

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Catalyst (hardener) T 40

Print date: 04.03.2013

Product code: 415137-GHS-2013

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1. Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture

Catalyst (hardener) T 40

Company/undertaking identification

| | | |
|----------------------------------|---------------------------------|--------------------------|
| Company name: | R&G Faserverbundwerkstoffe GmbH | |
| | Composite Technology | |
| Street: | Im Meißel 7 - 13 | |
| Place: | D-71111 Waldenbuch | |
| Post-office box: | 1145 | |
| | D-71107 Waldenbuch | |
| Telephone: | +49-7157-530460 | Telefax: +49-7157-530470 |
| e-mail: | info@r-g.de | |
| Internet: | www.r-g.de | |
| Responsible Department: | Management | |
| 1.4. Emergency telephone number: | poison information centre | |

2. Hazards identification

Classification

Indications of danger: Harmful

R phrases:

Flammable.

Harmful by inhalation.

Irritating to eyes and respiratory system.

Harmful: danger of serious damage to health by prolonged exposure if swallowed.

May cause long-term adverse effects in the aquatic environment.

GHS: Hazard categories:

Flammable liquid: Flam. Liq. 3

Acute toxicity: Acute Tox. 4

Serious eye damage/eye irritation: Eye Irrit. 2

Specific target organ toxicity - single exposure: STOT SE 3

Hazard Statements:

Flammable liquid and vapour.

Harmful if inhaled.

Causes serious eye irritation.

May cause respiratory irritation.

3. Composition/information on ingredients

Chemical characterization (Mixture)

Organo-Zinnverbindung + Kieselsäureester

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Hazardous components

| EC No | CAS No | Chemical name | Quantity |
|-----------|------------|--|----------|
| | | Classification GHS classification | |
| 201-083-8 | 78-10-4 | ethyl silicate, tetraethyl silicate | < 60 % |
| | | Xn - Harmful, Xi - Irritant R10-20-36/37 | |
| | | Flam. Liq. 3, Acute Tox. 4, Eye Irrit. 2, STOT SE 3; H226 H332 H319 H335 | |
| 269-595-4 | 68299-15-0 | Bis (neodecanoyloxy) dioctylstannan | < 30 % |
| | | Xn - Harmful R48/22-53 | |

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

4. First aid measures

General information

Move persons to safety. Self-protection of the first aider.

After inhalation

Lie affected person down, cover with a blanket and keep warm. If victim is at risk of losing consciousness, position and transport on their side. Call a doctor, giving the substance's exact name.

After contact with skin

Take off immediately all contaminated clothing. Immediately rinse with copious amounts of water. Consult a doctor when irritation persists.

After contact with eyes

If the product comes into contact with the eyes, immediately rinse the open eyes with copious amounts of water for at least ten minutes. Afterwards consult an eye specialist.

After ingestion

Rinse mouth immediately and drink large quantities of water. Do not induce vomiting. Call a doctor, giving the substance's exact name.

Advice to doctor

Following inhalation: Apply cortisone spray at early stage.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Water spray. Extinguishing powder. Sand. Foam. Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons

jet of water

Special protective equipment for fire-fighters

Wear breathing apparatus with own air supply.

6. Accidental release measures

Personal precautions

Wear personal protection equipment. @00000000503 Do not breathe in gases/vapours/aerosols. Provide adequate ventilation/vapour extraction at the workplace.

6.2. Environmental precautions

Do not empty into drains or the aquatic environment. Contain escaping liquid with suitable material (e.g. soil). Retain contaminated washing water and dispose. Transfer to a disposal receptacle complying with the local/national legal provisions.

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Methods for cleaning up/taking up

Remove mechanically, placing in appropriate containers for disposal. Do not rinse down with water. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Contain the spread of large quantities and pump these off into suitable receptacles. Remove any residual loose lining with detergent/soap solution or another biodegradable cleaning agent.

Additional information

Remove from all sources of ignition.

7. Handling and storage

Handling

Advice on safe handling

Provide adequate room ventilation, if necessary with vapour extraction at the workplace.

Advice on protection against fire and explosion

Take precautionary measures against static discharges. Keep away from naked flames, heat sources, and sparks. Use water to cool receptacles in danger.

Storage

Requirements for storage rooms and vessels

Employ reliable measures to prevent the product from entering the soil.

Further information on storage conditions

Keep receptacles tightly sealed. Keep in well sealed receptacles at a cool, dry location. Protect against moisture and water.

8. Exposure controls/personal protection

Exposure limit values

8.2. Exposure controls

9. Physical and chemical properties

General information

| | |
|-----------------|------------|
| Physical state: | liquid |
| Colour: | colourless |
| Odour: | weak |

Important health, safety and environmental information

Test method

Changes in the physical state

| | |
|------------------------------------|------------------------|
| Boiling point: | 160 - 161 °C |
| Flash point: | 34 °C |
| Lower explosion limits: | 1,3 |
| Vapour pressure: (at 20 °C) | 1 hPa |
| Density (at 25 °C): | 1,04 g/cm ³ |
| Water solubility: | virtually insoluble |
| Viscosity / dynamic: (at 23 °C) | 2 mPa·s |

9.2. Other information

| | |
|-----------------------|--------|
| Ignition temperature: | 210 °C |
|-----------------------|--------|

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10. Stability and reactivity

10.4. Conditions to avoid

moisture

Materials to avoid

Reacts with: Water, strong acid and alkalis
Formation of: alcohols.

11. Toxicological information

12. Ecological information

Ecotoxicity

May cause long-term damaging effects in open waters. Do not introduce larger quantities in clarification plant.

13. Disposal considerations

Contaminated packaging

Noncleanable packaging must be disposed of like the substance.

14. Transport information

Land transport (ADR/RID)

14.1. UN number: 1993

ADR/RID class: 3

Warning plate

Hazard No: 30

ADR/RID packing group: III

Description of the goods

Entzündbarer flüssiger Stoff, n.a.g (Tetraethylsilikat)

Other applicable information (land transport)

: (D/E)

Marine transport (IMDG)

14.1. UN number: 1993

IMDG code: 3

Marine pollutant: ja

IMDG packing group: III

Description of the goods

Flammable liquid, n.o.s. (Tetraethyl silicate)

Air transport (ICAO)

UN/ID number: 1993

ICAO/IATA-DGR: 3

ICAO packing group: III

Description of the goods

Flammable liquid, n.o.s (Tetraethyl silicate)

15. Regulatory information

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Labelling

Danger symbols: Xn - Harmful



Xn - Harmful

R phrases

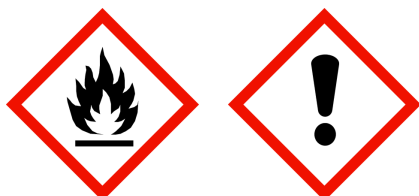
- 10 Flammable.
- 20 Harmful by inhalation.
- 36/37 Irritating to eyes and respiratory system.
- 48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.
- 53 May cause long-term adverse effects in the aquatic environment.

S phrases

- 16 Keep away from sources of ignition - No smoking.
- 51 Use only in well-ventilated areas.
- 03/07 Keep container tightly closed in a cool place.

GHS labelling

Signal word: Warning
Pictograms: flame; exclamation mark



Hazard statements

- H226 Flammable liquid and vapour.
- H332 Harmful if inhaled.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.

Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash ... thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

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| | present and easy to do. Continue rinsing. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P370+P378 | In case of fire: Use ... for extinction. |
| P235 | Keep cool. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container to |

Special labelling of certain mixtures

Contains epoxy constituents. May produce an allergic reaction.

National regulatory information

| | |
|--------------------------------|--|
| Employment restrictions: | Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing. |
| Water contaminating class (D): | 3 - highly water contaminating |

16. Other information

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

| | |
|-------|---|
| 10 | Flammable. |
| 20 | Harmful by inhalation. |
| 36/37 | Irritating to eyes and respiratory system. |
| 48/22 | Harmful: danger of serious damage to health by prolonged exposure if swallowed. |
| 53 | May cause long-term adverse effects in the aquatic environment. |

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

| | |
|------|-----------------------------------|
| H226 | Flammable liquid and vapour. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |

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