SAFETY DATA SHEETS

This SDS packet was issued with item:

077034002

N/A

Printing date 14.06.2012 Version number 4 Revision: 08.06.2012

I Identification of the substance/mixture and of the company/undertaking

- · Product identifier
- · Trade name: GrandTEC
- · Relevant identified uses of the substance or mixture and uses advised against
- · Application of the substance / the preparation

Resin-impregnated light-curing glass-fibre strands for dental adhesive technique

- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

VOCO GmbH

Anton-Flettner-Str. 1-3 D-27472 Cuxhaven

- · Further information obtainable from: Scientific department tel. +49 (0)4721-719-0
- · Emergency telephone number: Poison Control Center Mainz +49 (0)6131-19240

2 Hazards identification

- · Classification of the substance or mixture
- · Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xi; Sensitising

May cause sensitisation by skin contact.

- · Information concerning particular hazards for human and environment: Not applicable.
- · Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

· Labelling according to EU guidelines:

As a medical device the product is not subject to labelling regulations under 1272/2008/EC.

· Code letter and hazard designation of product:



Xi Irritant

- · Safety phrases:
- 24 Avoid contact with skin.
- 37 Wear suitable gloves.
- · Other hazards Use only for intended scope of application

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous	components:
-------------	-------------

CAS: 109-16-0 Triethylene glycol dimethacrylate 2.5-5%

EINECS: 203-652-6

4 First aid measures

- · Description of first aid measures
- · General information: Seek medical treatment.
- · After inhalation: Seek medical treatment in case of complaints.
- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water.
- · After swallowing: If symptoms persist consult doctor.

Trade name: GrandTEC

(Contd. of page 1)

5 Firefighting measures

- · Extinguishing media
- · Suitable extinguishing agents: Not required.
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- · Handling:
- · Precautions for safe handling For dental use only.
- · Information about fire and explosion protection: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: See storage instructions on package
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep container tightly sealed.

8 Exposure controls/personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · Control parameters
- · Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- · Additional information: The lists valid during the making were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures: Wash hands before breaks and at the end of work.
- · Respiratory protection: Not required.
- · Protection of hands:



Protective gloves

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· 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.

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Printing date 14.06.2012 Version number 4 Revision: 08.06.2012

Trade name: GrandTEC

· Eye protection: Not required.

(Contd. of page 2)

9 Physical and chemical properties

- · Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Liquid on inert carrier material

Colour: Yellowish
Odour: Characteristic

· pH-value: Not determined.

· Change in condition

Melting point/Melting range: Undetermined. Boiling point/Boiling range: Undetermined.

· Flash point: Not applicable.

· Self-igniting: Product is not selfigniting.

• Danger of explosion: Product does not present an explosion hazard.

• **Density at 20°C:** 1.73 g/cm³

· Solubility in / Miscibility with

water: Insoluble.

• *Other information* No further relevant information available.

10 Stability and reactivity

- · Reactivity
- · Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- · on the skin: Irritant to skin and mucous membranes.
- · on the eye: Irritating effect.
- · Sensitization: No sensitizing effects known.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Additional ecological information:
- · 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.

GB ·

Trade name: GrandTEC

(Contd. of page 3)

13 Disposal considerations

- · Waste treatment methods
- · Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.

14 Transport information

- · UN-Number
- · ADR, ADN, IMDG, IATA Void
- \cdot UN proper shipping name
- · ADR, ADN, IMDG, IATA Void
- · Transport hazard class(es)
- · ADR, ADN, IMDG, IATA
- · Class Void
- · ADR, IMDG, IATA Void · Marine pollutant: No

15 Regulatory information

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.

- · Department issuing MSDS: Scientific department
- · Contact: Tel.: +49 (0)4721-719-0

GB

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· Code letter and hazard designation of product:



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- 24 Avoid contact with skin.
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CAS: 109-16-0 Triethylene glycol dimethacrylate 2.5-5%

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- · Description of first aid measures
- · General information: Seek medical treatment.
- · After inhalation: Seek medical treatment in case of complaints.
- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water.
- · After swallowing: If symptoms persist consult doctor.

Trade name: GrandTEC

(Contd. of page 1)

5 Firefighting measures

- · Extinguishing media
- · Suitable extinguishing agents: Not required.
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- · Handling:
- · Precautions for safe handling For dental use only.
- · Information about fire and explosion protection: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: See storage instructions on package
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep container tightly sealed.

8 Exposure controls/personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · Control parameters
- · Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- · Additional information: The lists valid during the making were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures: Wash hands before breaks and at the end of work.
- · Respiratory protection: Not required.
- · Protection of hands:



Protective gloves

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· 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.

(Contd. on page 3)

Printing date 14.06.2012 Version number 4 Revision: 08.06.2012

Trade name: GrandTEC

· Eye protection: Not required.

(Contd. of page 2)

9 Physical and chemical properties

- · Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Liquid on inert carrier material

Colour: Yellowish
Odour: Characteristic

· pH-value: Not determined.

· Change in condition

Melting point/Melting range: Undetermined. Boiling point/Boiling range: Undetermined.

· Flash point: Not applicable.

· Self-igniting: Product is not selfigniting.

• Danger of explosion: Product does not present an explosion hazard.

• **Density at 20°C:** 1.73 g/cm³

· Solubility in / Miscibility with

water: Insoluble.

• *Other information* No further relevant information available.

10 Stability and reactivity

- · Reactivity
- · Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- · on the skin: Irritant to skin and mucous membranes.
- · on the eye: Irritating effect.
- · Sensitization: No sensitizing effects known.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Additional ecological information:
- · 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.

GB ·

Trade name: GrandTEC

(Contd. of page 3)

13 Disposal considerations

- · Waste treatment methods
- · Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.

14 Transport information

- · UN-Number
- · ADR, ADN, IMDG, IATA Void
- \cdot UN proper shipping name
- · ADR, ADN, IMDG, IATA Void
- · Transport hazard class(es)
- · ADR, ADN, IMDG, IATA
- · Class Void
- · ADR, IMDG, IATA Void · Marine pollutant: No

15 Regulatory information

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.

- · Department issuing MSDS: Scientific department
- · Contact: Tel.: +49 (0)4721-719-0

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Printing date 09/08/2016 Reviewed on 09/08/2016

1 Identification

- · Product identifier
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- · Application of the substance / the mixture

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- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

VOCO GmbH

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- · Information department: Scientific department tel. +49 (0)4721-719-0
- Emergency telephone number: Scientific department tel. +49 (0)4721-719-0

2 Hazard(s) identification

Health effects are based on the unmixed/uncured material.

Under FDA regulations this product is classified as a medical device.

Medical devices are exempt from the labelling provisions of GHS according to the Hazard Communication Standard (HCS).

· Classification of the substance or mixture



Skin Sens. 1 H317 May cause an allergic skin reaction.

- · Label elements
- · Hazard pictograms GHS07
- · Signal word Warning
- · Hazard statements

May cause an allergic skin reaction.

· Precautionary statements

Wear protective gloves/protective clothing/eye protection/face protection.

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

IF ON SKIN: Wash with plenty of water.

 $Dispose\ of\ contents/container\ in\ accordance\ with\ local/regional/national/international\ regulations.$

- · Other hazards Use only for intended scope of application
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.
- · Dangerous components:

109-16-0 Triethylene glycol dimethacrylate

Skin Sens. 1, H317

2.5-5%

4 First-aid measures

- · Description of first aid measures
- · General information: Seek medical treatment.
- · After inhalation: Seek medical treatment in case of complaints.
- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water.
- · After swallowing: If symptoms persist consult doctor.
- · Information for doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.

(Contd. on page 2)

Printing date 09/08/2016 Reviewed on 09/08/2016

Trade name: GrandTEC

(Contd. of page 1)

· Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: Not required.
- · Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- · Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- · Handling:
- · **Precautions for safe handling** For dental use only.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: See storage instructions on package
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- · Additional information: The lists that were valid during the creation were used as basis.
- $\cdot \textit{Exposure controls}$
- · Personal protective equipment:
- · General protective and hygienic measures: Wash hands before breaks and at the end of work.
- · Breathing equipment: Not required.
- · Protection of hands:



Protective gloves

· Material of gloves

(Contd. on page 3)

US

Printing date 09/08/2016 Reviewed on 09/08/2016

Trade name: GrandTEC

(Contd. of page 2)

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Eye protection: Not required.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Liquid on inert carrier material

Color: Yellowish

· Odor: Characteristic

· pH-value: Not determined.

· Change in condition

Melting point/Melting range: Undetermined. Boiling point/Boiling range: Undetermined.

· Flash point: Not applicable.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product does not present an explosion hazard.

• Density at 20 °C (68 °F): 1.73 g/cm³ (14.437 lbs/gal)

· Solubility in / Miscibility with

Water: Insoluble.

· Viscosity:

Dynamic: Not determined. **Kinematic:** Not determined.

• *Other information* No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- · on the skin:

Testing according to ISO 10993-1/10993-10 showed no skin irritation for this product when fully cured Irritant to skin and mucous membranes.

- · on the eye: No irritating effect.
- · Sensitization: Sensitization possible through skin contact.

(Contd. on page 4)

US

Printing date 09/08/2016 Reviewed on 09/08/2016

Trade name: GrandTEC

(Contd. of page 3)

- · Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer)

128-37-0 2,6-di-tert-butyl-p-cresol

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes: Water hazard class 1 (Self-assessment): slightly hazardous for water
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

· UN-Number · DOT, ADR, ADN, IMDG, IATA	Void	
· UN proper shipping name · DOT, ADR, ADN, IMDG, IATA	Void	
· Transport hazard class(es)		
· DOT, ADR, ADN, IMDG, IATA · Class	Void	
· Packing group · DOT, ADR, IMDG, IATA	Void	
· Environmental hazards: · Marine pollutant:	No	
· Special precautions for user	Not applicable.	
· Transport in bulk according to Annex MARPOL73/78 and the IBC Code	II of Not applicable.	

Printing date 09/08/2016 Reviewed on 09/08/2016

Trade name: GrandTEC

(Contd. of page 4)

· UN "Model Regulation":

Void

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Sara
- · Section 355 (extremely hazardous substances):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

- · Proposition 65
- · Chemicals known to cause cancer:

None of the ingredients are listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed

· Chemicals known to cause developmental toxicity:

None of the ingredients are listed

- · Cancerogenity categories
- · EPA (Environmental Protection Agency)

None of the ingredients are listed

- · IARC (International Agency for Research on Cancer) Contact VOCO for more information.
- · TLV (Threshold Limit Value established by ACGIH)

128-37-0 2,6-di-tert-butyl-p-cresol

A4

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients are listed

- · GHS label elements
- The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms GHS07
- · Signal word Warning
- · Hazard statements

May cause an allergic skin reaction.

· Precautionary statements

Wear protective gloves/protective clothing/eye protection/face protection.

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

IF ON SKIN: Wash with plenty of water.

Dispose of contents/container in accordance with local/regional/national/international regulations.

16 Other information

The information contained herein is based on our present knowledge and is believed to be correct at the date issued. The information is subject to change without notice. However, all information, statements, recommendations or suggestions shall not constitute any guarantee, representation or warranty, expressed or implied.

Final determination whether the product is fit and suitable for a particular purpose and the user's method of use or application is the sole responsibility of the user.

(Contd. on page 6)

- US

Printing date 09/08/2016 Reviewed on 09/08/2016

Trade name: GrandTEC

(Contd. of page 5)

· Department issuing SDS: Scientific department

· Contact: Tel.: +49 (0)4721-719-0

· Date of preparation / last revision 09/08/2016 / 7

· 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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

 $OSHA:\ Occupational\ Safety\ \&\ Health$

TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Skin Sens. 1: Skin sensitisation – Category 1

* * Data compared to the previous version altered.

US