

according to Regulation (EC) No 1907/2006

**Megaseal Universal**

Revision date: 23.07.2018

Product code: MEGASEALUNI

Page 1 of 10

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1. Product identifier**

Megaseal Universal

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

**Use of the substance/mixture**

Megaseal Universal is a light curing sealing lacquer for dentures, repairs and orthodontic applications.

**1.3. Details of the supplier of the safety data sheet**

Company name:	MEGADENTA Dentalprodukte GmbH	
Street:	Carl-Eschebach-Str. 1A	
Place:	01454 Radeberg, Germany	
Telephone:	+49-3528 4530	Telefax: +49-3528 45321
e-mail:	info@megadenta.de	
Internet:	www.megadenta.de	

**1.4. Emergency telephone number:** +49-3528 453-0 (just during usual office time: GMT+1)

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Regulation (EC) No. 1272/2008**

Hazard categories:

Flammable liquid: Flam. Liq. 2

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Respiratory or skin sensitisation: Skin Sens. 1

Reproductive toxicity: Repr. 2

Specific target organ toxicity - single exposure: STOT SE 3

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Highly flammable liquid and vapour.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

Suspected of damaging fertility.

May cause respiratory irritation.

Harmful to aquatic life with long lasting effects.

**2.2. Label elements**

**Regulation (EC) No. 1272/2008**

**Hazard components for labelling**

Methyl methacrylate

Bisphenol A epoxyate dimethacrylate

2,4,6-Trimethyl-benzoyl-diphenylphosphinoxyde

2-(2-Hydroxy-5-methylphenyl)benzotriazole

**Signal word:** Danger

**Pictograms:**



according to Regulation (EC) No 1907/2006

**Megaseal Universal**

Revision date: 23.07.2018

Product code: MEGASEALUNI

Page 2 of 10

**Hazard statements**

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361f	Suspected of damaging fertility.
H412	Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P362+P364	Take off contaminated clothing and wash it before reuse.
P403+P235	Store in a well-ventilated place. Keep cool.

**Special labelling of certain mixtures**

5 - < 10 % of the mixture consists of ingredient(s) of unknown acute toxicity (inhalation).  
Contains < 1 % of components with unknown hazards to the aquatic environment.

**2.3. Other hazards**

The non-polymerized material could irritate skin due to longer contact.

Water hazard class 2 - Hazardous to the aquatic environment.

**SECTION 3: Composition/information on ingredients**

**3.2. Mixtures**

**Chemical characterization**

Low-viscosity liquid of methyl methacrylate, different dimethacrylates, photochemical initiators and stabilizers.

**Hazardous components**

CAS No	Chemical name	Quantity
	EC No	
	Index No	
	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
80-62-6	Methyl methacrylate	50 - < 55 %
	Flam. Liq. 2, Skin Irrit. 2, Skin Sens. 1, STOT SE 3; H225 H315 H317 H335	
41637-38-1	Bisphenol A epoxyate dimethacrylate	40 - < 45 %
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, STOT SE 3; H315 H319 H317 H335	
75980-60-8	2,4,6-Trimethyl-benzoyl-diphenylphosphinoxyde	5 - < 10 %
	278-355-8	
	Repr. 2, Skin Sens. 1, Aquatic Chronic 2; H361f H317 H411	
2440-22-4	2-(2-Hydroxy-5-methylphenyl)benzotriazole	< 1 %
	01-2119583811-34	
	Skin Sens. 1, Aquatic Chronic 1; H317 H410	

Full text of H and EUH statements: see section 16.

**SECTION 4: First aid measures**

according to Regulation (EC) No 1907/2006

**Megaseal Universal**

Revision date: 23.07.2018

Product code: MEGASEALUNI

Page 3 of 10

**4.1. Description of first aid measures**

**General information**

Polymerized material is non-hazardous.

**After inhalation**

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

**After contact with skin**

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

**After contact with eyes**

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

**After ingestion**

Rinse mouth immediately and drink plenty of water. Induce vomiting when the affected person is not unconscious. 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**

**Suitable extinguishing media**

Water spray jet, Carbon dioxide (CO<sub>2</sub>), Foam, Extinguishing powder.

**5.2. Special hazards arising from the substance or mixture**

Highly flammable. Vapours can form explosive mixtures with air.

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

**Additional information**

Use water spray jet to protect personnel and to cool endangered containers. 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**

Remove all sources of ignition. 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 uncontrolled discharge of product into the environment. Danger of explosion

**6.3. Methods and material for containment and cleaning up**

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**

according to Regulation (EC) No 1907/2006

**Megaseal Universal**

Revision date: 23.07.2018

Product code: MEGASEALUNI

Page 4 of 10

**Advice on safe handling**

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**

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

**Further information on handling**

Light-sensitive substance. Protect from exposure to the light. Store not above 25°C.

**7.2. Conditions for safe storage, including any incompatibilities**

**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**Advice on storage compatibility**

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances.

**7.3. Specific end use(s)**

For the coating of hard surfaces, preferably in polymerized methacrylates.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
80-62-6	Methyl methacrylate	50	208		TWA (8 h)	WEL
		100	416		STEL (15 min)	WEL

**DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
2440-22-4	2-(2-Hydroxy-5-methylphenyl)benzotriazole			
Worker DNEL, long-term		inhalation	systemic	1 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	2,5 mg/kg bw/day
Consumer DNEL, long-term		dermal	systemic	1,2 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	1,2 mg/kg bw/day

**PNEC values**

CAS No	Substance	Value
	Environmental compartment	
2440-22-4	2-(2-Hydroxy-5-methylphenyl)benzotriazole	

**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**

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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Megaseal Universal

Revision date: 23.07.2018

Product code: MEGASEALUNI

Page 5 of 10

drink.

#### Eye/face protection

Suitable eye protection: goggles.

#### Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

#### Skin protection

Flame-retardant protective clothing. Wear anti-static footwear and clothing . .

#### Respiratory protection

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:	low viscous liquid
Colour:	yellow
Odour:	characteristic
pH-Value:	nicht anwendbar0

#### Changes in the physical state

Melting point:	not determined
Initial boiling point and boiling range:	101 °C
Flash point:	10 °C

#### Flammability

Solid:	not applicable
Gas:	not applicable
Lower explosion limits:	2,1 vol. %
Upper explosion limits:	12,5 vol. %
Ignition temperature:	430 °C

#### Auto-ignition temperature

Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined

#### Oxidizing properties

Not oxidising.

Vapour pressure: (at 20 °C)	47 hPa
Density (at 20 °C):	1,1 g/cm <sup>3</sup>
Water solubility:	unlöslich

#### Solubility in other solvents

not determined

Partition coefficient:	not determined
Flow time:	Data not available
Vapour density:	not determined
Evaporation rate:	not determined

according to Regulation (EC) No 1907/2006

**Megaseal Universal**

Revision date: 23.07.2018

Product code: MEGASEALUNI

Page 6 of 10

**9.2. Other information**

Solid content: not determined

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

Highly flammable.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

No known hazardous reactions.

**10.4. Conditions to avoid**

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

**10.5. Incompatible materials**

No information available.

**10.6. Hazardous decomposition products**

With incomplete combustion toxic gases such as carbon monoxide may be generated.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**ATEmix tested**

	Dose	Species	Source
LD50, oral	7872 mg/kg	Rat	

**Acute toxicity**

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
80-62-6	Methyl methacrylate				
	oral	LD50 7900 mg/kg	Rat		
	dermal	LD50 >5000 mg/kg	Rabbit		
75980-60-8	2,4,6-Trimethyl-benzoyl-diphenylphosphinoxyde				
	oral	LD50 >5000 mg/kg	Rat		
	inhalative	Data lacking			
2440-22-4	2-(2-Hydroxy-5-methylphenyl)benzotriazole				
	oral	LD50 >10000 mg/kg	Rat		
	dermal	LD50 >2000 mg/kg		analogy	
	inhalative (4 h) aerosol	LC50 >0,59 mg/l	Rat		

**Additional information on tests**

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

according to Regulation (EC) No 1907/2006

**Megaseal Universal**

Revision date: 23.07.2018

Product code: MEGASEALUNI

Page 7 of 10

**SECTION 12: Ecological information**

**12.1. Toxicity**

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
75980-60-8	2,4,6-Trimethyl-benzoyl-diphenylphosphinoxyde					
	Acute fish toxicity	LC50 mg/l	6,53	96 h	Oryzias latipes	
	Acute algae toxicity	ErC50 mg/l	2,01	72 h	Pseudokirchneriella subcapitata	OECD 201
	Acute crustacea toxicity	EC50 mg/l	3,53	48 h	Daphnia magna	OECD Guideline 202
2440-22-4	2-(2-Hydroxy-5-methylphenyl)benzotriazole					
	Acute fish toxicity	LC50 mg/l	>0,17	96 h	Oncorhynchus mykiss	
	Acute algae toxicity	ErC50 mg/l	>100	72 h	Desmodesmus subspicatus	
	Acute crustacea toxicity	EC50 mg/l	>1000	48 h	Daphnia magna	
	Algae toxicity	NOEC	33 mg/l	3 d	Desmodesmus subspicatus	
	Crustacea toxicity	NOEC mg/l	0,013	21 d	Daphnia magna	
	Acute bacteria toxicity	(>100 mg/l)		3 h		

**12.2. Persistence and degradability**

The product has not been tested.

**12.3. Bioaccumulative potential**

The product has not been tested.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
75980-60-8	2,4,6-Trimethyl-benzoyl-diphenylphosphinoxyde	3,257
2440-22-4	2-(2-Hydroxy-5-methylphenyl)benzotriazole	4,2

**BCF**

CAS No	Chemical name	BCF	Species	Source
2440-22-4	2-(2-Hydroxy-5-methylphenyl)benzotriazole	44-220	Cyprinus carpio	

**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 to enter into surface water or drains. Do not allow to enter into soil/subsoil.  
Water hazard class 2 - Hazardous to the aquatic environment.

according to Regulation (EC) No 1907/2006

**Megaseal Universal**

Revision date: 23.07.2018

Product code: MEGASEALUNI

Page 8 of 10

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Advice on disposal**

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

**Waste disposal number of waste from residues/unused products**

180106 WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (EXCEPT KITCHEN AND RESTAURANT WASTES NOT ARISING FROM IMMEDIATE HEALTH CARE); wastes from natal care, diagnosis, treatment or prevention of disease in humans; chemicals consisting of or containing hazardous substances; 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)**

**14.1. UN number:** UN 1247  
**14.2. UN proper shipping name:** METHYL METHACRYLATE MONOMER, STABILIZED  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
Hazard label: 3  
Classification code: F1  
Limited quantity: 1 L  
Transport category: 2  
Hazard No: 339  
Tunnel restriction code: D/E

**Other applicable information (land transport)**

E2

**Inland waterways transport (ADN)**

**14.1. UN number:** UN 1247  
**14.2. UN proper shipping name:** METHYL METHACRYLATE MONOMER, STABILIZED  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
Hazard label: 3  
Classification code: F1  
Limited quantity: 1 L

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

E2

**Marine transport (IMDG)**

**14.1. UN number:** UN 1247  
**14.2. UN proper shipping name:** METHYL METHACRYLATE MONOMER, STABILIZED  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
Hazard label: 3  
Special Provisions: -  
Limited quantity: 1 L  
EmS: F-E, S-D



according to Regulation (EC) No 1907/2006

**Megaseal Universal**

Revision date: 23.07.2018

Product code: MEGASEALUNI

Page 9 of 10

**Other applicable information (marine transport)**

E2

**Air transport (ICAO-TI/IATA-DGR)**

<b>14.1. UN number:</b>	UN 1247
<b>14.2. UN proper shipping name:</b>	METHYL METHACRYLATE MONOMER, STABILIZED
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	II
Hazard label:	3
Limited quantity Passenger:	1 L
Passenger LQ:	Y341
Excepted quantity:	E2
IATA-packing instructions - Passenger:	353
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	364
IATA-max. quantity - Cargo:	60 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS:	yes
Danger releasing substance:	Methylmethacrylat

**14.6. Special precautions for user**

Warning: Combustible liquid.

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

not applicable

**SECTION 15: Regulatory information**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EU regulatory information**

2010/75/EU (VOC):	50,949 % (560,439 g/l)
2004/42/EC (VOC):	50,949 % (560,439 g/l)
Information according to 2012/18/EU (SEVESO III):	P5c FLAMMABLE LIQUIDS

**National regulatory information**

Employment restrictions:	Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Water contaminating class (D):	2 - clearly water contaminating
Skin resorption/Sensitization:	Causes allergic hypersensitivity reactions.

**15.2. Chemical safety assessment**

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

**SECTION 16: Other information**

**Changes**

This data sheet contains changes from the previous version in section(s): 2,3,4,6,7,8,15,16.

**Abbreviations and acronyms**

ADR: 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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Megaseal Universal

Revision date: 23.07.2018

Product code: MEGASEALUNI

Page 10 of 10

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%

#### Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method
Skin Sens. 1; H317	Calculation method
Repr. 2; H361f	Calculation method
STOT SE 3; H335	Calculation method
Aquatic Chronic 3; H412	Calculation method

#### Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361f	Suspected of damaging fertility.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

#### Further Information

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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