC)

7.1 Handling Precautions: Handle away from ignition sources. Avoid excessive heat. Don't smoke.

7.2 Precautions in case of Fire and Explosion: Extinguish all ignition sources.

7.3 Storage Conditions: Keep in a cool place, away from flames and sparks. No smoking. Take precautionary measures against static discharges. Keep container closed when not in use.

7.4 Suggested container(s): Original containers provided by manufacturer.

7.5 Indication for Combined Storage: Avoid contact with strong oxidizing agents and acids.

7.6 Environmental precautions: Do not allow product to reach sewers and rivers.

7.7 Other Precautions: Use according to directions.

SECTION 8**Exposure controls/personal protection**

<u>8.1 Exposure Limits:</u>	(Acetone): <u>TWA</u> : 500 ppm (1188 mg/m ³); <u>STEL</u> : 750 ppm (1782 mg/m ³); (Toluene): <u>TWA</u> : 100 ppm; (2-Butanone): <u>TWA</u> : 200 ppm (590 mg/m ³); <u>STEL</u> : 300 ppm (885 mg/m ³); (ZnO) <u>TWA</u> : 0,6ppm (2 mg/m ³); <u>STEL</u> : 3 ppm (10 mg/m ³)
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8.2 Exposure control measures8.2.1 Precautionary Measures:

(according to communitarian directives 89/686/EEC & article 4 of 98/24/EC)

Ventilation:	<u>Local Exhaust Ventilation:</u> Sufficient to keep vapour concentration below exposure limits. <u>Special Ventilation:</u> None. <u>Mechanical (General) Ventilation:</u> None <u>Other Ventilation:</u> None.
Respiratory Protection:	When vapour concentration exceeds exposure limits: use self-contained breathing apparatus (or mask with filter against organic vapours).
Hands Protection:	Impervious gloves, polyethylene or polytetrafluorethylene (Teflon) type.
Eyes Protection:	Safety glasses may be used.
Skin Protection:	Handle in accordance with good personal hygiene and safety practices. These practices include avoiding unnecessary exposure.
Other Protective Equipments:	Eyewash. It would be better use a lab coat.

Measures listed in this paragraph are to be considered as indications and NOT prescriptions (89/656/EEC)

8.2.2 Environment exposure control measures

Not Applicable.

SECTION 9**Physical and Chemical Properties**9.1 General information

Appearance: Brown liquid (syrup).

Odour: Organic solvent odour.

9.2 Information related to health, safety and environment

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Material Safety Data Sheet for: PERMLASTIC ADHESIVE

<p><u>pH</u>: Not established (N/E)</p> <p><u>Boiling point</u>: 55,6°C</p> <p><u>Flash point</u>: -18°C (Closed cup)</p> <p><u>Flammability</u>: Yes.</p> <p><u>Lower Explosivity Limit (L.E.L.)</u>: 2,6</p> <p><u>Upper Explosivity Limit (U.E.L.)</u>: 12,8</p> <p><u>Oxidizing properties</u>: None</p> <p><u>Vapour pressure</u>: 180 mm of Hg</p>	<p><u>Relative density</u>: N/E</p> <p><u>Specific gravity</u>: 0,87 g/ml</p> <p><u>Solubility</u>: Not determined (N/D)</p> <p><u>Partition coefficient n-octanol/water</u>: N/E</p> <p><u>Viscosity</u>: 175-300 mPa</p> <p><u>Vapour density (air = 1)</u>: 2,0</p> <p><u>Evaporation rate (n-butane = 1)</u>: 1,9</p> <p><u>Melting point</u>: Not applicable</p>
<p><i>9.3 Other information (according to communitarian directive 94/9/EC):</i></p>	
<p><u>Miscibility</u>: N/D</p> <p><u>Solubility in Lipids</u>: N/D</p>	<p><u>Conducibility</u>: N/A</p> <p><u>Gases Group</u>: N/A</p>

SECTION 10

Stability and Reactivity

Stability: Stable if stored as directed.

10.1 Conditions to avoid: Heat and ignition sources.

10.2 Materials to avoid (incompatibility): Avoid contact with acids and strong oxidizing agents.

10.3 Hazardous decomposition products: Thermal decomposition or burning may produce carbon monoxide, carbon dioxide, aldehydes, ketones and cyanidric acid.

Other precautions:

Hazardous Polymerization Products: None.

Safety significance in case of change in physical appearance: None.

Stabilizers: No stabilizers are present in this product.

SECTION 11**Toxicological Information**

CMR effects (Carcinogenicity, Mutagenicity and toxicity for reproduction):

None

Effects and hazards of eye contact: May cause irritation: symptoms may include edema, rash, smarting, lachrymation and accommodation inconveniences.

Effects and hazards of skin contact: Prolonged or repeated skin contact will defat the skin and cause irritation and possible dermatitis, erythema, edema, itch and dryness of the skin, including cracking.

Effects and hazards of Inhalation (Breathing): May cause depression of central nervous system (cephalea, dizziness, drowsiness, coordination deficiency, reflection reduction, speak confusedly, stunned condition and unconscious) and irritation to the upper respiratory tract (pain to nose and throat, cough, sneeze).

Effects and hazards of Ingestion (Swallowing): May cause irritation of gastrointestinal tissues: symptoms may include pain, vomit, nausea, tautness of abdomen when pressed, blood in vomit and faeces.

Effects for prolonged Exposure: Pneumonia from inhalation: symptoms may be cough, respiratory difficulty, dyspnoea, blood in expectoration and pneumonia that may be mortal.

Toxic-kinetic effects: Unknown.

Effects on metabolism: Unknown.

Toxicological data for ingredients:

TOLUENE	LD ₅₀ (oral rat)	5000 mg/Kg
	LD ₅₀ (skin rabbit)	12124 mg/Kg
	LC ₅₀ (inhalation rat/4hrs)	5320 ppm
ACETONE	LD ₅₀ (oral rat)	5800 mg/Kg
	LD ₅₀ (skin rabbit)	20000 mg/Kg
	LC ₅₀ (inhalation rat/4hrs)	150 ppm
2-BUTANONE (MethylEthylKetone - MEK)	LD ₅₀ (oral rat)	2737 mg/Kg
	LD ₅₀ (skin rabbit)	5000 mg/Kg
ZnO (Acute toxicity):	LD ₅₀ (oral mouse)	7950 mg/Kg
	LD ₅₀ (skin rat)	> 2000 mg/Kg
	LD _{Lo} (oral human)	500 mg/Kg
	LC ₅₀ (inhalation rat/4hrs)	> 5700 mg/m ³ (4 hrs)

SECTION 12**Ecological Information**

Refer to data regarding Zinc Oxide.

12.1 Eco-toxicity: Not available

12.2 Mobility: Not available

12.3 Persistence and degradability: Not available

12.4 Bioaccumulative potential: Not available

12.5 Results of PBT (Persistent Bio-Toxicity) assessment: Not available

12.6 Other adverse effects: Not available

Aquatic toxicity data for ingredients:

TOLUENE	LC ₅₀ (Fishes)	63 mg/l
2-BUTANONE (MEK)	LC ₅₀ (Fishes)	5 mg/l
ZnO (Acute toxicity):	EC ₅₀ (Daphnia magna)	> 1000 mg/l (48 hrs)
	LC ₅₀ (Oncorhynchus mykiss)	1,1 mg/l (96 hrs)
	LC ₅₀ (Lepomis macrochirus)	> 320 mg/l (96 hrs)
	LC ₅₀ (Pimephales promelas)	2246 mg/l (96 hrs)
	EC ₅₀ (Selenastrum capricornutum)	0,17 mg/l (72 hr; Lisec 1997)

SECTION 13

Disposal considerations

Dispose of in accordance with local regulations. The product must be disposed as hazardous waste.

SECTION 14

Transport information

14.1 Sea transportation (IMDG)

UN number: 1133 Class: 3 Packing group: II EMS-No: F-E, S-D
Stowage/segregation: Category B; Limited Quantity: 5 Lt
Proper shipping name: Adhesives containing flammable liquid



14.2 Air transportation (ICAO/IATA)

UN number: 1133 Class: 3 Packing group: II Label: 3 (Flammable liquid)
Maximum quantities: 5 Lt (Passenger Aircraft); 60 Lt (Cargo Aircraft only)
Limited Quantity: 1 Lt Proper shipping name: Adhesives containing flammable liquid

14.3 Transportation by Road/Railway (RID/ADR)

UN number: 1133 Class: 3 Packing group: II (5°b); Hazard identific. n°: 33 Label: 3
Limited Quantity LQ6: (5 Lt/30 Kg for combined, 1 Lt/20Kg for bandaged trays/pallets).
Proper shipping name: Adhesives containing flammable liquid.

SECTION 15 (Classification according to communitarian directives 67/548/EEC & 99/45/EC)

Regulatory information

Hazard labelling not required.

This product is an exempted medical device (directive 1999/45/EC, article 1, paragraph 5g).

SECTION 16**Other information**16.1 Risk phrases of all ingredients

- 48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
 65 Harmful: may cause lung damage if swallowed.
 11 Highly flammable.
 50/53 Very toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.
 63 Possible risk of harm to the unborn child.
 38 Irritating to skin.
 67 Vapours may cause drowsiness and dizziness.

16.1.1 Safety phrases of all ingredients

- 2 Keep out of the reach of children.
 16 Keep away from sources of ignition.
 23 Do not breathe vapours.
 24 Avoid contact with skin.
 37 Wear suitable gloves.
 61 Avoid release to the environment. Refer to special instructions/safety data sheet.
 62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

16.2 Sources of key data used to compile the Safety Data Sheet:

European Chemicals Bureau (ECB – www.ecb.jrc.it)

European chemical Substances Information System (ESIS - www.ecb.jrc.it/esis)

A.C.G.I.H. (www.acgih.org)

N.I.O.S.H. (www.cdc.gov/niosh/)

O.S.H.A. (www.osha.gov/)

U.E. (www.europa.eu/index_it.htm)

I.A.R.C. (www.iarc.fr/)

N.T.P. (www.ntp.niehs.nih.gov)

European Community Directives:

67/548/EEC:	Classification, packaging and labelling of dangerous substances.
99/45/EC:	Directive concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations.
2001/58/EC:	Second amendment of directive 91/155/EEC for the definition of a detailed arrangement of specific information relating to dangerous preparations (art. 14 of 99/45/EC) and substances (art. 27 of 67/548/EEC).
89/656/EEC:	Directive on the minimum health and safety requirements for the use by workers of personal protective equipment at the workplace (third individual directive within the meaning of Article 16 (1) of Directive 89/391/EEC).
89/686/EEC:	Approximation of the laws of the Member States relating to personal protective equipment.
94/9/EC:	Approximation of the laws of the Member States concerning equipment and protective systems intended for use in potentially explosive atmospheres
98/24/EC:	Protection of the health and safety of workers from the risks related to chemical agents at work.

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(R.E.A.Ch.)

CAUTION: PRODUCT FOR PROFESSIONAL USE

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