1 Identification of the mixture and of the company/undertaking

Product name: *ESTETIC S liquid, ESTETIC SPECIAL liquid, ESTETIC SPECIAL monomer.*
Use of the mixture: *Liquid component for self-curing resin used in dental prosthetics.*
Company/undertaking identification
Manufacturer: *Wytwórnia Zębów Sztucznych "WIEDENT" Sp. Jawna, 94-104 Łódź, Obywatelska Str 187/189, tel. +48 (42) 640 48 70, fax +48 (42) 688 33 84, e-mail:office@wiedent.com.pl*
E-mail address of person responsible for this SDS: a.suskiewicz@wiedent.com.pl
Emergency telephone number: *+48 (42) 640 48 70*

2 Hazards identification

Classification according to dangerous product regulations incl. Directive 1999/45/EC.
Physicochemical hazards:
F – Highly flammable product with R11 – Highly flammable
To people:
Xi – Irritant with R37/38 – Irritating to respiratory system and skin
R43 - May cause sensitisation by skin contact
To the environment:
Mixture is not classified as hazardous
See also point 12.
Additional information:
-

3 Composition/information on ingredients

Substance name	Concentration In % vol.	CAS number	EC number	EEC number	Classification
Methyl methacrylate	>99,0	80-62-6	201-297-1	607-035-00-6	F; R11 Xi; R37/38 R43 Note D
N,*N*-dimethyl-*p*-toluidine	<1	99-97-8	202-805-4	612-056-00-9	T; R23/24/25 R33 R52/53 Note C
Substances are classified according to table 3.2 in Annex VI to regulation (EC) on classification, labelling and packaging of substances and mixtures in January 2009.					

For complete wording of the R-phrases, refer to point 16.

4 First-aid measures

Inhalation: *Remove person from danger area, supply with fresh air and seek medical advice.*
Eye contact: *Rinse immediately with plenty of water, lifting lower and upper eyelids occasionally. Get medical attention.*
Skin contact: *Wash thoroughly with water and soap – remove contaminated clothing immediately. If skin irritation occurs (redness, blisters, etc.), consult doctor.*
Ingestion: *Do not induce vomiting. Immediately rinse mouth and drink plenty of water (200-300 ml). Immediately consult doctor. Show this container or label.*

5 Fire-fighting measures

Suitable extinguishing media: *foam, ABC powder, BC powder, carbon dioxide (CO_2).*
Extinguishing media, which must not be used for safety reasons: *water, D powder.*
Special exposure hazards arising from the mixture, combustion products, resulting gases:
Development of explosive vapours/air mixture possible.

Special protective equipment for fire-fighters: *depending on intensivity of fire wear full protective clothing and approved self-contained breathing apparatus with independent air supply.*
Further information: *dispose of used extinguishing media according to official regulations.*

6 Accidental release measures

Personal precautions: *Remove all sources of ignition. Avoid contact with skin. Ensure sufficient protection of respiratory tracts.*
Environmental measures: *Prevent from entering drainage system. Prevent surface and ground-water infiltration, as well as ground penetration. In case of contamination of drains, streams, watercourses etc. inform competent authority.*
Methods for cleaning-up*: Collect using absorbent material (e.g. sand, kieselgur, sawdust etc.) and transfer to properly labelled, sealed drums for safe disposal according to point 13.Small amounts wipe by paper towel. Flush contaminated areas with water.*

7 Handling and storage

Handling: *Use in well-ventilated areas away from any sources of flames, sparks, ignition etc. Do not smoke. Eating, drinking, as well as food storage is prohibited in work- room. Use working methods according to operating instructions. Avoid contact with eyes and skin.*
Storage: *Store in the closed, original container in temperature <30°C. Store in a dry, cool and well ventilated area away from any sources of ignition.*
Specific uses: *For repairing dentures and orthodontics bases, for making temporary crowns and bridges. Do not use in heat-curing process.*

8 Exposure controls/personal protection

Additional technical measures:
Ensure good ventilation. This can be achieved by local suction or general air extraction. If this is insufficient to maintain the concentration under WEL, suitable breathing protection should be worn.
Exposure standards:

Methyl methacrylate
USA:
ACGiH (TLV-TWA) – 210 mg/m^3; TLV-STEL - 410 mg/m^3
Germany - 210 mg/m^3;
Poland
TLV-TWA - 50 mg/m^3
STEL – 400 mg/m^3

N,N-dimethyl-*p*-toluidine
Not established

Biological limit values:
Not allocated.
Individual protection measures:
Remove immediately contaminated clothing. Wash hands before breaks and at end of work. Eating, drinking and smoking is prohibited in work-room. Avoid contact with skin and eyes. Avoid inhalation.
Respiratory protection:
Under short- term exposure to low concentrations worn respirator with filter A. For emergencies or instances where the exposure levels are not known use respirator with independent air supply.
Hand protection:
Wear protective gloves in butyl rubber. Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer. In the case of mixtures the resistance of glove material cannot be calculated in advance so it has to be tested before use. The exact breakthrough time of the glove

material can be requested from the protective glove manufacturer and must be observed. Protective hand cream recommended.

Eye protection:

Normally not necessary.

Skin protection :

Depending of exposure, light protective working garments, long-sleeved, safety shoes etc.

9 Physical and chemical properties

Methyl methacrylate

Appearance:	*liquid*
Colour:	*Colourless*
Odour :	*Slight – esters of methacrylate acids*
pH:	*No data*
Boiling temperature:	*100,3 °C*
Melting temperature:	*-48,2 °C*
Flash point:	*10 °C*
Auto flammability temperature:	*430 °C*
Explosive limits:	
Upper	*12,5 % vol.*
Lower	*2,1 % vol.*
Vapour pressure:	
at 20 °C	*38,7 mbar*
at 30 °C	*66,7 mbar*
at 50 °C	*166,7 mbar*
Relative density:	
at 20 °C	*943 kg/m^3*
Solubility:	
Water	*slightly soluble - 15,9 g/l at 20 °C*
Organic solvents	*miscible with majority of organic solvents.*
Coefficient n-octanol/water:	*1,38*

10 Stability and reactivity

Stability: *Stable under normal storage and handling conditions. Product is stabilized.*

Conditions to avoid: *At temperature above 30 °C or after life-time product may polymerise. Polymerisation is exothermic and may be violent.*

Materials, to avoid: *Radical initiators, ions of heavy metals, reductors.*

Hazardous reactions: *Hazardous polymerisation*

Hazardous decomposition products: *Not forming under normal handling. See also point 5.*

11 Toxicological information

Methyl methacrylate

Acute toxicity

LD_{50} per os (rat) > 5000 mg/kg

LC_{50} inhal. (rat – 4h) – 29,8 mg/l

LD_{50} dermal (rabbit) > 5000 mg/kg

Eye and skin irritation:

Rabbit 24 h – no irritating

Methyl methacrylate was not mutagenic, carcinogenic, or teratogenic and did not show reproductive effects in animal studies.

N,N-*dimethyl*-p-*toluidine*

Acute toxicity:

LD_{50} per os (rat) - 500 mg/kg

Inhal (rat) – no data
Skin irritation
Rabbit, 24 h – no irritating
Eye irritation
Rabbit, 24 h – may irritating
No data about mutagenic, carcinogenic, or teratogenic and reproductive effects.
Different allergenic reactions were observed in humans exposed to methyl methacrylate or N,N-*dimethyl*-p-*toluidine - headaches, eye irritation, skin diseases.*
Avoid contact with skin. Do not inhale vapours.

12 Ecological information

Methyl methacrylate
Biodegradation – ready biodegradable - 94 % 14 d OECD 301C
Aquatic toxicity
Fish (Oncorhynchus mykiss – 96h) - LC_{50}>79 mg/l
Water flea (Daphnia magna – 21 d) – NOEC - 37 mg/l
(Daphnia magna – 48 h) – EC_{50} - 69 mg/l
Algal toxicity (Scenedesmus quadricauda – 9,8 d) – EC_3 – 37 mg/l
(Selenastrum capricornutum – 96 h) – EC_{50} – 170 mg/l
Bacterium (Pseudomonas putida) – EC_0 – 100 mg/l
N,N-*dimethyl*-p-*toluidine*
Biodegradation – not readily biodegradable – 5 % BOD
Aquatic toxicity
Fish (Brachydanio rerio – 96h) - LC_{50} – 100 mg/l
Water flea – no data
Algal toxicity - no data
Bacterium - no data
Prevent penetration into sewage system, surface and ground-water infiltration as well as ground penetration.

13 Disposal considerations

Do not allow to sewers. Do not contaminate watercourses and soil.
Classification of wastes according to Waste Directive 2006/12/EC of The European Parliament and of The Council of 5 April 2006 on waste
Hazardous Waste Directive 91/689/EC
Commission Decision on the list of the most common wastes and of hazardous waste (EWC2002) 2000/532/EC and Revised list 2001/118/EC (EWL)
EC disposal code:
15 01 10 - packaging containing residues of or contaminated by dangerous substances*
16 03 05 - organic wastes containing dangerous substances*
** - hazardous waste*
Pay attention to local and national official regulations.

14 Transport information

Road (ADR) / Rail (RID) transport

Name:	*Methyl methacrylate, monomer, stabilized*
Class/ Classification code:	*3/F1*
Packing group:	*II*
Label:	*3*
Limited quantities:	*LQ4*
Packing instructions:	***ADR**-P001, IBC02, R001; **RID**-P001, DPPL02, R001*
UN number:	*1247*
Number of hazard	*339*

Air (IATA/ICAO) transport

Name:	*Methyl methacrylate, monomer, stabilized*
Class:	*3/F1*
Packing group:	*II*
Label:	*3*
Limited quantities:	*LTDQTY*
Packing instructions:	*PG2*
UN number:	*1247*
Number of hazard	*339*

15 Regulatory information

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

Labelling:

Symbols:

F — *Highly flammable*

Xi — *Irritant*

Risk phrases:
R11 – Highly flammable
R37/38 – Irritating to respiratory system and skin
R43 – May cause sensitisation by skin contact
Safety phrases:
S2 - Keep out of the reach of children.
S9 - Keep container in a well-ventilated place.
S16 - Keep away from sources of ignition.
S24 - Avoid contact with skin.
S37 - Wear suitable gloves.
S46 - If swallowed, seek medical advice immediately and show this container or label.

16 Other information

Text of R phrases mentioned in point 3:
R11 – Highly flammable
R23/24/25 – Toxic by inhalation, in contact with skin and if swallowed
R33 – Danger of cumulative effects
R37/38 – Irritating to respiratory system and skin
R43 – May cause sensitisation by skin contact
R52/53 – Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.