



according to 29 CFR 1910.1200(g)

### **RS VIVO Try-In**

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### 1. Identification

#### **Product identifier**

RS VIVO Try-In

### Recommended use of the chemical and restrictions on use

#### Use of the substance/mixture

Light curing resin for additive manufacturing of dental aesthetic try-ins

### 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
E-mail (Contact person): 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

**Emergency phone number:** Giftinformationszentrum Universitätsklinikum Mainz

Telefon +49 6131 19240

## 2. Hazard(s) identification

# Classification of the chemical

#### 29 CFR Part 1910.1200

Respiratory or skin sensitization: Skin Sens. 1

# Label elements

## 29 CFR Part 1910.1200

Signal word: Warning

Pictograms:



#### **Hazard statements**

May cause an allergic skin reaction

# **Precautionary statements**

Avoid breathing dust/vapours/spray.

Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection.

If on skin: Wash with plenty of water and soap.

If skin irritation or rash occurs: Get medical advice/attention.

Collect spillage.





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Dispose of contents/container in accordance with local regulation.

### Hazards not otherwise classified

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

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

# 3. Composition/information on ingredients

### **Mixtures**

#### Chemical characterization

Mixture of acrylic resins and initiators.

### Relevant ingredients

CAS No	Components	Quantity
84170-74-1	Neopentyl glycol propoxylate diacrylate (NPGPODA)	15 - 30 * %
72869-86-4	urethane dimethacrylate (UDMA)	10 - 40 * %
84434-11-7	Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate	< 5 * %

#### **Further Information**

## 4. First-aid measures

## **Description of first aid measures**

#### **General information**

Get medical advice/attention if you feel unwell. Immediately remove any contaminated clothing, shoes or stockings.

### After inhalation

Get medical advice/attention if you feel unwell. Provide fresh air.

# After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Immediately remove any contaminated clothing, shoes or stockings. If skin irritation occurs: Get medical advice/attention.

### After contact with eyes

After eye contact: Rinse immediately carefully and thoroughly with eye-bath or water. If eye irritation persists: Get medical advice/attention.

#### After ingestion

Do NOT induce vomiting. Medical treatment necessary.

# Most important symptoms and effects, both acute and delayed

No information available.

# Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

# 5. Fire-fighting measures

## **Extinguishing media**

## Suitable extinguishing media

Foam, Extinguishing powder, Carbon dioxide.

## Unsuitable extinguishing media

Full water jet

## Specific hazards arising from the chemical

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

<sup>\*</sup> The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.





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# Special protective equipment and precautions for fire-fighters

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

#### Additional information

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

#### 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

#### General advice

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

#### **Environmental precautions**

Do not allow to enter into surface water or drains.

#### 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.

### Reference to other sections

Safe handling: see section 7

Personal protection equipment (PPE): see section 8

Disposal: see section 13

# 7. Handling and storage

# **Precautions for safe handling**

#### Advice on safe handling

Do not breathe gas/fume/vapor/spray.

Provide fresh air.

### Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking.

#### 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.

## 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 (40-77 °F). Can polymerize with intense heat release.

# Hints on joint storage

No special measures are necessary.

## 8. Exposure controls/personal protection

## **Control parameters**

#### **Exposure controls**

#### Individual protection measures, such as personal protective equipment

## Eye/face protection

Eye glasses with side protection



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## Hand protection

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.

### 9. Physical and chemical properties

### Information on basic physical and chemical properties

Physical state: Liquid Color: white

Odor: No data available

Melting point/freezing point:

Boiling point or initial boiling point and

not determined
not determined

boiling range:

not determined Flammability: Lower explosion limits: not determined Upper explosion limits: not determined > 100 °C Flash point: Auto-ignition temperature: not determined Decomposition temperature: not determined pH-Value: not determined Viscosity / kinematic: not determined not determined Water solubility:

Solubility in other solvents

not determined

Dissolution rate: not determined Partition coefficient n-octanol/water: not determined Dispersion stability: not determined Vapor pressure: not determined Density (at 20 °C): not determined Relative density: not determined Bulk density: not determined Relative vapour density: not determined Particle characteristics: not applicable

# 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

### **Further Information**

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

# 10. Stability and reactivity

### Reactivity

No hazardous reaction when handled and stored according to provisions.

## **Chemical stability**



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Stability: Stable

The product is stable under storage at normal ambient temperatures.

#### Possibility of hazardous reactions

Hazardous reactions: Will not occur

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

## **Conditions to avoid**

Protect from the action of light. Keep only in the original container at a temperature between 4 - 25 °C (40 - 77 °F). Can polymerize with intense heat release.

## Incompatible materials

Oxidising agent, Reducing agent, Heavy metals, Acids, Alkali (lye).

### **Hazardous decomposition products**

No known hazardous decomposition products.

# 11. Toxicological information

### Information on toxicological effects

### **Acute toxicity**

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

#### **ATEmix** calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 5000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 12,5 mg/l

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

## Irritation and corrosivity

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.

# Sensitizing effects

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



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## 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.

# Specific target organ toxicity (STOT) - single exposure

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

## Specific target organ toxicity (STOT) - repeated exposure

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

Carcinogenicity (OSHA): No ingredient of this mixture is listed.

Carcinogenicity (IARC): No ingredient of this mixture is listed.

Carcinogenicity (NTP): No ingredient of this mixture is listed.

**Aspiration hazard** 

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

### **Further information**

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

### 12. Ecological information

#### **Ecotoxicity**

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

# Persistence and degradability

The product has not been tested.

## Bioaccumulative potential

The product has not been tested.

# **Mobility in soil**

The product has not been tested.

## **Endocrine disrupting properties**





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

### 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.

### 13. Disposal considerations

### Waste treatment methods

# **Disposal recommendations**

Small quantities can be polymerized by light and the cured solid material can be disposed of with the regular garbage. Larger quantities must be disposed of following the regulations of the local authorities. Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

## 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.

### 14. Transport information

#### U.S. DOT 49 CFR 172.101

UN number or ID number: UN 3082

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(ACRYLIC RESIN)

Transport hazard class(es):9Packing group:IIIHazard label:9

Special Provisions: 8, 146, 173, 335, 441, IB3, T4, TP1, TP29

Limited quantity: No limit

Marine transport (IMDG)

UN number or ID number: UN 3082

<u>UN proper shipping name:</u> ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(ACRYLIC RESIN)

Transport hazard class(es):9Packing group:IIIHazard label:9

Special Provisions: 274, 335, 969

Limited quantity: 5 L

Excepted quantity: E1

EmS: F-A, S-F

Air transport (ICAO-TI/IATA-DGR)

UN number or ID number: UN 3082

<u>UN proper shipping name:</u> ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(ACRYLIC RESIN)

Transport hazard class(es):9Packing group:IIIHazard label:9

Special Provisions:

Limited quantity Passenger:

Passenger LQ:

Excepted quantity:

A97 A158 A197

30 kg G

Y964

Excepted quantity:

E1

IATA-packing instructions - Passenger: 964



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IATA-max. quantity - Passenger:450 LIATA-packing instructions - Cargo:964IATA-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 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.

### **Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: Yes

Danger releasing substance: Acrylic-resin

### Special precautions for user

No information available.

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

# 15. Regulatory information

### **U.S. Regulations**

# **National Inventory TSCA**

All components of this product are included on the TSCA Chemical Inventory or are not reqiured to be listed on the TSCA Chemical Inventory.

# National regulatory information

SARA Section 311/312 Hazards:

Neopentyl glycol propoxylate diacrylate (NPGPODA) (84170-74-1): Immediate (acute) health hazard urethane dimethacrylate (UDMA) (72869-86-4): Immediate (acute) health hazard Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate (84434-11-7): Immediate (acute) health hazard

## **State Regulations**

### Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)

This product can not expose you to chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

### 16. Other information

## Hazardous Materials Identification System (HMIS)

Health: 1
Flammability: 1
Physical Hazard: 0

# **NFPA Hazard Ratings**

Health: 1
Flammability: 1
Reactivity: 0

Unique Hazard:

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### 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

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%

#### Other data

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