

KERR

Material Safety Data Sheet

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

Revision Date: 03rd May 2009

SECTION 1

Product & Company identification

1.1 Product name

TAB (2000) LIQUID REGULAR

1.2 Uses/Application:

Temporary Crown & Bridge material.

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; Irritating; Sensitizing.

2.2 Other hazard

None.

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.
Methyl Methacrylate monomer (MMA)	> 90	F, Xi	11-36/37/38-43	80-62-6	201-297-1
Ethylene dimethacrylate	< 10	Xi	37-43	97-90-5	202-617-2
N,N dimethyl p-toluidine (DMPT)	< 1	T	23/24/25-33-52/53	99-97-8	202-805-4
Hydroquinone	< 0,1	Xn; N	22-40-41-43-68-50	123-31-9	204-617-8

3.2 Other non-hazardous ingredients

None.

SECTION 4**First aid measures**

- 4.1 Treatment for eye contact: Immediately flush eyes with water for at least 15 minutes. Call a physician.
- 4.2 Treatment for skin contact: Wash skin with soap and water.
- 4.3 Treatment for inhalation (breathing): Move to fresh air. Administer oxygen or give artificial respiration as required.
- 4.4 Treatment for ingestion (swallowing): In the unlikely event of ingestion, call a physician immediately and show this safety data sheet. **FOR PHYSICIAN:** give out a glass of paraffin oil. Inhalation of a small quantity of vomit containing material may cause lung damage. If gastrolysis occurs, it's better to intubate patient.

SECTION 5**Fire-fighting Measures**

- 5.1 Suitable extinguishing media: Water spray (only from safety distance), Carbon dioxide, foam and dry chemical.
- 5.2 Forbidden extinguishing media: Water stream.
- 5.3 Special fire fighting measures: Keep away from flames and other heat sources. Cool exposed material to high temperatures with water spray. Vapors are heavier than air and may travel to ignition source.
- 5.4 Unusual fire and explosion hazards: Sealed containers exposed to elevated temperatures may rupture explosively due to polymerization. Vapours are heavier than air and may travel to ignition sources.
- 5.5 Special protection equipment: Sealed overall for liquid and gases; self contained breathing apparatus.

SECTION 6**Accidental Release Measures**

- 6.1 Personal Precautions: For high vapour concentration: Evacuate area, eliminate ignition sources. Absorb spills with inert material and transfer to suitable container for disposal. Refer to precautional measures reported in other sections.
- 6.2 Environmental Precautions: Material should not be allowed to drain into sewers.
- 6.3 Reclaiming Methods: Incinerate liquid in proper equipment (sand, earth, vermiculite, diatomaceous earth as absorbent materials). 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: Keep away from ignition sources. Avoid exposure to excessive heat.

7.2 Precautions in case of Fire and Explosion: Extinguish all ignition sources. Vapours may produce explosive mixtures with air. Product can be electrostatically charged. Use always with grounded equipments.

7.3 Storage Conditions: Store in a cool, dark place and in containers tightly closed. Keep away from ignition sources.

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

7.5 Indication for Combined Storage: Avoid contact with oxidizing agents, peroxides, catalyzers, amines and heavy metals compounds.

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

7.7 Other Precautions: Use according to directions. No smoke.

SECTION 8**Exposure controls/personal protection**

8.1 Exposure Limits: (MMA): TWA: 50 ppm (205 mg/m³); TLV: 100 ppm (410 mg/m³);

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 threshold limits: use self-contained breathing apparatus.
Hands Protection:	Impervious gloves, butylic rubber or neoprene type
Eyes Protection:	Safety glasses.
Skin Protection:	Handle in accordance with good personal hygiene and safety practices. These practices include avoiding unnecessary exposure to uncured material.
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	
<i>9.1 General information</i>	
<u>Appearance</u> : Colourless liquid.	<u>Odour</u> : Acrid, fruity odour.
<i>9.2 Information related to health, safety and environment</i>	
<u>pH</u> : Not applicable (N/A)	<u>Relative density</u> : >1 g/ml @ 20°C (MMA)
<u>Boiling point</u> : 100°C	<u>Specific gravity</u> : 0,943 g/ml @ 20°C
<u>Flash point</u> : 10°C (TCC)	<u>Solubility</u> : 15,9 g/l (in water)
<u>Flammability</u> : Yes.	<u>Partition coefficient n-octanol/water</u> : 1,38 (MMA)
<u>Lower Explosivity Limit (L.E.L.)</u> : 2,1	<u>Viscosity</u> : 0,63 mPa/sec @ 20°C (Brookfield)
<u>Upper Explosivity Limit (U.E.L.)</u> : 12,5	<u>Vapour density (air = 1)</u> : >1 @ 20°C (MMA)
<u>Oxidizing properties</u> : None	<u>Evaporation rate (n-butane = 1)</u> : 3,1 (MMA)
<u>Vapour pressure</u> : 40mBar @ 20°C	<u>Melting point</u> : -48,2°C (MMA)
<i>9.3 Other information (according to communitarian directive 94/9/EC):</i>	
<u>Miscibility</u> : Not determined	<u>Conducibility</u> : N/A
<u>Solubility in Lipids</u> : Not determined	<u>Gases Group</u> : N/A

SECTION 10 Stability and Reactivity
<u>Stability</u> : Stable if stored as directed.
<u>10.1 Conditions to avoid</u> : Heat, light, aging, contamination and ignition sources.
<u>10.2 Materials to avoid (incompatibility)</u> : Reducing and oxidizing agents. Material has strong solvent action and can soften paint and rubber.
<u>10.3 Hazardous decomposition products</u> : Carbon monoxide, carbon dioxide, smoke.
<u>Other precautions</u> :
<u>Hazardous Polymerization Products</u> : None.
<u>Safety significance in case of change in physical appearance</u> : None.
<u>Stabilizers</u> : The product is stabilized with Hydroquinone (see also section 3.1).

SECTION 11**Toxicological Information**

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

No

Effects and hazards of eye contact: Liquid or high vapour concentration may cause irritation.

Effects and hazards of skin contact: May cause skin rashes.

Effects and hazards of Inhalation (Breathing): Prolonged exposition may lead to headaches, nausea, drowsiness and unconsciousness.

Effects and hazards of Ingestion (Swallowing): May cause gastro-intestinal distress.

Effects for prolonged Exposure: A prolonged exposure to the product may cause strong headaches, nausea, unconsciousness, drowsiness and anorexia.

Toxic-kinetic effects: Unknown.

Effects on metabolism: Unknown.

Toxicological data for ingredients:

Methyl Methacrylate monomer	LD ₅₀ (oral rat)	> 5000 mg/Kg (OCSE 401)
	LD ₅₀ (skin rabbit)	> 5000 mg/Kg
	LC ₅₀ (inhalation rat/4hrs)	> 29,8 mg/l
DMPT	LC ₅₀ (inhalation rat/4hrs)	1400 mg/m ³
Ethylene dimethacrylate	LD ₅₀ (oral rat)	3300 mg/Kg
	LD ₅₀ (oral mouse)	2000 mg/Kg
Hydroquinone	LD ₅₀ (oral rat)	302 mg/Kg
	LD ₅₀ (skin mammal)	5970 mg/Kg

SECTION 12**Ecological Information**

This product has not known ecological hazardous effects.

12.1 Eco-toxicity: Not available

12.2 Mobility: Not available

12.3 Persistence and degradability: 32% at 28 days

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:

Methyl Methacrylate monomer Easily biodegradable: 94% (OCSE 301 C, 14 days)	LC ₅₀ (Oncorhynchus mykiss, 96h)	> 79 mg/l (OCSE 203, GLP)
	EC ₅₀ (Daphnia magna, 48h)	69 mg/l (OCSE 202, 48 hours)
	NOEC (Daphnia magna, 21 days)	37 mg/l (OCSE 202/2, flow)
	EC ₃ (scenedesmus quadricauda)	37 mg/l (DIN 38412/9, 8days)
	EC ₅₀ (selenastrum capricornutum)	170 mg/l (OCSE 201, 96 hours)
	EC ₀ (pseudomonas putida)	100 mg/l

SECTION 13**Disposal considerations**

Dispose of in accordance of local regulations.

SECTION 14**Transport information**14.1 Sea transportation (IMDG)

UN number: 1247 Class: 3 Packing group: II EMS-No: F-E, S-D

Stowage/segregation: Category B; Limited Quantity: 1lt

Proper shipping name: Methyl Methacrylate monomer, stabilized

14.2 Air transportation (ICAO/IATA)

UN number: 1247 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: Methyl Methacrylate monomer, stabilized

14.3 Transportation by Road/Railway (RID/ADR)

UN number: 1247 Class: 3 Packing group: II; Hazard identific. n°: 339 Label: 3

Proper shipping name: Methyl Methacrylate Monomer, stabilized

Limited Quantity LQ4: (3lt/30 Kg for combined, 1lt/20Kg for bandaged trays/pallets).

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

- 11 Highly flammable.
- 43 May cause sensitisation by skin contact.
- 36/37/38 Irritating to eyes, respiratory system and skin.
- 22 Harmful if swallowed.
- 23/24/25 Toxic by inhalation, in contact with the skin and if swallowed.
- 33 Danger of cumulative effects.
- 40 Limited evidence of a carcinogenic effect.
- 41 Risk of serious damage to eyes.
- 50 Very toxic to aquatic organisms.

52/53 Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment.
68 Possible risk of irreversible effects.

16.1.1 Safety phrases of all ingredients

2 Keep out of the reach of children.
16 Keep away from sources of ignition.
24/25 Avoid contact with skin and eyes.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
37/39 Wear suitable gloves and eye/face protection.
46 If swallowed, 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.

Document modification history: First version in compliance of Community Regulation 2006/1907/EC (R.E.A.Ch.)

CAUTION: PRODUCT FOR PROFESSIONAL USE

The information on this Safety Sheet is based on presently available data and to our best knowledge for the correct handling of the product under normal conditions. Any use of this product in any way not indicated on this Sheet or the use of this product together with any other process/procedure will be exclusively under the user's responsibility. This document does not constitute explicit or implicit warranty of product quality or fitness for a particular purpose.