

Safety Data Sheet

according to Regulation (EC) No 1907/2006

e-shell 500

Print date: 26.06.2014

Product code: 150044XX

Page 1 of 8

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

e-shell 500

Further trade names

e-shell 500 clear, e-shell 501 pink

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

light curing resin for hearing aid devices

1.3. Details of the supplier of the safety data sheet

Company name:	Deltamed GmbH	
Street:	Raiffeisenstr. 8a	
Place:	D-61169 Friedberg	
Telephone:	+49 6031 7283-0	Telefax: +49 6031 7283-29
e-mail:	info@deltamed.de	
Internet:	www.deltamed.de	
Responsible Department:	F&E	
	Telefax +49 6031 7283-29	

1.4. Emergency telephone number:Giftinformationszentrum Universitätsklinikum Mainz
Telefon +49 6131 19240**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture**

Indications of danger: T - Toxic
R phrases:
May cause harm to the unborn child.
Possible risk of impaired fertility.

GHS classification

Hazard categories:
Reproductive toxicity: Repr. 1B
Hazard Statements:
May damage the unborn child. Suspected of damaging fertility.

2.2. Label elements**Hazardous components which must be listed on the label**

Tetrahydrofurfuryl methacrylate

Signal word:	Danger
Pictograms:	GHS08

**Hazard statements**

H360Df May damage the unborn child. Suspected of damaging fertility.

Precautionary statements

P201	Obtain special instructions before use.
P280	Wear protective gloves/protective clothing/eye protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P273	Avoid release to the environment.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

e-shell 500

Print date: 26.06.2014

Product code: 150044XX

Page 2 of 8

P501

Dispose of contents/container in accordance with local regulation.

2.3. Other hazards

Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Hazardous components**

EC No	Chemical name	Quantity
CAS No	Classification	
Index No	GHS classification	
REACH No		
	Tetrahydrofurfuryl methacrylate	10-25 %
2455-24-5	T - Toxic R61-62	
	Repr. 1B; H360Df	
	7,7,9-Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diaza-hexadecan-1,16-diol dimethacrylate	1-10 %
72869-86-4	R52-53	
	Aquatic Chronic 3; H412	
278-355-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	< 1 %
75980-60-8	Repr. Cat. 3 R62-52-53	
015-203-00-X	Repr. 2, Aquatic Chronic 3; H361f H412	

Full text of R and H phrases: see Section 16.

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Medical treatment is necessary if symptoms occur which are obviously caused by skin or eye contact with the product or by inhalation of its vapours. Take off all contaminated clothing immediately.

After inhalation

Provide fresh air. Medical treatment necessary.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Immediately remove any contaminated clothing, shoes or stockings. Medical treatment necessary.

After contact with eyes

After eye contact: Rinse immediately carefully and thoroughly with eye-bath or water. Consult an ophthalmologist.

After ingestion

Do NOT induce vomiting. Medical treatment necessary.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media**

Safety Data Sheet

according to Regulation (EC) No 1907/2006

e-shell 500

Print date: 26.06.2014

Product code: 150044XX

Page 3 of 8

Suitable extinguishing media

Foam. Extinguishing powder Carbon dioxide

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon monoxide. Carbon dioxide Hazardous decomposition products

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Larger quantities: Take up mechanically (by pumping). Smaller quantities and/or residues: Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Provide good room ventilation even at ground level (vapours are heavier than air). Keep container tightly closed. If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion

In the event of fire, cool the endangered containers with water. Keep away from sources of ignition --- No smoking. Take precautionary measures against static discharges. When heated above the flash point and/or during spraying (atomizing), ignitable mixtures may form in air.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Protect from the action of light. Keep only in the original container at a temperature between 5 -30 °C. Can polymerize with intense heat release. Keep container tightly closed.

Advice on storage compatibility

No special measures are necessary.

7.3. Specific end use(s)

light curing resin for hearing aid devices

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

Safety Data Sheet

according to Regulation (EC) No 1907/2006

e-shell 500

Print date: 26.06.2014

Product code: 150044XX

Page 4 of 8

8.2. Exposure controls**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing. Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Eye/face protection

tightly fitting goggles

Hand protection

butyl rubber gloves (0.7 mm), Break through time ca. 60 min (EN 374). Gloves should be replaced regularly, especially after extended contact with the product. For each work-place a suitable glove type has to be selected.

Skin protection

Wear suitable protective clothing.

Respiratory protection

Breathing apparatus in case of high concentrations, short term: filter appliance, filter A In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	various, depending on coloration
Odour:	characteristic

Test method

pH-Value: not determined

Changes in the physical state

Melting point: not determined

Initial boiling point and boiling range: not determined

Flash point: > 150 °C

Flammability

Solid: not applicable

Gas: not applicable

Lower explosion limits: not determined

Upper explosion limits: not determined

Auto-ignition temperature

Solid: not applicable

Gas: not applicable

Decomposition temperature: not determined

Vapour pressure: not determined

Density: not determined

Water solubility: insoluble

Solubility in other solvents

The substance is not soluble in water.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

e-shell 500

Print date: 26.06.2014

Product code: 150044XX

Page 5 of 8

Partition coefficient:	not determined
Viscosity / dynamic: (at 20 °C)	400 mPa·s
Vapour density:	not determined
Evaporation rate:	not determined

9.2. Other information

Solid content:	not determined
----------------	----------------

SECTION 10: Stability and reactivity**10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions.

10.4. Conditions to avoid

Protect from the action of light. Keep only in the original container at a temperature between 5 -30 °C.
Can polymerize with intense heat release.

10.5. Incompatible materials

Oxidising agent, Reducing agent, Heavy metals, acids, Alkali (lye)

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity**

Based on available data, the classification criteria are not met.

Acute toxicity

CAS No	Chemical name	Exposure routes	Method	Dose	Species	Source
2455-24-5	Tetrahydrofurfuryl methacrylate	oral	LD50	4000 mg/kg	Rat	OECD 401
72869-86-4	7,7,9-Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diaza-hexadecan-1,16-diol dimethacrylate	oral	LD50	>2000 mg/kg	Rat	OECD 401
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	oral	LD50	> 5000 mg/kg	Rat	RTECS

Irritation and corrosivity

Based on available data, the classification criteria are not met.
May cause mild skin and eye irritation.

Sensitising effects

Based on available data, the classification criteria are not met.
Possible sensitization in case of persons suffering from hypersensitivity.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

e-shell 500

Print date: 26.06.2014

Product code: 150044XX

Page 6 of 8

STOT-single exposure

Based on available data, the classification criteria are not met.

Severe effects after repeated or prolonged exposure

Based on available data, the classification criteria are not met.

Repeated dose toxicity (Tetrahydrofurfuryl methacrylate) : Rat, oral, OECD 422, NOAEL: 300 mg/kg

Carcinogenic/mutagenic/toxic effects for reproduction

May damage the unborn child. Suspected of damaging fertility. (Tetrahydrofurfuryl methacrylate)

Aspiration hazard

Based on available data, the classification criteria are not met.

Additional information on tests

This mixture is classified as hazardous according to regulation (EC) No. 1272/2008 [CLP]. Special hazards arising from the substance or mixture!

Further information

Product has not been tested. The statement is derived from the properties of the components.

SECTION 12: Ecological information**12.1. Toxicity**

Aquatic toxicity: The classification criteria for this hazard class are not met by definition.

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h] [d]	Species	Source
2455-24-5	Tetrahydrofurfuryl methacrylate					
	Acute fish toxicity	LC50	34,7 mg/l	96 h	Pimephales promelas (fathead minnow)	
72869-86-4	7,7,9-Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diaza-hexadecan-1,16-diol dimethacrylate					
	Acute fish toxicity	LC50	10,1 mg/l	96 h	Brachydanio rerio (zebra-fish)	OECD 203
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide					
	Acute crustacea toxicity	EC50	10 - 100 mg/l	48 h		

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name				
	Method	Value	d	Source	
	Evaluation				
72869-86-4	7,7,9-Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diaza-hexadecan-1,16-diol dimethacrylate				
	Biodegradation	22 %	28	OECD 301 F	

12.3. Bioaccumulative potential

The product has not been tested.

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Do not allow uncontrolled discharge of product into the environment. Do not allow to enter into surface water or drains.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

e-shell 500

Print date: 26.06.2014

Product code: 150044XX

Page 7 of 8

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Advice on disposal**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

Waste disposal number of waste from residues/unused products

070208 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other still bottoms and reaction residues
Classified as hazardous waste.

Waste disposal number of used product

070208 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other still bottoms and reaction residues
Classified as hazardous waste.

Waste disposal number of contaminated packaging

070208 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other still bottoms and reaction residues
Classified as hazardous waste.

Contaminated packaging

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)****Other applicable information (land transport)**

No dangerous good in sense of these transport regulations.

Inland waterways transport (ADN)**Other applicable information (inland waterways transport)**

No dangerous good in sense of these transport regulations.

Marine transport (IMDG)**Other applicable information (marine transport)**

No dangerous good in sense of these transport regulations.

Air transport (ICAO)**Other applicable information (air transport)**

No dangerous good in sense of these transport regulations.

14.6. Special precautions for user

No information available.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulatory information**

Employment restrictions:

Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing.

Water contaminating class (D):

1 - slightly water contaminating

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

e-shell 500

Print date: 26.06.2014

Product code: 150044XX

Page 8 of 8

SECTION 16: Other information**Changes**

reason of revision: reclassification tetrahydrofurfuryl methacrylate by supplier

Abbreviations and acronymsADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Full text of R phrases referred to under Sections 2 and 3

- | | |
|----|---|
| 52 | Harmful to aquatic organisms. |
| 53 | May cause long-term adverse effects in the aquatic environment. |
| 61 | May cause harm to the unborn child. |
| 62 | Possible risk of impaired fertility. |

Full text of H statements referred to under Sections 2 and 3

- | | |
|--------|---|
| H360Df | May damage the unborn child. Suspected of damaging fertility. |
| H361f | Suspected of damaging fertility. |
| H412 | Harmful to aquatic life with long lasting effects. |

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)