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

1.1 Product identifier

   Trade name : STAPA BG HYDROLAN 8154 55900/G Aluminium Paste
   Material number : 005351GK0

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

   This information is not available.

1.3 Details of the supplier of the safety data sheet

   Company : ECKART GmbH
   Guentersthal 4
   91235 Hartenstein
   Telephone : +499152770
   Telefax : +499152777008
   E-mail address : msds.eckart@altana.com
   Responsible/issuing person

1.4 Emergency telephone number

   GBK Gefahr gut Büro GmbH, Ingelheim, Germany:
   From outside US: (001) 352-323-3500
   (First call in English, response in your language is possible)
   US & Canada (toll free) : 1-800-5355-053

SECTION 2: Hazards identification

GHS Classification

   : Acute toxicity, Category 4, Oral, H302
   Acute toxicity, Category 4, Inhalation, H332
   Acute toxicity, Category 5, Dermal, H313
   Skin corrosion/irritation, Category 2, H315
SAFETY DATA SHEET

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STAPA BG HYDROLAN 8154 55900/G Aluminium Paste

Version 1.0 Revision Date 03.01.2019 Print Date 07.01.2019

Serious eye damage/eye irritation, Category 2A, H319

GHS-Labelling

Symbol(s) : Warning

Signal word : Warning

Hazard statements : H302 + H332: Harmful if swallowed or if inhaled.
H313: May be harmful in contact with skin.
H315: Causes skin irritation.
H319: Causes serious eye irritation.

Precautionary statements : Prevention:
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/ eye protection/ face protection.

Response:
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P312 Call a POISON CENTER/doctor if you feel unwell.
P337 + P313 If eye irritation persists: Get medical advice/ attention.

Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label

Identification CAS-No.
2-butoxyethanol 111-76-2
silicon dioxide 7631-86-9
Fatty acids, C14-18 and C16-18-unsatd. 67701-06-8

Other hazards which do not result in classification
Combustible Solids

SECTION 3: Composition/information on ingredients

Substance name: BG HYDROLAN 8154
Substance No.: 

Hazardous components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>EINECS-No.</th>
<th>Classification and labelling</th>
<th>Concentration[%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium powder (stabilised)</td>
<td>7429-90-5</td>
<td>231-072-3</td>
<td>Flam. Sol.;1;H228</td>
<td>50 - 100</td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>203-905-0</td>
<td>Flam. Liq.;4;H227</td>
<td>25 - 50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox.;4;H302</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox.;4;H312</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox.;4;H332</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Irrit.;2;H315</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irrit.;2;H319</td>
<td></td>
</tr>
<tr>
<td>silicon dioxide</td>
<td>7631-86-9</td>
<td>231-545-4</td>
<td>Acute Tox.;5;H303</td>
<td>1 - 10</td>
</tr>
<tr>
<td>Fatty acids, C14-18 and C16-18-unsatd.</td>
<td>67701-06-8</td>
<td>266-930-6</td>
<td>Acute Tox.;5;H313</td>
<td>1 - 10</td>
</tr>
<tr>
<td>N-(3-(trimethoxysilyl)propyl)ethylenediamine</td>
<td>1760-24-3</td>
<td>217-164-6</td>
<td>Acute Tox.;4;H332</td>
<td>0,1 - 0,25</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Sens.;1;H317</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Dam.;1;H317</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Chronic;2;H411</td>
<td></td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16.
SECTION 4: First aid measures

4.1 Description of first aid measures

General advice: Move the victim to fresh air. Do not leave the victim unattended.
Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.

If inhaled: If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact: Wash off immediately with soap and plenty of water.
If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact: Immediately flush eye(s) with plenty of water.
Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed: Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

This information is not available.
4.3 Indication of any immediate medical attention and special treatment needed
   This information is not available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
   Suitable extinguishing media  :  Dry sand, Special powder against metal fire
   Unsuitable extinguishing media  :  Water, Foam, ABC powder, Carbon dioxide (CO2)

5.2 Special hazards arising from the substance or mixture
   This information is not available.

5.3 Advice for firefighters
   Special protective equipment for firefighters  :  Use personal protective equipment.
   Wear self-contained breathing apparatus for firefighting if necessary.
   Further information  :  Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
   Personal precautions  :  Evacuate personnel to safe areas.
                           Use personal protective equipment.
                           Remove all sources of ignition.
                           Use personal protective equipment.
                           Avoid dust formation.
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6.2 Environmental precautions

Environmental precautions: Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up: Use mechanical handling equipment. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Do not flush with water. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling: Keep away from heat and sources of ignition. Avoid dust formation. Ensure adequate ventilation.

Avoid formation of respirable particles. Do not breathe vapours/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion: Keep away from open flames, hot surfaces and sources of ignition. Earthing of containers and apparatuses is essential.

Avoid dust formation.

Hygiene measures: When using do not eat or drink. When using do not smoke.
Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Keep container closed when not in use. Keep away from sources of ignition - No smoking.

Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards.

Further information on storage conditions: Protect from humidity and water. Do not allow to dry.

Advice on common storage: Do not store together with oxidizing and self-igniting products. Never allow product to get in contact with water during storage. Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

Other data: No decomposition if stored and applied as directed.

7.3 Specific end use(s)

This information is not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Germany:

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium powder</td>
<td>7429-90-5</td>
<td>AGW (Inhalable fraction)</td>
<td>10 mg/m³</td>
<td>2014-04-02</td>
<td>DE TRGS 900</td>
</tr>
</tbody>
</table>
### SAFETY DATA SHEET

**Globally Harmonized System of Classification and Labelling of Chemicals (GHS)**

**STAPA BG HYDROLAN 8154 55900/G Aluminium Paste**

**Version 1.0**  
**Revision Date 03.01.2019**  
**Print Date 07.01.2019**

<table>
<thead>
<tr>
<th>(stabilised)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak-limit: excursion factor (category)</td>
<td>2; (II)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Further information</td>
<td>Commission for dangerous substancesSenate commission for the review of compounds at the work place dangerous for the health (MAK-commission).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>aluminium powder (stabilised)</td>
<td>7429-90-5</td>
<td>AGW (Alveolate fraction)</td>
<td>1,25 mg/m³</td>
</tr>
<tr>
<td>Peak-limit: excursion factor (category)</td>
<td>2; (II)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Further information</td>
<td>Commission for dangerous substancesSenate commission for the review of compounds at the work place dangerous for the health (MAK-commission).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>TWA</td>
<td>20 ppm 98 mg/m³</td>
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<tr>
<td>Further information</td>
<td>Identifies the possibility of significant uptake through the skinIndicative</td>
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<td></td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>STEL</td>
<td>50 ppm 246 mg/m³</td>
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<tr>
<td>Further information</td>
<td>Identifies the possibility of significant uptake through the skinIndicative</td>
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<td></td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>AGW</td>
<td>10 ppm 49 mg/m³</td>
</tr>
<tr>
<td>Peak-limit: excursion factor (category)</td>
<td>4; (II)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Further information</td>
<td>Commission for dangerous substancesSkin absorptionWhen there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child</td>
<td></td>
<td></td>
</tr>
<tr>
<td>silicon dioxide</td>
<td>7631-86-9</td>
<td>AGW (Inhalable fraction)</td>
<td>4 mg/m³</td>
</tr>
<tr>
<td>Further information</td>
<td>Senate commission for the review of compounds at the work</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
place dangerous for the health (MAK-commission). Colloidal amorphous silica, including pyrogenic silica and in wet processes manufactured silica (precipitated silica, silicagel). When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child.

| silicon dioxide | 7631-86-9 | AGW (Inhalable fraction) | 4 mg/m³ | 2013-09-19 | DE TRGS 900
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Further information</td>
<td>Senate commission for the review of compounds at the workplace dangerous for the health (MAK-commission). Colloidal amorphous silica, including pyrogenic silica and in wet processes manufactured silica (precipitated silica, silicagel). When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.2 Exposure controls

**Personal protective equipment**

Eye protection: Wear face-shield and protective suit for abnormal processing problems.

Hand protection

Material: Solvent-resistant gloves

Remarks: Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). The exact break through time can be obtained from the protective glove producer and this has to be observed. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Recommended preventive skin protection
Skin should be washed after contact.
The suitability for a specific workplace should be discussed
with the producers of the protective gloves.

Skin and body protection:
- Long sleeved clothing
- Safety shoes
- Choose body protection according to the amount and
  concentration of the dangerous substance at the work place.

Respiratory protection:
- Use suitable breathing protection if workplace concentration
  requires.

Environmental exposure controls
General advice:
- Prevent further leakage or spillage if safe to do so.
  If the product contaminates rivers and lakes or drains inform
  respective authorities.

Water:
- The product should not be allowed to enter drains, water
  courses or the soil.
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Pasty solid</td>
</tr>
<tr>
<td>Colour</td>
<td>silver</td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Bulk density</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Combustible Solids</td>
</tr>
<tr>
<td>Auto-flammability</td>
<td>not auto-flammable</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Miscibility with water</td>
<td>immiscible</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Viscosity, dynamic : No data available
Viscosity, kinematic : No data available
Flow time : No data available
Explosive properties : Not explosive
Not explosive

9.2 Other information
No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
No decomposition if stored and applied as directed.

10.2 Chemical stability
No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions
Hazardous reactions : Reacts with alkalis, acids, halogenes and oxidizing agents.
Contact with acids and alkalis may release hydrogen.
Mixture reacts slowly with water resulting in evolution of hydrogen.
Vapour/air-mixtures are explosive at intense warming.
Stable under recommended storage conditions.

10.4 Conditions to avoid
Conditions to avoid : Do not allow to dry.
No data available

10.5 Incompatible materials
Materials to avoid : Acids
10.6 Hazardous decomposition products

Hazardous decomposition products: No data available
Other information: No data available

SECTION 11: Toxicological information
11.1 Information on toxicological effects

Acute toxicity

**Components:**

- **2-butoxyethanol:** Acute inhalation toxicity: > 3,1 mg/l
  - Exposure time: 1 h
  - Test atmosphere: vapour

- **silicon dioxide:** Acute oral toxicity: LD50 Rat: 5 000 mg/kg
  - Mouse: 15 000 mg/kg
  - Acute inhalation toxicity: Rat: 0,139 mg/l
Exposure time: 4 h

Acute dermal toxicity: LD50 Rabbit: > 5 000 mg/kg

**Fatty acids, C14-18 and C16-18-unsatd.:**
Acute oral toxicity: LD50 Rat: > 5 000 mg/kg
Acute inhalation toxicity: LC50 Rat: > 46 mg/l
  Exposure time: 1 h
  Test atmosphere: dust/mist

Acute dermal toxicity: LD50 Rabbit: > 3 160 mg/kg

**N-(3-(trimethoxysilyl)propyl)ethylenediamine:**
Acute oral toxicity: LD50 Rat: ca. 2 400 mg/kg
Acute inhalation toxicity: LC50: 1,49 - 2,44 mg/l
  Exposure time: 4 h
  Test atmosphere: vapour

Acute dermal toxicity: LD50 Rat: > 2 000 mg/kg

**Skin corrosion/irritation**
Product
May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation
Product
Eye irritation

Respiratory or skin sensitisation
No data available

Carcinogenicity
No data available

Toxicity to reproduction/fertility
No data available

Reprod.Tox./Development/Teratogenicity
No data available

STOT - single exposure
No data available

STOT - repeated exposure
No data available

Aspiration toxicity
No data available
Further information

Product
No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:
silicon dioxide (7631-86-9):
Toxicity to daphnia and other aquatic invertebrates: (Daphnia (water flea)): 7 600 mg/l
Toxicity to algae: (Chlorella pyrenoidosa (algae)): 440 mg/l
Exposure time: 72 h

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
No data available
12.6 Other adverse effects

**Product:**
Additional ecological information: No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

**Product:**
Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.
In accordance with local and national regulations.

**Contaminated packaging:**
Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
In accordance with local and national regulations.

SECTION 14: Transport information

14.1 UN number
14.2 Proper shipping name
14.3 Transport hazard class
14.4 Packing group
14.5 Environmental hazards

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
   No data available

SECTION 15: Regulatory information

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

   **Prohibition/Restriction**
   REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

   **Prohibition/Restriction**
   Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

   **Prohibition/Restriction**
   Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

15.2 Chemical safety assessment

   No data available
SECTION 16: Other information

Full text of H-Statements

H227 : Combustible liquid.
H228 : Flammable solid.
H302 : Harmful if swallowed.
H302 + H332 : Harmful if swallowed or if inhaled.
H303 : May be harmful if swallowed.
H312 : Harmful in contact with skin.
H313 : May be harmful in contact with skin.
H315 : Causes skin irritation.
H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.
H319 : Causes serious eye irritation.
H332 : Harmful if inhaled.
H411 : Toxic to aquatic life with long lasting effects.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.