SAFETY DATA SHEET

STAPA BG HYDROLAN 214 55900/G
Aluminium Paste

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : STAPA BG HYDROLAN 214 55900/G Aluminium Paste
Product code : 005475GK0

Manufacturer or supplier's details
Company name of supplier : ECKART GmbH
Address : Guentersthal 4
            Hartenstein 91235
Telephone : +499152770
Telefax : +499152777008
Emergency telephone number : CHEMTREC: 800-424-9300
                              CHEMTREC: 1-703-527-3387 (International)
                              GBK Gefahrgut Buero 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 (Oral) : Category 4
Acute toxicity (Inhalation) : Category 4
Acute toxicity (Dermal) : Category 5
Skin irritation : Category 2
Eye irritation : Category 2A

GHS label elements
SAFETY DATA SHEET

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Hazard pictograms

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.
- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/ eye protection/ face protection.

Response:
- P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
- P302 + P352 IF ON SKIN: Wash with plenty of water.
- P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 present and easy to do. Continue rinsing.
- P312 Call a POISON CENTER or doctor/ physician if you feel unwell.
- P332 + P313 If skin irritation occurs: Get medical advice/ attention.
- P362 + P364 Take off contaminated clothing and wash it before reuse.

Disposal:
- P501 Dispose of contents/ container to an approved waste disposal plant.
Hazardous components which must be listed on the label:
Ethanol, 2-butoxy-
Silica

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>7429-90-5</td>
<td>&gt;= 50 - &lt; 70</td>
</tr>
<tr>
<td>Ethanol, 2-butoxy-</td>
<td>111-76-2</td>
<td>&gt;= 30 - &lt; 50</td>
</tr>
<tr>
<td>Silica</td>
<td>7631-86-9</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
</tbody>
</table>

SECTION 4. 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.

Most important symptoms and effects, both acute and delayed:
- Harmful if swallowed or if inhaled.  
- May be harmful in contact with skin.  
- Causes skin irritation.  
- Causes serious eye irritation.

SECTION 5. FIREFIGHTING MEASURES

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

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

Specific extinguishing methods:
- Standard procedure for chemical fires.  
- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special protective equipment for firefighters:
- Use personal protective equipment.  
- Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

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

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

SECTION 7. HANDLING AND STORAGE

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.

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.

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

Conditions for safe storage:
- 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.

Materials to avoid:
- 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.

Further information on storage stability: No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>7429-90-5</td>
<td>LMPE-PPT</td>
<td>10 mg/m3</td>
<td>MX OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LMPE-PPT (Dust)</td>
<td>10 mg/m3</td>
<td>MX OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable fraction)</td>
<td>1 mg/m3</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable fraction)</td>
<td>1 mg/m3 (Aluminium)</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Ethanol, 2-butoxy-</td>
<td>111-76-2</td>
<td>VLE-PPT</td>
<td>20 ppm</td>
<td>NOM-010-STPS-2014</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>20 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Silica</td>
<td>7631-86-9</td>
<td>LMPE-PPT (Respirable)</td>
<td>3 mg/m3</td>
<td>MX OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LMPE-PPT (Inhalable)</td>
<td>10 mg/m3</td>
<td>MX OEL</td>
</tr>
</tbody>
</table>

Biological occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol, 2-butoxy-</td>
<td>111-76-2</td>
<td>Butoxyacetic acid (BAA)</td>
<td>Urine</td>
<td>end of shift</td>
<td>200 mg/g Creatinine</td>
<td>MX BEI</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td></td>
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<td>Urine</td>
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<td>200 mg/g Creatinine</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>BEI</td>
</tr>
</tbody>
</table>
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Version 1.0              SDS Number: 102000000201
Revision Date: 03/21/2018  Date of last issue: -

Personal protective equipment

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

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.

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

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Pasty solid
Colour: silver

soon as possible after exposure ceases)
Odour: characteristic
Odour Threshold: No data available
pH: No data available
Melting point/freezing point: No data available
Boiling point/boiling range: 171 °C
Flash point: 65 °C
Evaporation rate: No data available
Flammability (solid, gas): Combustible Solids
Auto-flammability: not auto-flammable
Upper explosion limit / Upper flammability limit: No data available
Lower explosion limit / Lower flammability limit: No data available
Vapour pressure: No data available
Relative density: No data available
Solubility(ies): No data available
Partition coefficient: n-octanol/water: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity: No data available
Explosive properties: Not explosive

SECTION 10. STABILITY AND REACTIVITY
Reactivity: No decomposition if stored and applied as directed.
Chemical stability: No decomposition if stored and applied as directed.
Possibility of 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.
Conditions to avoid: Do not allow to dry.
Incompatible materials: Acids
                                      Bases
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Oxidizing agents
Highly halogenated compounds

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity
Harmful if swallowed or if inhaled.
May be harmful in contact with skin.

Components:
Ethanol, 2-butoxy-:
Acute oral toxicity : Acute toxicity estimate: 500 mg/kg
Method: Converted acute toxicity point estimate

Acute inhalation toxicity : > 3.1 mg/l
Exposure time: 1 h
Test atmosphere: vapour

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

Silica:
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

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/eye irritation
Causes serious eye irritation.

Respiratory or skin sensitisation
Skin sensitisation
Not classified based on available information.
**Respiratory sensitisation**
Not classified based on available information.

**Germ cell mutagenicity**
Not classified based on available information.

**Carcinogenicity**
Not classified based on available information.

**Reproductive toxicity**
Not classified based on available information.

**STOT - single exposure**
Not classified based on available information.

**STOT - repeated exposure**
Not classified based on available information.

**Aspiration toxicity**
Not classified based on available information.

**Further information**

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**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Components:**

**Silica:**
Toxicity to daphnia and other aquatic invertebrates: (Daphnia (water flea)): 7,600 mg/l

Toxicity to algae: (Chlorella pyrenoidosa (algae)): 440 mg/l

**Persistence and degradability**
No data available

**Bioaccumulative potential**
No data available

**Other adverse effects**
No data available
SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste from residues: 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

International Regulations
Remarks: Not classified as dangerous in the meaning of transport regulations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

National Regulations
Special precautions for user
Remarks: Not classified as dangerous in the meaning of transport regulations.

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
Federal Law for the control of chemical precursors, essential chemical products and machinery for producing capsules, tablets and pills: Not applicable

The components of this product are reported in the following inventories:
DSL: All components of this product are on the Canadian DSL
TSCA: On TSCA Inventory
SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)
MX BEI : Official Mexican Norm NOM-047-SSA1-2011, Environmental Health - Biological exposure indices for workers occupationally exposed to chemical agents
MX OEL : Mexico. Occupational Exposure Limits
NOM-010-STPS-2014 : Mexico. Norm NOM-010-STPS-2014 on Chemicals Polluting the Work Environment - Identification, Assessment and Control - Appendix 1 Occupational Exposure Limits
ACGIH / TWA : 8-hour, time-weighted average
MX OEL / LMPE-PPT : Time weighted average
NOM-010-STPS-2014 / VLE-PPT : Time weighted average limit value

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IEESC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System
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