1. PRODUCT AND COMPANY IDENTIFICATION

Product name : STAPA BG HYDROLAN 8154 55900/G Aluminium Paste
Product code : 005351GK0
Chemical nature : Aluminium pigment paste

Manufacturer or supplier’s details
Company : 爱卡特殊效果颜料（珠海）有限公司
Address : 珠海市金湾区南水镇浪屿路 3 号
Telephone : +8607567228600
Emergency telephone number : National Emergency Response Hotline for Chemical Incident (China): 0532-83889090
E-mail address : Riko.Huang@altana.com
Telefax : +8607567228601

2. HAZARDS IDENTIFICATION

Emergency Overview
Appearance : Pasty solid
Colour : silver
Odour : characteristic
Harmful if swallowed or if inhaled. May be harmful in contact with skin. Causes skin irritation. Causes serious eye irritation.

GHS Classification
Acute toxicity (Oral) : Category 4
Acute toxicity (Inhalation) : Category 4
Acute toxicity (Dermal) : Category 5
Skin corrosion/irritation : Category 2
Serious eye damage/eye irritation : Category 2A

GHS label elements
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.
  - 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.

Physical and chemical hazards
Not classified based on available information.

Health hazards
Harmful if swallowed. Harmful if inhaled. May be harmful in contact with skin. Causes skin irritation. Causes serious eye irritation.

Environmental hazards
Not classified based on available information.

Other hazards which do not result in classification
Combustible Solids
None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substance / Mixture</th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance name</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
</table>

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SAFETY DATA SHEET
according to GB/T 16483 and GB/T 17519

STAPA BG HYDROLAN 8154 55900/G Alumin-
ium Paste

Version 1.0 Revision Date: 2019/01/03 SDS Number: 102000003476 Print Date: 2019/01/07 Date of first issue: 2019/01/03

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>Mass Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium powder</td>
<td>7429-90-5</td>
<td>&gt;= 50 &lt;= 100</td>
</tr>
<tr>
<td>Ethanol, 2-butoxy-</td>
<td>111-76-2</td>
<td>&gt;= 25 &lt; 50</td>
</tr>
</tbody>
</table>
| 1,2-Ethanediwmine, N-[3-(trimethoxysilyl) pro-
pyl]- | 1760-24-3 | >= 0.1 < 0.25 |

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.

5. FIREFIGHTING MEASURES

Suitable extinguishing media : Dry sand
Special powder against metal fire

Unsuitable extinguishing media : Water
Foam
### 4. FIRE FIGHTING MEASURES

**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.

### 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.

### 7. HANDLING AND STORAGE

- **Handling**: 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.

Avoidance of contact:
- Acids
- Bases
- Oxidizing agents
- Highly halogenated compounds

Storage

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.

Technical measures/Precautions:
- Protect from humidity and water.
- Do not allow to dry.

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.

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>Aluminium powder</td>
<td>7429-90-5</td>
<td>PC-TWA (Total dust)</td>
<td>3 mg/m3 (Aluminium)</td>
<td>GBZ 2.1-2007</td>
</tr>
</tbody>
</table>

Personal protective equipment

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

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 break-through 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.

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

9. 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>Propellant</td>
<td>No data available</td>
</tr>
<tr>
<td>Colour</td>
<td>silver</td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Combustible Solids</td>
</tr>
<tr>
<td>Flammability (liquids)</td>
<td>No data available</td>
</tr>
<tr>
<td>Burning rate</td>
<td>No data available</td>
</tr>
</tbody>
</table>
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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 reac- : Reacts with alkalis, acids, halogenes and oxidizing agents.

STAPA BG HYDROLAN 8154 55900/G Aluminium Paste

11. TOXICOLOGICAL INFORMATION

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

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: 2,750 mg/kg
Method: Calculation method

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

1,2-Ethanediamine, N-[3-(trimethoxysilyl) propyl]-:
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
Causes skin irritation.

Product:
Remarks: May cause skin irritation in susceptible persons.
STAPA BG HYDROLAN 8154 55900/G Aluminium Paste

11. HUMAN HEALTH EFFECTS

Serious eye damage/eye irritation
Causes serious eye irritation.

Product:
Remarks: 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
Product:
Remarks: No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects
Product:
Additional ecological information: No data available

13. DISPOSAL CONSIDERATIONS

Disposal methods
14. TRANSPORT INFORMATION

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

ADR : Not classified as dangerous in the meaning of transport regulations.

IATA-DGR : Not classified as dangerous in the meaning of transport regulations.

IMDG-Code : Not classified as dangerous in the meaning of transport regulations.

Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR

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

National Regulations
Remarks : Not classified as dangerous good under GB 6944/12268

15. REGULATORY INFORMATION

National regulatory information
Law on the Prevention and Control of Occupational Diseases: Applicable

Regulations on Safety Management of Hazardous Chemicals
Catalogue of Hazardous Chemicals : Listed
16. OTHER INFORMATION

Full text of other abbreviations
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; IECS - 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; UNATDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Date format : yyyy/mm/dd
GBZ 2.1-2007 / PC-TWA : Permissible concentration - time weighted average

Disclaimer
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.

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