SAFETY DATA SHEET

STAPA 4 X Aluminium Paste

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : STAPA 4 X Aluminium Paste
Product code : 053210G60

Manufacturer or supplier's details
Company name of supplier : ECKART GmbH
Address : Guenterthalm 4
Hartenstein 91235
Telephone : +499152770
Telefax : +499152777008
Emergency telephone : 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
Flammable solids : Category 1
Acute toxicity (Inhalation) : Category 5
Skin irritation : Category 2
Eye irritation : Category 2A
Carcinogenicity : Category 2
Specific target organ systemic toxicity - repeated exposure : Category 2

GHS label elements
Hazard pictograms:

Signal Word: Danger

Hazard Statements:
- H228 Flammable solid.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H333 May be harmful if inhaled.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements:

**Prevention:**
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P240 Ground and bond container and receiving equipment.
- P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
- P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
- P264 Wash skin thoroughly after handling.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**
- P302 + P352 IF ON SKIN: Wash with plenty of water.
- P304 + P312 IF INHALED: 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.
- P308 + P313 IF exposed or concerned: Get medical advice/ attention.
- P332 + P313 If skin irritation occurs: Get medical advice/ attention.
- P362 + P364 Take off contaminated clothing and wash it before reuse.
P370 + P378  In case of fire: Use for extinction: Special powder for metal fires.
P370 + P378  In case of fire: Use for extinction: Dry sand.

Storage:
P405  Store locked up.

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

Hazardous ingredients which must be listed on the label:
Benzene, dimethyl-

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>Benzene, dimethyl-</td>
<td>1330-20-7</td>
<td>&gt;= 10 -&lt; 20</td>
</tr>
<tr>
<td>Octadecanoic acid</td>
<td>57-11-4</td>
<td>&gt;= 5 -&lt; 10</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

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

If inhaled  :  Consult a physician after significant exposure.
              If unconscious, place in recovery position and seek medical advice.

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.
   Flush eyes with water as a precaution.
   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:
   Causes skin irritation.
   Causes serious eye irritation.
   May be harmful if inhaled.
   Suspected of causing cancer.
   May cause damage to organs through prolonged or repeated exposure.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry sand
   Special powder against metal fire

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

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 fire-fighters: 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.
   Use personal protective equipment.
   Avoid dust formation.
Ensure adequate ventilation.
Remove all sources of ignition.

Environmental precautions:
Prevent product from entering drains.
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:
Earthing of containers and apparatuses is essential.
Take measures to prevent the build up of electrostatic charge.
Use explosion-proof equipment.

Avoid dust formation.
Keep away from open flames, hot surfaces and sources of ignition.

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 vapors/dust.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
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.

No smoking.
Keep container tightly closed in a dry and well-ventilated place.
Observe label precautions.
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

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Ingredients</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 (Aluminum)</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Benzene, dimethyl-</td>
<td>1330-20-7</td>
<td>VLE-PPT</td>
<td>100 ppm</td>
<td>NOM-010-STPS-2014</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VLE-CT</td>
<td>150 ppm</td>
<td>NOM-010-STPS-2014</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>100 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>150 ppm</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>
TWA 100 ppm ACGIH
STEL 150 ppm ACGIH

Octadecanoic acid 57-11-4 TWA 10 mg/m3 ACGIH

<table>
<thead>
<tr>
<th>Ingredients</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>Benzene, dimethyl-</td>
<td>1330-20-7</td>
<td>Methylhippuric acid</td>
<td>Urine</td>
<td>End of shift</td>
<td>1.5 g/g creatinine</td>
<td>MX BEI</td>
</tr>
<tr>
<td>Methylhippuric acids</td>
<td></td>
<td></td>
<td>Urine</td>
<td>End of shift (As soon as possible after exposure ceases)</td>
<td>1.5 g/g creatinine</td>
<td>ACGIH BEI</td>
</tr>
<tr>
<td>Methylhippuric acids</td>
<td></td>
<td></td>
<td>Urine</td>
<td>End of shift (As soon as possible after exposure ceases)</td>
<td>1,500 mg/g</td>
<td>ACGIH BEI</td>
</tr>
</tbody>
</table>

**Personal protective equipment**

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

In the case of dust or aerosol formation use respirator with an approved filter.
Dust safety masks are recommended when the dust concentration is more than 10 mg/m3.

**Hand protection**
Material: Solvent-resistant gloves (butyl-rubber)

**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 : Safety glasses
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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Pasty solid</td>
</tr>
<tr>
<td>Color</td>
<td>silver</td>
</tr>
<tr>
<td>Odor</td>
<td>characteristic</td>
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<tr>
<td>Odor 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>Boiling point/boiling range</td>
<td>137 °C</td>
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<tr>
<td>Flash point</td>
<td>30 °C</td>
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<tr>
<td>Evaporation rate</td>
<td>No data available</td>
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<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
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<tr>
<td>Auto-flammability</td>
<td>not auto-flammable</td>
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<tr>
<td>Upper explosion limit / Upper flammability limit</td>
<td>No data available</td>
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<tr>
<td>Lower explosion limit / Lower flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
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<tr>
<td>Density</td>
<td>1.3 g/cm3</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Explosive properties: Not explosive. Vapors may form explosive mixture with air.

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.
- Vapors may form explosive mixture with air.
- Stable under recommended storage conditions.

Conditions to avoid:
- Do not allow to dry.
- Heat, flames and sparks.

Incompatible materials:
- Acids
- Bases
- Oxidizing agents
- Highly halogenated compounds

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity:
May be harmful if inhaled.

Ingredients:

Benzene, dimethyl-:

Acute inhalation toxicity:
- Acute toxicity estimate: 11 mg/l
  Exposure time: 4 h
  Test atmosphere: vapor
  Method: Calculation method

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

  Acute toxicity estimate: 1,295 mg/kg
  Method: Calculation method
Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/eye irritation
Causes serious eye irritation.

Ingredients:
Benzene, dimethyl-
Result: Eye irritation

Respiratory or skin sensitization
Skin sensitization
Not classified based on available information.

Respiratory sensitization
Not classified based on available information.

Ingredients:
Benzene, dimethyl-
Assessment: Harmful in contact with skin or if inhaled.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Suspected of causing cancer.

Reproductive toxicity
Not classified based on available information.

STOT-single exposure
Not classified based on available information.

Ingredients:
Benzene, dimethyl-
Assessment: May cause respiratory irritation.

STOT-repeated exposure
May cause damage to organs through prolonged or repeated exposure.
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STAPA 4 X Aluminium Paste

Ingredients:
Benzene, dimethyl:
Assessment: May cause damage to organs through prolonged or repeated exposure.

Ingredients:
Benzene, dimethyl:
Repeated dose toxicity:
Assessment: Harmful in contact with skin or if inhaled.

Aspiration toxicity
Not classified based on available information.

Ingredients:
Benzene, dimethyl:
May be fatal if swallowed and enters airways.

Further information

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
No data available

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. 
Do not burn, or use a cutting torch on, the empty drum. 
In accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR
UN/ID No. : UN 1325
Proper shipping name : Flammable solid, organic, n.o.s. 
                      (Aluminium pigment paste)
Class : 4.1
Packing group : II
Labels : Flammable Solid
Packing instruction (cargo aircraft) : 448
Packing instruction (passenger aircraft) : 445

IMDG-Code
UN number : UN 1325
Proper shipping name : FLAMMABLE SOLID, ORGANIC, N.O.S. 
                      (Aluminium pigment paste)
Class : 4.1
Packing group : II
Labels : 4.1
EmS Code : F-A, S-G
Marine pollutant : no
Remarks : IMDG Code segregation group 15 - Powdered metals

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

Domestic regulation

NOM-002-SCT
UN number : UN 1325
Proper shipping name : FLAMMABLE SOLID, ORGANIC, N.O.S. 
                      (Aluminium pigment paste)
Class : 4.1
Packing group : II
Labels : 4.1

Special precautions for user
Not applicable
SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
NOM-165-SEMARNAT-2013, Norm establishing a list of substances subject to report for the Registry of Emissions and Pollutant Transfer

Ingredients | CAS-No. | MPU (kg/year) | Transfer/Release (kg/year)
--- | --- | --- | ---
Benzene, dimethyl- | 1330-20-7 | 5000 kg/year | 1000 kg/year

MPU: Applicable reporting threshold when the substance, pure or in mixture in a composition of more than 1% by weight, is used for industrial activities at facilities that are subject to report or are produced by them

Federal Law for the control of chemical precursors, essential chemical products and machinery for producing capsules, tablets and pills.

The ingredients 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
ACGIH / STEL: Short-term exposure limit
MX OEL / LMPE-PPT: Time weighted average
NOM-010-STPS-2014 / VLE-PPT: Time weighted average limit value
NOM-010-STPS-2014 / VLE-CT: Short term exposure 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; IECSC - 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

Revision Date : 04/30/2018

The information provided in this Material 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.

MX / Z8