SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

STAPA BG HYDROLAN 501 55900/G Aluminium Paste
Version 1.1 Revision Date 06.03.2014 Print Date 19.11.2018

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

1.1 Product identifier
   Trade name : STAPA BG HYDROLAN 501 55900/G Aluminium Paste

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 Gefahrgut 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

2.1 Classification of the substance or mixture

   Classification (REGULATION (EC) No 1272/2008)
   Acute toxicity, Category 4 : H302: Harmful if swallowed.
   Acute toxicity, Category 4 : H332: Harmful if inhaled.
   Skin irritation, Category 2 : H315: Causes skin irritation.
   Eye irritation, Category 2 : H319: Causes serious eye irritation.

   Classification (67/548/EEC, 1999/45/EC)
   Harmful : R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.
   Irritant : R36/38: Irritating to eyes and skin.

2.2 Label elements

   Labelling (REGULATION (EC) No 1272/2008)
Hazard pictograms: 

Signal word: Warning

Hazard statements: H302 + H332 Harmful if swallowed or if inhaled
                  H315 Causes skin irritation.
                  H319 Causes serious eye irritation.

Precautionary statements: Prevention:
                           P261 Avoid breathing vapours.
                           P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

                           Response:
                           P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
                           P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
                           P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
                           P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

Hazardous components which must be listed on the label:
111-76-2 2-butoxyethanol

2.3 Other hazards
No information available.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No. EC-No. Registration number</th>
<th>Classification (67/548/EEC)</th>
<th>Classification (REGULATION (EC) No</th>
<th>Concentration [%]</th>
</tr>
</thead>
</table>

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102000020087 / 005847GK0
SECTIN 4: First aid measures

4.1 Description of first aid measures

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.

Move the victim to fresh air.
Do not leave the victim unattended.

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

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

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

Immediately flush eye(s) with plenty of water.

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

Symptoms : No information available.
Risks : No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Dry sand, Special powder against metal fire

Unsuitable extinguishing media : ABC powder, Carbon dioxide (CO2), Water, Foam

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 fire fighting if necessary.

Further information : Use a water spray to cool fully closed containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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 : Use personal protective equipment. Avoid dust formation.
Evacuate personnel to safe areas. Use personal protective equipment.

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

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 : 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 : 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 : Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards. Earthing of containers and apparatuses is essential. Reaction with water liberates extremely flammable gas (hydrogen). Take measures to prevent the build up of electrostatic charge. Use
explosion-proof equipment. Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Keep away from sources of ignition - No smoking. Keep container closed when not in use.

Further information on storage conditions: Protect from humidity and water.

Advice on common storage: Do not store near acids. Do not store together with oxidizing and self-igniting products. Keep away from oxidising agents and strongly acid or alkaline materials. Never allow product to get in contact with water during storage. Keep away from oxidising 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

<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</td>
<td>7429-90-5</td>
<td>TWA (Inhalable)</td>
<td>10 mg/m³</td>
<td>2011-12-01</td>
<td>GB EH40</td>
</tr>
</tbody>
</table>

Further information: The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m⁻³ 8-hour TWA of inhalable dust or 4 mg.m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.

| aluminium  | 7429-90-5 | TWA (Respirable) | 4 mg/m³ | 2011-12-01 | GB EH40 |

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<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS Number</th>
<th>Exposure Level</th>
<th>Limit</th>
<th>Date</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium</td>
<td>7429-90-5</td>
<td>TWA (Inhalable)</td>
<td>10 mg/m³</td>
<td>2005-04-06</td>
<td>GB EH40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable)</td>
<td>4 mg/m³</td>
<td>2005-04-06</td>
<td>GB EH40</td>
</tr>
</tbody>
</table>

Further information:

For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust. The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg·m⁻³ 8-hour TWA of inhalable dust or 4 mg·m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed ‘inhalable’ and ‘respirable’. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3. Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.
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<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>TWA</td>
<td>20 ppm 98 mg/m3</td>
<td>2000-06-16</td>
<td>2000/39/EC</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>50 ppm 246 mg/m3</td>
<td>2000-06-16</td>
<td>2000/39/EC</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>TWA</td>
<td>25 ppm</td>
<td>2005-04-06</td>
<td>GB EH40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>STEL</td>
<td>50 ppm</td>
<td>2005-04-06</td>
<td>GB EH40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<table>
<thead>
<tr>
<th>Substance</th>
<th>TWA (Respirable)</th>
<th>Year</th>
<th>Value</th>
<th>GB EH40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon dioxide</td>
<td>2.4 mg/m³</td>
<td>2007-08-01</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Further information

For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3. General methods for sampling and gravimetric analysis of respirable and inhalable dust. The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg·m⁻³ 8-hour TWA of inhalable dust or 4 mg·m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed ‘inhalable’ and ‘respirable’. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3. Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.
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with. Where no specific short-term exposure limit is listed, a figure
three times the long-term exposure should be used.

**DNEL:**
2-butoxyethanol (111-76-2)  End Use: Workers
Exposure routes: Skin contact
Potential health effects: short term – systemic effects
Value: 89 mg/kg

**DNEL:**
2-butoxyethanol (111-76-2)  End Use: Workers
Exposure routes: Skin contact
Potential health effects: long term – systemic effects
Value: 75 mg/kg

**DNEL:**
2-butoxyethanol (111-76-2)  End Use: Consumers
Exposure routes: Inhalation
Potential health effects: short term – local effects
Value: 123 mg/m³

**DNEL:**
2-butoxyethanol (111-76-2)  End Use: Consumers
Exposure routes: Ingestion
Potential health effects: short term – systemic effects
Value: 13.4 mg/kg

**DNEL:**
2-butoxyethanol (111-76-2)  End Use: Consumers
Exposure routes: Skin contact
Potential health effects: short term – systemic effects
Value: 44.5 mg/kg

**DNEL:**
2-butoxyethanol (111-76-2)  End Use: Consumers
Exposure routes: Inhalation
Potential health effects: short term – systemic effects
Value: 426 mg/m³

**DNEL:**
2-butoxyethanol (111-76-2)  End Use: Consumers
Exposure routes: Ingestion
Potential health effects: long term – systemic effects
Value: 3.2 mg/kg
Exposure routes: Skin contact
Potential health effects: long term – systemic effects
Value: 38 mg/kg

**DNEL:**
2-butoxyethanol (111-76-2)

End Use: Consumers
Exposure routes: Inhalation
Potential health effects: long term – systemic effects
Value: 49 mg/m3

**PNEC:**
2-butoxyethanol (111-76-2)

Fresh water
Value: 8.8 mg/l

**PNEC:**
2-butoxyethanol (111-76-2)

Fresh water sediment
Value: 34.6 mg/kg

**PNEC:**
2-butoxyethanol (111-76-2)

Marine water
Value: 0.88 mg/l

**PNEC:**
2-butoxyethanol (111-76-2)

Marine sediment
Value: 3.46 mg/kg

**PNEC:**
2-butoxyethanol (111-76-2)

STP
Value: 463 mg/l

**8.2 Exposure controls**

**Personal protective equipment**

Eye protection: Eye wash bottle with pure water
Wear face-shield and protective suit for abnormal processing problems.

Hand protection

Material: Solvent-resistant gloves (butyl-rubber)

Remarks: The suitability for a specific workplace should be discussed with the producers of the protective gloves.
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
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

Appearance: Pasty solid
Colour: silver
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 : Stable under recommended storage conditions.
10.4 Conditions to avoid
Conditions to avoid : no data available
Do not allow evapouration to dryness.

10.5 Incompatible materials
Materials to avoid : no data available

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

Product
Acute oral toxicity : Acute toxicity estimate : 1,250 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : 3.75 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : > 2,000 mg/kg
Method: Calculation method

Components:
STAPA BG HYDROLAN 501 55900/G Aluminium Paste

7429-90-5 :
Acute inhalation toxicity : LC50 rat: > 5 mg/l
   Exposure time: 4 h
   Test atmosphere: dust/mist

111-76-2 :
Acute oral toxicity : Acute toxicity estimate: 500 mg/kg
   Method: Converted acute toxicity point estimate

Acute dermal toxicity : Acute toxicity estimate: 1,100 mg/kg
   Method: Converted acute toxicity point estimate

Skin corrosion/irritation

   Product
   May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation

   Product
   May cause irreversible eye damage.

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
STAPA BG HYDROLAN 501 55900/G Aluminium Paste

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
no data available

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

European Waste Catalogue: 12 01 04 - non-ferrous metal dust and particles

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.

Contaminated packaging: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

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

no data available

15.2 Chemical Safety Assessment

no data available

SECTION 16: Other information

Full text of R-Phrases

R11 Highly flammable.
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R36/38 Irritating to eyes and skin.

Full text of H-Statements

H228 Flammable solid.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.

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.