Safety Data Sheet

according to Regulation (EC) No 1907/2006

carbon fabrics, tapes, braided sleeves, rovings, yarns, chopped strands

Revision date: 28.01.2020 Product code: 190220-2010 Page 1 of 5

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

1.1. Product identifier
carbon fabrics, tapes, braided sleeves, rovings, yarns, chopped strands

Further trade names
Aksaca, Torayca, Pyrofil, HexTow, Tenax, Zotek Panex, Tairyfil, Dialead, Granoc

Dieses Produkt ist eine Erzeugnis gemäß REACH-Verordnung. Es besteht KEINE Pflicht zur Erstellung eines Sicherheitsdatenblatts!

This product is an article under REACH regulation. There is NO obligation to prepare a safety data sheet!

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

1.3. Details of the supplier of the safety data sheet
R&G Faserverbundwerkstoffe GmbH
Company name: Composite Technology
Street: Im Meiβel 7 - 13
Place: D-71111 Waldenbuch
Post-office box: 1145
Place: D-71107 Waldenbuch
Telephone: +49 (0)7157 5304-60 Telefax: +49 (0)7157 5304-70
e-mail: info@r-g.de
Internet: www.r-g.de
Management
Responsible Department: Vergiftungs-Informations-Zentrale Freiburg

1.4. Emergency telephone
number: Tel: +49 (0)761 19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008
Hazard Statements:
May cause an allergic skin reaction.

2.2. Label elements

Regulation (EC) No. 1272/2008
Hazard components for labelling
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)

Hazard statements
H317 May cause an allergic skin reaction.

Precautionary statements
P280 Wear protective gloves.

Special labelling of certain mixtures
EUH208 Contains reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight >= 700). May produce an allergic reaction.

Additional advice on labelling
not classified as dangerous under the hazardous substances laws (GefStoffV)/EC Directives

SECTION 3: Composition/information on ingredients

3.2. Mixtures
Hazardous components

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-44-0</td>
<td>Carbon</td>
<td>&gt; 95%</td>
</tr>
<tr>
<td>231-153-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25068-38-6</td>
<td>reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight &lt;= 700)</td>
<td>0.1 - 1%</td>
</tr>
<tr>
<td>500-033-5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H315 H319 H317 H411

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
Change contaminated clothing.

After inhalation
Remove to fresh air Consult a doctor when complaints persist.

After contact with skin
After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, seek medical treatment.

After contact with eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice.

After ingestion
not applicable

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Unsuitable extinguishing media
High power water jet.

5.2. Special hazards arising from the substance or mixture

Carbon monoxide

5.3. Advice for firefighters

Wear breathing apparatus without recirculating air and suitable protective clothing.

Additional information
Fire residue and contaminated firefighting water must be disposed of in accordance with government regulations.

SECTION 6: Accidental release measures

6.3. Methods and material for containment and cleaning up

Absorb with sand, earth, or another absorbent substance. Collect in suitable receptacles. Wash off contaminated area with water.
SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling
adherence to the general industrial rules and regulations and hygiene provisions for the prevention of risks

Advice on protection against fire and explosion
Keep away from ignition sources and naked flames. Dust explosive.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels
Store in a dry place free of frost. Do not subject to excessive heat.
Storage temperature: < 50°C
Relative room humidity: < 85%

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>ppm</th>
<th>mg/m³</th>
<th>fibres/ml</th>
<th>Category</th>
<th>Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-44-0</td>
<td>Graphite, respirable</td>
<td>-</td>
<td>4</td>
<td></td>
<td>TWA (8 h)</td>
<td>WEL</td>
</tr>
</tbody>
</table>

Additional advice on limit values
unknown

8.2. Exposure controls

Protective and hygiene measures
Wear protective clothing.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: solid
Colour: black
Odour: odourless

Changes in the physical state
Melting point: 3,500 °C
Density (at 23 °C): 1,7 - 2,0 g/cm³
Water solubility: insoluble

SECTION 10: Stability and reactivity

10.4. Conditions to avoid
Danger of dust explosion.

10.5. Incompatible materials
unknown

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight &lt;= 700)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exposure route</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
<th>Method</th>
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<tbody>
<tr>
<td>oral</td>
<td>LD50</td>
<td>11400</td>
<td>Rat</td>
<td>GESTIS</td>
</tr>
<tr>
<td>dermal</td>
<td>LD50</td>
<td>&gt; 22800</td>
<td>Rabbit</td>
<td>GESTIS</td>
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</tbody>
</table>

Irritation and corrosivity

Fiber abrasion can cause mechanical skin irritation.

SECTION 12: Ecological information

12.1. Toxicity

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<table>
<thead>
<tr>
<th>Aquatic toxicity</th>
<th>Dose</th>
<th>Species</th>
<th>Method</th>
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</thead>
<tbody>
<tr>
<td>Acute fish toxicity</td>
<td>LC50</td>
<td>4,4 mg/l</td>
<td>Oncorhynchus mykiss (Rainbow trout)</td>
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<tr>
<td>Acute algae toxicity</td>
<td>ErC50</td>
<td>9,4 mg/l</td>
<td>Scenedesmus capricornutum</td>
</tr>
<tr>
<td>Acute crustacea toxicity</td>
<td>EC50</td>
<td>2,8 mg/l</td>
<td>Daphnia magna</td>
</tr>
<tr>
<td>Acute bacteria toxicity</td>
<td>(&gt; 100 mg/l)</td>
<td>3 h</td>
<td>Activated sludge</td>
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</tbody>
</table>

12.2. Persistence and degradability

<table>
<thead>
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<table>
<thead>
<tr>
<th>Value</th>
<th>Method</th>
<th>Source</th>
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<tr>
<td>5%</td>
<td>OECD 301F</td>
<td>28 Manufacturer</td>
</tr>
<tr>
<td>6-12%</td>
<td>OECD 301B</td>
<td>28 Manufacturer</td>
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12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

<table>
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<table>
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<tr>
<th>Log Pow</th>
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<tbody>
<tr>
<td>3.24</td>
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BCF

<table>
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<tr>
<th>BCF</th>
<th>Species</th>
<th>Source</th>
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</thead>
<tbody>
<tr>
<td>31</td>
<td></td>
<td>Quantitative structure-activity relationship (QSAR)</td>
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</tbody>
</table>

Further information

Do not empty into drains.

SECTION 13: Disposal considerations
13.1. Waste treatment methods

Disposal recommendations
Remove according to the regulations.

List of Wastes Code - residues/unused products
160304 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; inorganic wastes other than those mentioned in 16 03 03

List of Wastes Code - contaminated packaging
150101 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); paper and cardboard packaging

SECTION 14: Transport information

Land transport (ADR/RID)
14.3. Transport hazard class(es): No dangerous good in sense of these transport regulations.

Inland waterways transport (ADN)
14.3. Transport hazard class(es): No dangerous good in sense of these transport regulations.

Marine transport (IMDG)
14.3. Transport hazard class(es): No dangerous good in sense of these transport regulations.

Air transport (ICAO-TI/IATA-DGR)
14.3. Transport hazard class(es): No dangerous good in sense of these transport regulations.

Other applicable information
postal dispatch without restriction

SECTION 15: Regulatory information

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

National regulatory information
Water contaminating class (D): 1 - slightly water contaminating

Additional information
not applicable

SECTION 16: Other information

Relevant H and EUH statements (number and full text)
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.
EUH208 Contains reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight >/= 700).. May produce an allergic reaction.

Further Information
Avoid contact with the eyes and skin.

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