

Material Safety Data Sheet According to 91/155 EC

Trade name: anaxACRYL RS liquid

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Version 2

1 Identification of substance:

- Product details:
- Trade name: anaxACRYL RS liquid
- Article number: 1952....
- Application of the substance / the preparation: Auxiliary for dental technology
- Manufacturer / Supplier:
anax dent GmbH Olgastrasse 120A D-70180 Stuttgart
Tel. 0049 711 620092.0 Fax 0049 711 620092.29
email: akopietz@anaxdent.com
- Further information obtainable from: Andreas Kopietz
- Information in case of emergency: 0049 711 6200920

2 Composition / Data on components:

- Chemical characterization
- Description: Liquid based on methacryl acid ester, containing an activator.
- Dangerous components:

CAS: 80-62-6 EINECS: 201-297-1	methyl methacrylate	 Xi,  F; R 11-37/38-43	50-75%
CAS: 97-86-9 EINECS: 202-613-	isobutyl methacrylate	 Xi,  N; R 10-36/37/38-43-50	10-25%
CAS: 97-63-2 EINECS: 202-597-5	ethyl methacrylate	 Xi,  F; R 11-36/37/38-43	10-25%
CAS: 3077-12-1 EINECS: 221-359-1	2,2'-[(4-methylphenyl)imino]bisethanol	 Xn; R 22	2.5-10%
	2-(2H-benzotriazol-2-yl)-4-methyl-phenol	 Xi; R 43-53	◀ 2.5%

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

3 Hazard identification

- 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.
Has a narcotizing effect.

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<p>R 11 Highly flammable.</p> <p>R 36/37/38 Irritating to eyes, respiratory system and skin.</p> <p>R 43 May cause sensitisation by skin contact.</p> <ul style="list-style-type: none">• Classification system: The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
<p>4 First aid measures</p> <ul style="list-style-type: none">• After inhalation: Supply fresh air and to be sure call for a doctor. In case of unconsciousness place patient stably in side position for transportation.• After skin contact: Immediately wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.• After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, 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: Water spray, Foam, Fire-extinguishing powder, Carbon dioxide.• For safety reasons unsuitable extinguishing agents: Water with full jet.• Special hazards caused by the substance, its products of combustion or resulting gases: Can form explosive gas-air mixtures.• Protective equipment: Wear self-contained respiratory protective device.
<p>6 Accidental release measures</p> <ul style="list-style-type: none">• Person-related safety precautions: Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation. 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). Dispose contaminated material as waste according to item 13.
<p>7 Handling and storage</p> <p>Handling</p> <ul style="list-style-type: none">• Information for safe handling: Ensure good ventilation/exhaustion at the workplace.• Information about fire - and explosion protection: Keep ignition sources away - Do not smoke. Protect against electrostatic charges. <p>Storage</p> <ul style="list-style-type: none">• Requirements to be met by storerooms and receptacles: Storage between 15 °C and 30 °C in a dry and well-aired place. Avoid heating the material to over 50 °C and cooling it below 5 °C.

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- Information about storage in one common storage facility: Not required.
- Further information about storage conditions:
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

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	
OES	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: Tightly sealed goggles.

9 Physical and chemical properties:

- General information

Form:	Fluid
Colour:	Colourless
Odour:	Characteristic
- Change in condition

Melting point / melting range:	Undetermined
Boiling point / Boiling range:	101°C
- Flash point: 10°C
- Ignition temperature: 390°C
- 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:	1,8 Vol%
upper:	12,5 Vol%

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<ul style="list-style-type: none">• Vapour pressure: 47 hPa• Density at 20°C: 0,93 g/cm³• Solubility in / Miscibility with water: Not miscible or difficult to mix.• Solvent content: organic solvents: 0,0%									
10 Stability and reactivity <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. Reacts with reducing agents.• Dangerous decomposition products: No dangerous decomposition products known.									
11 Toxicological information <ul style="list-style-type: none">• Acute toxicity:• LD/LC50 values relevant for classification:<table><tr><td>methyl methacrylate</td><td>LD-50 oral</td><td>►5000 mg/kg rat (lit.)</td></tr><tr><td></td><td>LD-50 inhalativ</td><td>7093 ppm/4h rat (lit.)</td></tr><tr><td>N,N-Bis(2-hydroxyethyl)-p-toluidine</td><td>LD-50 oral</td><td>300 mg/kg rat</td></tr></table>• Primary irritant effect:• on the skin: Irritant to skin and mucous membranes.• on the eye: Irritating effect.• Sensitisation: Sensitisation 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• Sensitisation: May cause sensitisation by skin contact.	methyl methacrylate	LD-50 oral	►5000 mg/kg rat (lit.)		LD-50 inhalativ	7093 ppm/4h rat (lit.)	N,N-Bis(2-hydroxyethyl)-p-toluidine	LD-50 oral	300 mg/kg rat
methyl methacrylate	LD-50 oral	►5000 mg/kg rat (lit.)							
	LD-50 inhalativ	7093 ppm/4h rat (lit.)							
N,N-Bis(2-hydroxyethyl)-p-toluidine	LD-50 oral	300 mg/kg rat							
12 Ecological information: <ul style="list-style-type: none">• Behaviour in environmental systems:• Components:<table><tr><td>methyl methacrylate</td><td>Biodegradability: 30,7 % Time: 28 d Method: OECD 301 C Valuation: difficult to decompose</td></tr><tr><td>Isobutyl methacrylate</td><td>Biodegradability: ca. 33,7 % Time: 28 d Method: Respirometric Test (lit.) Valuation: difficult to decompose</td></tr></table>• Ecotoxical effects:• Acquatic toxicity:	methyl methacrylate	Biodegradability: 30,7 % Time: 28 d Method: OECD 301 C Valuation: difficult to decompose	Isobutyl methacrylate	Biodegradability: ca. 33,7 % Time: 28 d Method: Respirometric Test (lit.) Valuation: difficult to decompose					
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Type of test	Effective concentration	Method	Assessment
<ul style="list-style-type: none"> Toxicity to fish: (MMA) 	LC-50: ►79 mg/l NOEC: 40 mg/l Time: 96 h EEC84 Species: Oncorhynchus mykiss	OECD 203 ISO 7346	
<ul style="list-style-type: none"> Toxicity to Micro-Organisms (MMA) 	ECO: 100 mg/l Species: Pseudomonas putida	starting inhibition of cell growth	
<ul style="list-style-type: none"> Toxicity to fish: (isobutyl methacrylate) 	LC-50/96h : 20mg/l Species: rainbow trout	OECD 203, GLP	
<ul style="list-style-type: none"> Toxicity to Micro-Organisms: (isobutyl methacrylate) 	ECO/16h: ► 281 mg/l Species: Pseudomonas fluorescens	DEV L8	
<ul style="list-style-type: none"> General notes: Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. 			
13 Disposal considerations <ul style="list-style-type: none"> Product: Recommendation: Must not be disposed together with household garbage. Do not allow product to reach sewage system. Must be specially treated adhering to official regulations. European waste catalogue: 08 01 11 waste paint and varnish containing organic solvents or other dangerous substances. Uncleaned packaging: Recommendation: Disposal must be made according to official regulations. 			
14 Transport information <ul style="list-style-type: none"> Land transport ADR/RID (cross-border) 			
 <ul style="list-style-type: none"> ADR/RID class: 3 (F1) Flammable liquids. Danger code (Kemler): 33 UN-Number: 1993 Packaging group: II Hazard label 3 Description of goods: 1993 FLAMMABLE LIQUID, N.O.S. (vapor pressure at 50°C at most 110 k Pa) (METHYL METHACRYLATE MONOMER, STABILIZED, ETHYL METHACRYLATE, STABILIZED) 			

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- Maritime transport IMDG:



- IMDG Class: 3
- UN Number: 1993
- Label 3
- Packaging group: II
- EMS Number: F-E,S-E
- Marine pollutant: No
- Proper shipping name: FLAMMABLE LIQUID, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED, ETHYL METHACRYLATE, STABILIZED)

- Air transport ICAO-TI and IATA-DGR:



- ICAO/IATA Class: 3
- UN/ID Number: 1993
- Label 3
- Packaging group: II
- Proper shipping name: FLAMMABLE LIQUID, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED, ETHYL METHACRYLATE, STABILIZED)

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:
isobutyl methacrylate
ethyl methacrylate
2-(2H-benzotriazol-2-yl)-4-methyl-phenol
- Risk phrases:
11 Highly flammable.
36/37/38 Irritating to eyes, respiratory system and skin.
43 May cause sensitisation 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.

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60 This material and its container must be disposed of as hazardous waste.

- National regulations
- Technical instructions (air):

Class	Share in %
III	≤2,5
NK	50-75

- Waterhazard class: Water hazard class 1 (Self-assessment): slightly 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:
 - 10 Flammable.
 - 11 Highly flammable.
 - 22 Harmful if swallowed.
 - 36/37/38 Irritating to eyes, respiratory system and skin.
 - 37/38 Irritating to respiratory system and skin.
 - 43 May cause sensitisation by skin contact.
 - 50 Very toxic to aquatic organisms.
 - 53 May cause long-term adverse effects in the aquatic environment.
- Department issuing MSDS: anax dent GmbH
- Contact: Andreas Kopietz