

Safety Data Sheet

according to Regulation (EC) No 1907/2006

RS VIVO Tray

Revision date: 04.03.2025

Product code: RS006198

Page 1 of 11

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

1.1. Product identifier

RS VIVO Tray

UFI: 3P80-90G6-G008-N7TK

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

Use of the substance/mixture

Light curing resin for additive manufacturing of individual trays

1.3. Details of the supplier of the safety data sheet

Manufacturer

Company name:	DeltaMed GmbH	
Street:	Raiffeisenstraße 8a	
Place:	61169 Friedberg (GER)	
Telephone:	+49 6031 7283-0	Telefax: +49 6031 7283-29
E-mail:	info@deltamed.de	
Contact person:	Research and Development Department	
E-mail:	info@deltamed.de	
Internet:	www.deltamed.de	
Responsible Department:	F&E	
	Telefax +49 6031 7283-29	

Supplier

Company name:	Rapid Shape GmbH	
Street:	Römerstrasse 21	
Place:	71296 Heimsheim	
Telephone:	+49 (0) 7033/309878-0	Telefax: +49 (0) 7033/309878-40
E-mail (Contact person):	info@rapidshape.de	
Internet:	http://rapidshape.de	

1.4. Emergency telephone number:

Giftinformationszentrum Universitätsklinikum Mainz
Telefon +49 6131 19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Skin Sens. 1; H317
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements

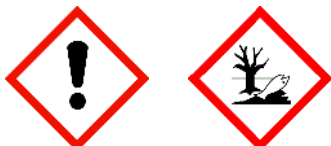
Regulation (EC) No 1272/2008

Hazard components for labelling

urethane dimethacrylate (UDMA)
Neopentyl glycol propoxylate diacrylate (NPGPODA)
Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate

Signal word: Warning

Pictograms:



Safety Data Sheet

according to Regulation (EC) No 1907/2006

RS VIVO Tray

Revision date: 04.03.2025

Product code: RS006198

Page 2 of 11

Hazard statements

- H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

- P261 Avoid breathing dust/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection.
P302+P352 IF ON SKIN: Wash with plenty of water and soap.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P391 Collect spillage.
P501 Dispose of contents/container in accordance with local regulation.

Special labelling of certain mixtures

Restricted to professional users.

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.

Toxic to aquatic life with long lasting effects.

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixture of acrylic resins and initiators.

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
72869-86-4	urethane dimethacrylate (UDMA)			10 - 40 %
	Skin Sens. 1B, Aquatic Chronic 2; H317 H411			
84170-74-1	Neopentyl glycol propoxylate diacrylate (NPGPODA)			15 - 30 %
	Skin Sens. 1, Aquatic Chronic 2; H317 H411			
84434-11-7	Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate			< 5 %
	282-810-6			
	Skin Sens. 1B, Aquatic Chronic 2; H317 H411			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
72869-86-4		urethane dimethacrylate (UDMA)	10 - 40 %
		inhalation: LC50 = >5 mg/l (dusts or mists); dermal: LD50 = >2000 mg/kg; oral: LD50 = >5000 mg/kg	
84170-74-1		Neopentyl glycol propoxylate diacrylate (NPGPODA)	15 - 30 %
		inhalation: LC50 = >2 mg/l (vapours); dermal: LD50 = >2000 mg/kg; oral: LD50 = > 5000 mg/kg	
84434-11-7	282-810-6	Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	< 5 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg	

Safety Data Sheet

according to Regulation (EC) No 1907/2006

RS VIVO Tray

Revision date: 04.03.2025

Product code: RS006198

Page 3 of 11

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

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

General advice

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

Other information

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

RS VIVO Tray

Revision date: 04.03.2025

Product code: RS006198

Page 4 of 11

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

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.

Advice on general occupational hygiene

It is essential for pregnant women to avoid inhaling the product and not to let it come in contact with the skin. 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.

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 4 -25 °C. Can polymerize with intense heat release. Keep container tightly closed.

Hints on joint storage

No special measures are necessary.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Name of agent			
DNEL type	Exposure route	Effect	Value	
72869-86-4	urethane dimethacrylate (UDMA)			
Worker DNEL, long-term	dermal	systemic	1,3 mg/kg bw/day	
Worker DNEL, long-term	inhalation	systemic	3,3 mg/m³	

PNEC values

CAS No	Name of agent		
Environmental compartment	Value		
72869-86-4	urethane dimethacrylate (UDMA)		
Freshwater	0,01 mg/l		
Marine water	0,001 mg/l		
Freshwater sediment	4,56 mg/kg		
Marine sediment	0,46 mg/kg		
Micro-organisms in sewage treatment plants (STP)	3,61 mg/l		
Soil	0,91 mg/kg		

Additional advice on limit values

There are no data available on the mixture itself.

8.2. Exposure controls

Safety Data Sheet

according to Regulation (EC) No 1907/2006

RS VIVO Tray

Revision date: 04.03.2025

Product code: RS006198

Page 5 of 11

Appropriate engineering controls

Do not breathe gas/fumes/vapour/spray.

Individual protection measures, such as personal protective equipment

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:	light pink	
Odour:	characteristic	
Melting point/freezing point:		not determined
Boiling point or initial boiling point and boiling range:		not determined
Flammability:		not determined
Lower explosion limits:		not determined
Upper explosion limits:		not determined
Flash point:		> 150 °C
Auto-ignition temperature:		not determined
Decomposition temperature:		not determined
pH-Value:		not determined
Viscosity / kinematic:		not determined
Water solubility:		not determined
Solubility in other solvents		
The substance is not soluble in water.		
Partition coefficient n-octanol/water:		not determined
Vapour pressure:		not determined
Density (at 20 °C):		1,1 g/cm ³
Relative vapour density:		not determined
Particle characteristics:		not applicable

9.2. Other information

Information with regard to physical hazard classes

Self-ignition temperature

Solid:	not applicable
Gas:	not applicable

Other safety characteristics

Evaporation rate:	not determined
Solid content:	not determined
Viscosity / dynamic: (at 20 °C)	500 - 1000 mPa·s

Further Information

Safety Data Sheet

according to Regulation (EC) No 1907/2006

RS VIVO Tray

Revision date: 04.03.2025

Product code: RS006198

Page 6 of 11

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

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 4 -25 °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 hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

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

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
72869-86-4	urethane dimethacrylate (UDMA)				
	oral	LD50 >5000 mg/kg	Rat	OECD 401	
	dermal	LD50 >2000 mg/kg	Rat	OECD 402	
	inhalation (4 h) dust/mist	LC50 >5 mg/l			
84170-74-1	Neopentyl glycol propoxylate diacrylate (NPGPODA)				
	oral	LD50 > 5000 mg/kg			
	dermal	LD50 >2000 mg/kg			
	inhalation vapour	LC50 >2 mg/l			
84434-11-7	Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate				
	oral	LD50 > 5000 mg/kg	Rat		
	dermal	LD50 > 2000 mg/kg	Rat		

Irritation and corrosivity

Safety Data Sheet

according to Regulation (EC) No 1907/2006

RS VIVO Tray

Revision date: 04.03.2025

Product code: RS006198

Page 7 of 11

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

May cause an allergic skin reaction. (urethane dimethacrylate (UDMA); Neopentyl glycol propoxylate diacrylate (NPGPODA); Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate)

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

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!

11.2. Information on other hazards

Further information

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

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
72869-86-4	urethane dimethacrylate (UDMA)					
	Acute fish toxicity	LC50 10,1 mg/l	96 h	Danio rerio (zebrafish)	OECD 203	
	Acute algae toxicity	ErC50 >0,68 mg/l	72 h	Desmodesmus subspicatus	OECD 201	
	Acute crustacea toxicity	EC50 >1,2 mg/l	48 h	Daphnia magna (Big water flea)		
84170-74-1	Neopentyl glycol propoxylate diacrylate (NPGPODA)					
	Acute fish toxicity	LC50 >2,7 mg/l	96 h	Danio rerio (zebrafish)		
	Acute algae toxicity	ErC50 11 mg/l	72 h	Pseudokirchneriella subcapitata		
	Acute crustacea toxicity	EC50 37 mg/l	48 h	Daphnia magna (Big water flea)		
84434-11-7	Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate					
	Acute fish toxicity	LC50 1,89 mg/l	96 h	Danio rerio		
	Acute algae toxicity	ErC50 1,01 mg/l	72 h	Desmodesmus subspicatus		
	Acute crustacea toxicity	EC50 2,26 mg/l	48 h	Daphnia magna		

12.2. Persistence and degradability

The product has not been tested.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

RS VIVO Tray

Revision date: 04.03.2025

Product code: RS006198

Page 8 of 11

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
72869-86-4	urethane dimethacrylate (UDMA)			
	Biodegradation	22 %	28	OECD 301 F
84170-74-1	Neopentyl glycol propoxylate diacrylate (NPGPODA)			
	OECD 301 D	41 %	28	
	Not readily biodegradable (according to OECD criteria)			

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 substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

The product has not been tested.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. 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.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

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

List of Wastes Code - 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; hazardous waste

List of Wastes Code - 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; hazardous waste

List of Wastes Code - 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; 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 or ID number:

UN 3082

14.2. UN proper shipping name:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(ACRYLIC RESIN)

14.3. Transport hazard class(es):

9

14.4. Packing group:

III

Safety Data Sheet

according to Regulation (EC) No 1907/2006

RS VIVO Tray

Revision date: 04.03.2025

Product code: RS006198

Page 9 of 11

Hazard label: 9
 Classification code: M6
 Special Provisions: 274 335 375 601
 Limited quantity: 5 L
 Excepted quantity: E1
 Transport category: 3
 Hazard No: 90
 Tunnel restriction code: -

Other applicable information (land transport)

SV 375: These substances, when carried in single or combination packagings of a net quantity not exceeding 5 litres of liquids or a net mass not exceeding 5 kg of solids per single or combination packaging, are not subject to the other provisions of ADR, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 3082
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ACRYLIC RESIN)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
 Hazard label: 9
 Classification code: M6
 Special Provisions: 274 335 375 601
 Limited quantity: 5 L
 Excepted quantity: E1

Marine transport (IMDG)

14.1. UN number or ID number: UN 3082
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ACRYLIC RESIN)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
 Hazard label: 9
 Special Provisions: 274, 335, 969
 Limited quantity: 5 L
 Excepted quantity: E1
 EmS: F-A, S-F
 Segregation group: 1 - acids

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 3082
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ACRYLIC RESIN)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
 Hazard label: 9
 Special Provisions: A97 A158 A197 A215
 Limited quantity Passenger: 30 kg G
 Passenger LQ: Y964
 Excepted quantity: E1
 IATA-packing instructions - Passenger: 964
 IATA-max. quantity - Passenger: 450 L
 IATA-packing instructions - Cargo: 964
 IATA-max. quantity - Cargo: 450 L

Other applicable information (air transport)

A 197: These substances are not subject to other provisions of these Regulations when carried in single or combination packagings with a net quantity per single or inner packaging not exceeding 5 L for liquids and a net

Safety Data Sheet

according to Regulation (EC) No 1907/2006

RS VIVO Tray

Revision date: 04.03.2025

Product code: RS006198

Page 10 of 11

weight not exceeding 5kg for substances, provided the packagings meet the general requirements of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes
Danger releasing substance: (ACRYLIC RESIN)

14.6. Special precautions for user

No information available.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

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

Restrictions on use (REACH, annex XVII):
Entry 3

National regulatory information

Water hazard class (D): 2 - obviously hazardous to water

15.2. Chemical safety assessment

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

SECTION 16: Other information**Abbreviations and acronyms**

Skin Sens: Skin sensitisation
Aquatic Chronic: Chronic aquatic hazard
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
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
Skin Sens. 1; H317	Calculation method
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

H317 May cause an allergic skin reaction.
H411 Toxic 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.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

RS VIVO Tray

Revision date: 04.03.2025

Product code: RS006198

Page 11 of 11

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