

Material Safety Data Sheet According to 91/155 EC

Trade name: **New Outline Liquid**

Printing date 28.05.2008

Version 2

1 Identification of substance:

- Product details:
- Trade name: New Outline Liquid
- Article number: 1610....
- Application of the substance / the preparation: see point 2)
- Manufacturer / Supplier:
anax dent GmbH Olgastrasse 120A D-70180 Stuttgart
Tel. 0049 711 620092.0 Fax 0049 711 620092.29
- Further information obtainable from: Andreas Kopietz
e-mail: akopietz@anaxdent.com

2 Composition / Data on components:

Chemical characterization

- Description: Liquid based on methacryl acid ester, containing an activator, used for the production of temporary crowns and bridges in dental medicine.

Dangerous components:			
CAS: 80-62-6 EINECS: 201-297-1	methyl methacrylate	 Xi,  F; R 11-37/38-43	50-75%
CAS: 142-09-6 EINECS: 205-521-9	n-Hexylmethacrylat	 Xi; R 36/37/38	2.5-10%

- Additional information:
For the wording of the listed risk phrases refer to section 16.

3 Hazard description



Xi Irritant, F Highly flammable

- Information concerning to particular hazards to man and environment:
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
R 11 Highly flammable.
R 37/38 Irritating to respiratory system and skin.
R 43 May cause sensitization by skin contact.
- Classification system
The classification is according to the latest editions of the EU-lists, end extended by company and literature data.

4 First aid measures

- General information: Immediately remove any clothing soiled by the product.
- After inhalation Supply fresh air; consult doctor in case of complaints.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.

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<p>If skin irritation continues, consult a doctor.</p> <ul style="list-style-type: none">• After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.• After swallowing: Rinse out mouth and then drink plenty of water. Do not induce vomiting; call for medical help immediately.
<p>5 Fire fighting measures</p> <ul style="list-style-type: none">• Suitable extinguishing agents: Carbon dioxide, Fire-extinguishing powder, Foam, Water spray.• For safety reasons unsuitable extinguishing agents: Water with full jet.• Protective equipment: Wear self-contained respiratory protective device.
<p>6 Accidental release measures</p> <ul style="list-style-type: none">• Person-related safety precautions: Ensure adequate ventilation. Wear protective clothing. Keep away from ignition sources.• Measures for environmental protection: Do not allow to enter sewers/ surface or ground water.• Measures for cleaning/collecting: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.• Dispose of the material collected according to regulations.• Additional information: See Section 13 for disposal information.
<p>7 Handling and storage</p> <p>Handling</p> <ul style="list-style-type: none">• Information for safe handling: Keep receptacles tightly sealed. Keep away from heat and direct sunlight. Ensure good ventilation/exhaustion at the workplace.• Information about fire - and explosion protection: Keep ignition sources away - Do not smoke. Protect against electrostatic charges. Fumes can combine with air to form an explosive mixture. <p>Storage</p> <ul style="list-style-type: none">• Requirements to be met by storerooms and receptacles: Store in a cool location.• Information about storage in one common storage facility: Store away from foodstuffs.• Further information about storage conditions: Keep receptacle tightly sealed. Store in cool, dry conditions in well sealed receptacles. Protect from exposure to the light.• Storage class: Not determined

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8 Exposure controls and personal protection gear

- Additional information about design of technical facilities:
No further data; see item 7.

Ingredients with limit values that require monitoring at the workplace:	
80-62-6 methyl methacrylate	
OEL	Short-term value: 416 mg/m ³ , 100 ppm Long-term value: 208 mg/m ³ , 50 ppm

- Additional information: The lists valid during the making were used as basis.
- Personal protective equipment
- General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- Respiratory protection: Not necessary if room is well-ventilated.
Use suitable respiratory protective device when high concentrations are present.
- Protection of hands: Protective gloves.
- Material of gloves Butyl rubber, BR
- Penetration time of glove material: The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- Eye protection: Safety glasses

9 Physical and chemical properties:

- General information
Form: Fluid
Colour: Clear
Odour: Ester-like
- Change in condition
Melting point / Melting range: -48°C
Boiling point / Boiling range: 101°C
- Flash point: 10°C (DIN 51755)
- Ignition temperature: 430 °C (DIN 51794)
- Self-igniting: Product is not self-igniting.
- Danger of explosion: Product is not explosive. However, formation of explosive air / vapour mixtures are possible.
- Explosion limits:
Lower: 2,1 Vol.% (Literature)
Upper: 12,5 Vol. % (Literature)
- Vapour pressure at 20°C: 47 hPa
- Density at 20°C: 0,967 g/cm³
- Solubility in / Miscibility with water: Not miscible or difficult to mix

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<ul style="list-style-type: none"> • Viscosity: Not determined • pH-value: Not determined • Solvent content: organic solvents: 0,0% 																												
<p>10 Stability and reactivity</p> <ul style="list-style-type: none"> • Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications. • Materials to be avoided: In presence of radical formers (e. g. peroxides), deoxidizing substances, and/or heavy metal ions, polymerization with heat release is possible. • Dangerous reactions: Exothermic polymerization. • Dangerous decomposition products: No dangerous decomposition products known. 																												
<p>11 Toxicological information</p> <ul style="list-style-type: none"> • Acute toxicity: • LD/LC50 values relevant for classification: methyl methacrylate LD-50 oral ►5000 mg/kg rat (lit.) LD-50 inhalative 7093 ppm/4h rat (lit.) n-Hexylmethacrylat LD-50 oral ►5000 mg/kg rat (lit.) • Primary irritant effect: • on the skin: Irritant to skin and mucous membranes. • on the eye: Slightly irritating. • Sensitization: Sensitization possible through skin contact. • Additional toxicological information: The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version. Irritant • Sensitization: May cause sensitization by skin contact. 																												
<p>12 Ecological information:</p> <ul style="list-style-type: none"> • Behaviour in environmental systems: Components: methyl methacrylate Biodegradability: 30,7 % Time: 28 d Method: OECD 301 C Valuation: difficult to decompose • Ecotoxicological effects: • Aquatic toxicity: <table border="0"> <thead> <tr> <th>Type of test</th> <th>Effective concentration</th> <th>Method</th> <th>Assessment</th> </tr> </thead> <tbody> <tr> <td>Toxicity to fish:</td> <td>LC-50: ►79 mg/l</td> <td>OECD 203</td> <td></td> </tr> <tr> <td>(MMA)</td> <td>NOEC: 40 mg/l</td> <td>ISO 7346</td> <td></td> </tr> <tr> <td></td> <td>Time: 96 h EEC84</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Species: Oncorhynchus mykiss</td> <td></td> <td></td> </tr> <tr> <td>Toxicity to Micro-Organisms (MMA)</td> <td>ECO: 100 mg/l</td> <td></td> <td>starting inhibition of cell growth</td> </tr> <tr> <td></td> <td>Species: Pseudomonas putida</td> <td></td> <td></td> </tr> </tbody> </table>	Type of test	Effective concentration	Method	Assessment	Toxicity to fish:	LC-50: ►79 mg/l	OECD 203		(MMA)	NOEC: 40 mg/l	ISO 7346			Time: 96 h EEC84				Species: Oncorhynchus mykiss			Toxicity to Micro-Organisms (MMA)	ECO: 100 mg/l		starting inhibition of cell growth		Species: Pseudomonas putida		
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- General notes: Do not allow product to reach ground water, water course or sewage system, even in small quantities.

13 Disposal considerations

- Product:
 - Recommendation: Must not be disposed together with household garbage. Do not allow product to reach sewage system.
After prior treatment product has to be disposed of in an incinerator for hazardous waste adhering to the regulations pertaining to the disposal of particularly hazardous waste.
 - European waste catalogue: 07 01 04| other organic solvents, washing liquids and mother liquors.
- Uncleaned packaging
- Recommendation: Disposal must be made according to official regulations.

14 Transport information

- Land transport ADR/RID (cross-border)



ADR/RID class: 3 (F1) Flammable liquids.

Danger code (Kemler): 339

UN-Number: 1247

Packaging group: II

Hazard label 3

Description of goods: 1247 METHYL METHACRYLATE MONOMER, STABILIZED, solution

- Maritime transport IMDG:



IMDG Class: 3

UN Number: 1247

Label 3

Packaging group: II

EMS Number: F-E,S-D

Marine pollutant: No

Proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED, solution

- Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class: 3

UN/ID Number: 1247

Label 3

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Packaging group: II
Proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED, solution

15 Regulations

- Labelling according to EU guidelines:
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials
- Code letter and hazard designation of product:
Xi Irritant
F Highly flammable
- Hazard-determining components of labelling:
methyl methacrylate
- Risk phrases:
11 Highly flammable.
37/38 Irritating to respiratory system and skin.
43 May cause sensitization by skin contact.
- Safety phrases:
9 Keep container in a well-ventilated place.
16 Keep away from sources of ignition - No smoking.
23 Do not breathe gas/fumes/vapour/ spray.
24 Avoid contact with skin.
37 Wear suitable gloves.
60 This material and its container must be disposed of as hazardous waste.
- National regulations
- Technical instructions (air):

Class	Share in %
II	50-75
- Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant R-phrases
11 Highly flammable.
36/37/38 Irritating to eyes, respiratory system and skin.
37/38 Irritating to respiratory system and skin.
43 May cause sensitization by skin contact.
- Department issuing MSDS: anax dent GmbH
- Contact: Mr. Andreas Kopietz