SAFETY DATA SHEET

Sauereisen 31 Liquid

Date Revised : 31.10.2018
Revision : 14

Product : GLASSBOND SAUEREISEN N° 31 LIQUID

SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/ MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier
Product name : GLASSBOND SAUEREISEN N° 31 LIQUID
REACH notes : Mixture- Substances contained in this product that are not classified as hazardous have been/will be registered for REACH at the appropriate time.

1.2 Relevant identified uses of the mixture and uses advised against.
Identified use : High temperature adhesive and sealant
Uses advised against : No other uses

1.3 Details of the supplier of the safety data sheet
Company identification
Glassbond (NW) Ltd
West Side Industrial Estate
Jackson Street
St. Helens
Merseyside WA9 3AT
United Kingdom

Telephone +44(0)1744 730334
Fax +44(0)1744 451661
Email technical@glassbond.co.uk

1.4 Emergency telephone number +44(0)1744 730334
(GMT, English spoken, Mon–Friday; 08.30-16.30)

SECTION 2 : HAZARDS IDENTIFICATION*

2.1 Classification of the mixture: calculation method

2.1.1 Regulation (EC) No. 1272/2008(CLP)
Physical/Chemical NOT CLASSIFIED
Human health Eye damage 2, Skin Irritant 2
Environmental NOT CLASSIFIED

2.1.2 Directive 1999/45/EC(DPD)
Not available

2.2 Label elements According to Regulation (EC) No. 1272/2008(CLP)

GS07
Signal word(s)  Warning

Hazard statement(s)

H315  Causes skin irritation. Cat2
H319  Causes serious eye irritation. Cat2

Precautionary statement(s)
P280  Wear protective gloves /protective clothing/eye protection/face protection
P305+  IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P351+
P338

2.3 Other Hazards

PBT:  This mixture contains no substances considered as PBT
vPvB:  This mixture contains no substances considered as vPvB

2.4 Additional information

For full text of H/P phrases see section 16 if not written out in full above.

section 3: Composition/Information on Ingredients *

3.1 Substances . (This product is a mixture according to EU legislation.)

3.2 Mixture of inorganic powders

<table>
<thead>
<tr>
<th>Hazardous ingredient</th>
<th>% w/w</th>
<th>CAS N°</th>
<th>EC N°</th>
<th>REACH N°</th>
<th>CPL EC 1272/2008</th>
</tr>
</thead>
</table>
| Sodium silicate      | 30-35 | 1344-09-8 | 215-687-4 | 01-2119448725-31 | H319: Eye damage 2
|                      |       |         |       |          | H315: Skin Irritant 2 |

3.3 Additional information

For full text of H/P phrases see section 16 if not written out in full above.
SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Take off contaminated clothing and wash before re-use (P362), take care not to contaminate unaffected areas.

Inhalation
IF INHALED (aerosol) remove victim to fresh air and keep at rest in a position comfortable for breathing.

Eyes
IF IN EYES rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305 + P351 + P338)
If eye irritation persists: Get medical attention (P337+P313)

Skin
IF ON SKIN wash exposed areas thoroughly after handling (P264)
If skin irritation or rash occurs get medical attention (P332+P313)

Ingestion
IF SWALLOWED: Rinse mouth (P301+P330). Obtain medical attention immediately, show this safety data sheet.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms
Eye contact - May cause serious eye irritation. (highly alkaline)

Risks
No information available

4.3 Indication of any immediate medical attention and special treatment needed

Treatment
Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Extinguishing media:
Aqueous solution. Not combustible.

5.2 Special hazards arising from the mixture
The liquid will not burn but the packaging is combustible.

5.3 Advice for fire fighters
No special measures required.

Further information: The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing media must be disposed of in accordance with official regulation.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, protective equipment and emergency procedures
Use personal protective clothing.

6.2 Environmental Precautions
Prevent contamination of soil, drains and surface waters. Do not discharge contaminated water/ fire-fighting water into drains/ surface water/ groundwater.

6.3 Methods and material for containment and cleaning up
Soak up with inert absorbent (e.g. sand). Dispose of material in accordance with official regulations.

6.4 Reference to other sections
For personal protection see section 8 and disposal section 13
SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling
Avoid contact with skin and eyes. Practice good housekeeping. Always replace cap after use. For PPE see section 8. Wash contaminated clothing before reuse (P363)

Advice on protection
Normal measures for preventive fire protection against fire and explosion

7.2 Conditions for safe storage, including any incompatibilities

Keep containers tightly closed. Store locked up (P450), under cover, in a well ventilated, cool, dry place and away from direct sunlight or heat. Protect from freezing.

- Protect from temperatures below: 4 °C
- Protect from temperatures above: 40 °C

Suitable storage materials: Original containers.

Higher temperatures will reduce the shelf life of the product. Under normal conditions (21°C) a shelf life of 12 months or more is possible.

7.3 Specific end use(s)

As per section 1.2

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits: OEL (Occupational Exposure Standard OES)

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<thead>
<tr>
<th></th>
<th>mg/m³</th>
<th>ppm</th>
<th>Note</th>
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<tr>
<td>TWA</td>
<td>-</td>
<td>(EH40 UK) OES 8 hr</td>
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</tr>
<tr>
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<td>-</td>
<td>(EH40 UK)</td>
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</tr>
<tr>
<td>TLV-TWA</td>
<td>-</td>
<td>(ACIGH)</td>
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<tr>
<td>STEL</td>
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Sodium silicate

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<th>ppm</th>
<th>Note</th>
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<td>TWA</td>
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<td>recommended</td>
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<tr>
<td>TWA</td>
<td>-</td>
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</tr>
<tr>
<td>STEL</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.1.2 Biological limit value
Not available

8.1.3 PNECs and DNELs
Not available

8.2 Exposure Controls

8.2.1 Appropriate engineering controls: Prevent formation of aerosol.

8.2.2 Personal Protective Equipment:

Eye/face Protection
Tightly fitting safety goggles (e.g. EN166)

Skin Protection/Hand
Gloves: Chemical resistant gloves (e.g. EN374) Butyl rubber: 0.7 mm coating thickness. Nitrile rubber: 0.4 mm coating thickness. Check with PPE manufacturer. Replace immediately if signs of degradation are observed. Wear closed work clothing.

Other

Respiratory Protection
Not required under normal working conditions.

Hygiene measures
General industrial hygiene practice

8.2.3 Environmental exposure controls
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>APPEARANCE</th>
<th>Liquid</th>
<th>COLOUR</th>
<th>Colourless</th>
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<tr>
<td>ODOUR</td>
<td>None</td>
<td>ODOUR THRESHOLD ppm</td>
<td>Not Available</td>
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<tr>
<td>pH VALUE</td>
<td>&lt;11.5</td>
<td>RELATIVE DENSITY</td>
<td>1.2-1.6 g/ml</td>
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<tr>
<td>MELTING POINT/FREEZING PT</td>
<td>0°C</td>
<td>SOLUBILITY IN WATER @ 20°C</td>
<td>Miscible</td>
</tr>
<tr>
<td>INITIAL BOILING POINT/RANGE</td>
<td>100°C</td>
<td>PARTITION COEFFICIENT</td>
<td>Not available</td>
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<tr>
<td>FLASHPOINT °C</td>
<td>Not applicable</td>
<td>(n-octanol/water)</td>
<td>Not available</td>
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<tr>
<td>EVAPORATION RATE</td>
<td>Not applicable</td>
<td>AUTO IGNITION TEMPERATURE</td>
<td>Not available</td>
</tr>
<tr>
<td>FLAMMABILITY (SOLID/GAS)</td>
<td>Not applicable</td>
<td>DECOMPOSITION TEMPERATURE °C</td>
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<tr>
<td>UPPER EXPLOSIVE LIMIT</td>
<td>Not Available</td>
<td>VISCOSITY mPa.s @ 25°C</td>
<td>20-30 mPa.s</td>
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<td>LOWER EXPLOSIVE LIMIT</td>
<td>Not Available</td>
<td>EXPLOSIVE PROPERTIES</td>
<td>Not available</td>
</tr>
<tr>
<td>VAPOUR DENSITY (AIR=1)</td>
<td>Not applicable</td>
<td>OXIDIZING PROPERTIES</td>
<td>Not oxidising</td>
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9.2 Other information

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
Stable under normal conditions.

10.2 Chemical Stability
Stable under recommended storage and handling conditions.

10.3 Possibility of Hazardous reactions
No dangerous reaction known under conditions of normal use

10.4 Conditions to Avoid
Freezing. Do not leave containers open.

10.5 Incompatible materials
In compatible with strong acids. Aqueous solutions will react with aluminium, zinc, tin and their alloys evolving hydrogen gas which can form an explosive mixture with air. Can react violently if in contact with acids. Can react with sugar residues to form carbon monoxide.

10.6 Hazardous Decomposition Products.
No hazardous decomposition products if stored and handled as prescribed/ indicated.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects of the mixture

Acute toxicity
Contains components that are hazardous by the following routes : skin, eye, inhalation.

| LD$_{50}$ ORAL TOXICITY IN RATS | 3400 mg/kg | Sodium silicate |
| LD$_{50}$ DERMAL TOXICITY RABBITS | >5000 mg/kg | Sodium silicate |
| LC$_{50}$ INHL TOXICITY IN RATS | >2.06 g/m$^3$ | Sodium silicate |
| LD$_{50}$ DERMAL TOXICITY RABBITS | mg/kg |
| LC$_{50}$ ORAL TOXICITY IN RATS | mg/kg |
| LD$_{50}$ DERMAL TOXICITY RABBITS | mg/kg |

Skin corrosion/ irritation
Irritating Cat2

Serious eye damage / irritation
Irritating Cat2

Respiratory or skin sensitisation
Not classified

Germ cell mutagenicity
Not classified

Carcinogenicity
Not classified
Reproductive toxicity
Specific Target Organ Toxicity (Repeated Exposure) Not classified
Specific Target Organ Toxicity (Single Exposure) Not classified
Aspiration hazard Not classified

11.2 Other information

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

<table>
<thead>
<tr>
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<th>sodium silicate</th>
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<tbody>
<tr>
<td>LL₅₀ Fish</td>
<td>(96 hr) 1108 mg/l Brachydanio rerio</td>
</tr>
<tr>
<td>EC₅₀ Invertibrates</td>
<td>(48 hr) 1700 mg/l Daphnia magna</td>
</tr>
<tr>
<td>EL₅₀ Algae</td>
<td>(72hr) Not available mg/l Selenastrum capricornutum</td>
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<table>
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<tr>
<th></th>
<th>mg/l</th>
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<tbody>
<tr>
<td>LL₅₀ Fish</td>
<td>Lepomis macrochirus</td>
</tr>
<tr>
<td>EC₅₀ Invertibrates</td>
<td>Daphnia magna</td>
</tr>
<tr>
<td>EL₅₀ Algae</td>
<td>Selenastrum capricornutum</td>
</tr>
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</table>

Micro organisms/ effect upon activated sludge

12.2 Persistence and degradability

Not biodegradable

12.3 Bioaccumulative potential

Not available

12.4 Mobility in soil

Soluble in water. If the product enters soil, it will be mobile and may contaminate groundwater.

12.5 Results of PBT and vPvB assessment

PBT: This mixture contains no substances considered as PBT

vPvB: This mixture contains no substances considered as vPvB

12.6 Other adverse effects

The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. Do not release untreated into natural waters. This product has not been tested. The statement has been derived from products of a similar structure and composition.
SECTION 13: DISPOSAL CONSIDERATION

13.1 Waste treatment methods

Dispose of contents/container according to the end user disposal procedure (P501). Dispose by landfill via a licensed waste disposal contractor in accordance with local and national regulations.

Contaminated packaging should be emptied as far as possible, they can then be recycled after being thoroughly cleaned by a licensed contractor. Labels must not be removed from containers until they have been cleaned. Packaging materials that are not contaminated should be treated as household waste or as recycling material.

13.2 Additional information

The UK Environmental Protection (Duty of Care) regulations (EP) and amendments should be noted (United Kingdom).

SECTION 14 - TRANSPORT INFORMATION

14.1 UN number

<table>
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<tr>
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14.2 Proper shipping name

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14.3 Transport Hazard Class

<table>
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14.4 Packing Group

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<th>IMDG</th>
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14.5 Environmental hazards

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14.6 Special Precautions for user

Not classified as dangerous in the meaning of transport regulations

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code

Not applicable
SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the mixture
EU Legislation

15.2 Chemical Safety Assessment
Assessed to be not PBT/vPvB.

SECTION 16: OTHER INFORMATION *

* SECTIONS REVISED 7, 10 Supercedes date 26.07.2017

The Safety Data Sheets have been revised throughout in accordance with CLP/GHS requirements

Legend
PBT Persistent, Bio accumulative and Toxic
vPvB very Persistent and very bio accumulative

Data sources
Supplier information

Other hazard phrases listed in this MSDS
H315 Causes skin irritation
H319 Causes serious eye irritation

Training advice
General industrial hygiene practice.
Manual handling

Further information
This information relates only to the specific material designated and is to the best of the company’s knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to it’s accuracy, reliability or completeness and without acceptance of liability for loss or damage attributable to reliance thereon as conditions of use lie outside our control. Users should always carry tests to establish the suitability of any products for their intended applications. No statements shall be incorporated in any contract unless expressively agreed in writing or construed as recommending the use of any product in conflict of any patent. All goods are supplied subject to Glassbond Ltd’s General Conditions of Sale.