SAFETY DATA SHEET

STAPA NDF 2120 Aluminum Paste

SECTION 1. IDENTIFICATION

Product name : STAPA NDF 2120 Aluminum Paste
Product code : 053396G60

Manufacturer or supplier's details
Company name of supplier : ECKART GmbH
Address : Guentersthal 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 in accordance with 29 CFR 1910.1200
Flammable solids : Category 1
Skin irritation : Category 2
Specific target organ systemic toxicity - single exposure : Category 3 (Central nervous system)

GHS label elements
Hazard pictograms : 
Signal Word : Danger
Hazard Statements:
- H228 Flammable solid.
- H315 Causes skin irritation.
- H336 May cause drowsiness or dizziness.

Precautionary Statements:

Prevention:
- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
- P264 Wash skin thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/eye protection/face protection.

Response:
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
- P332 + P313 If skin irritation occurs: Get medical advice/attention.
- P362 Take off contaminated clothing and wash 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:
- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
- 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:
Distillates (petroleum), hydrotreated light
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Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous 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;= 70 - &lt; 90</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated light</td>
<td>64742-47-8</td>
<td>&gt;= 20 - &lt; 30</td>
</tr>
<tr>
<td>Solvent naphtha (petroleum), light arom.</td>
<td>64742-95-6</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td>Benzene, 1,2,4-trimethyl-</td>
<td>95-63-6</td>
<td>&gt;= 1 - &lt; 5</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.
May cause drowsiness or dizziness.
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 hazards during fire fighting
- Do not allow run-off from fire fighting to enter drains or water courses.

Further information
- 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.

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.
- Avoid dust formation.
- 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 exposure - obtain special instructions before use.
- 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.

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.
- 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.

### 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>
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<tbody>
<tr>
<td>Aluminum</td>
<td>7429-90-5</td>
<td>TWA (total dust)</td>
<td>50 Million particles per cubic foot</td>
<td>OSHA Z-3</td>
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<tr>
<td></td>
<td></td>
<td>TWA (Respirable)</td>
<td>5 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (total dust)</td>
<td>15 mg/m³</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (total)</td>
<td>10 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (respirable fraction)</td>
<td>5 mg/m³</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (respirable fraction)</td>
<td>15 Million particles per cubic foot</td>
<td>OSHA Z-3</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</td>
<td>5 mg/m³ (Aluminum)</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Total)</td>
<td>15 mg/m³ (Aluminum)</td>
<td>OSHA P0</td>
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<tr>
<td></td>
<td></td>
<td>TWA (Respirable fraction)</td>
<td>5 mg/m³ (Aluminum)</td>
<td>OSHA P0</td>
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<tr>
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<td></td>
<td>TWA (total dust)</td>
<td>15 mg/m³ (Aluminum)</td>
<td>OSHA Z-1</td>
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<td></td>
<td>TWA (respirable fraction)</td>
<td>5 mg/m³ (Aluminum)</td>
<td>OSHA Z-1</td>
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<tr>
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<td></td>
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<td>15 mg/m³ (Aluminum)</td>
<td>OSHA P0</td>
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<tr>
<td></td>
<td></td>
<td>TWA (respirable)</td>
<td>5 mg/m³ (Aluminum)</td>
<td>OSHA P0</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.

**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.

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Pasty solid
Color : Silver
Odor : Characteristic
Odor Threshold : No data available
pH : No data available
Melting point/freezing point : No data available
Initial boiling point and boiling range : No data available
Flash point : No data available
Evaporation rate : No data available
Flammability (solid, gas) : The substance or mixture is a flammable solid with the category 1.
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Auto-flammability : not auto-flammable

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : No data available

Relative density : No data available

Density : 1.5 - 1.7 g/cm³

Solubility(ies) : No data available

Partition coefficient: n-octanol/water : No data available

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity : No data available

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
Not classified based on available information.

Ingredients:
Solvent naphtha (petroleum), light arom.:
Acute oral toxicity : LD50 (Rat): 3,492 mg/kg
Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg

Benzene, 1,2,4-trimethyl-:
Acute inhalation toxicity : Assessment: The component/mixture is moderately toxic after short term inhalation.

Skin corrosion/irritation
Causes skin irritation.

Ingredients:
Distillates (petroleum), hydrotreated light:
Result: Skin irritation

Serious eye damage/eye irritation
Not classified based on available information.

Respiratory or skin sensitization

Skin sensitization
Not classified based on available information.

Respiratory sensitization
Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.

IARC
No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA
No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.

NTP
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity
Not classified based on available information.
STOT-single exposure
May cause drowsiness or dizziness.

**Ingredients:**
- **Distillates (petroleum), hydrotreated light:**
  Assessment: May cause drowsiness or dizziness.

- **Solvent naphtha (petroleum), light arom.:**
  Assessment: May cause respiratory irritation., May cause drowsiness or dizziness.

- **Benzene, 1,2,4-trimethyl-:**
  Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

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

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

**Ingredients:**
- **Distillates (petroleum), hydrotreated light:**
  May be fatal if swallowed and enters airways.

- **Solvent naphtha (petroleum), light arom.:**
  May be fatal if swallowed and enters airways.

**Further information**

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ingredients:**
- **Distillates (petroleum), hydrotreated light:**

**Ecotoxicology Assessment**
- Acute aquatic toxicity : Harmful to aquatic life.
- Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.
Solvent naphtha (petroleum), light arom.:

Ecotoxicology Assessment
Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Benzene, 1,2,4-trimethyl-:

Ecotoxicology Assessment
Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

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 : The product should not be allowed to enter drains, water courses or the soil.
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
STAPA NDF 2120 Aluminum Paste

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: FLAMMABLE SOLID
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

49 CFR
UN/ID/NA number: UN 1325
Proper shipping name: Flammable solids, organic, n.o.s. (Aluminum pigment paste)
Class: 4.1
Packing group: II
Labels: FLAMMABLE SOLID
ERG Code: 133
Marine pollutant: no

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know
CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene, dimethyl-</td>
<td>1330-20-7</td>
<td>100</td>
</tr>
</tbody>
</table>

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity
This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards: Flammable (gases, aerosols, liquids, or solids)
Skin corrosion or irritation
Specific target organ toxicity (single or repeated exposure)

SARA 313: The following components are subject to reporting levels established by SARA Title III, Section 313:

- Aluminum 7429-90-5 >= 70 - < 90 %
- Benzene, 1,2,4-trimethyl- 95-63-6 >= 1 - < 5 %

Clean Air Act
This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act
The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

- Benzene, dimethyl- 1330-20-7 0.105 %

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

- Benzene, dimethyl- 1330-20-7 0.105 %

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations
Massachusetts Right To Know
- Aluminum 7429-90-5
- Distillates (petroleum), hydrotreated light 64742-47-8
- Solvent naphtha (petroleum), light arom. 64742-95-6
- Benzene, 1,2,4-trimethyl- 95-63-6
- Fatty acids, C14-18 and C16-18-unsatd. 67701-06-8

Pennsylvania Right To Know
- Aluminum 7429-90-5
Distillates (petroleum), hydrotreated light 64742-47-8
Solvent naphtha (petroleum), light arom. 64742-95-6
Benzene, 1,2,4-trimethyl- 95-63-6
Benzene, dimethyl- 1330-20-7
Benzene, (1-methylethyl)- 98-82-8

California Prop. 65
WARNING: This product can expose you to chemicals including lead and cadmium, which is/are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

WARNING: This product can expose you to chemicals including Benzene, (1-methylethyl)-, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California List of Hazardous Substances
Aluminum 7429-90-5
Distillates (petroleum), hydrotreated light 64742-47-8
Benzene, 1,2,4-trimethyl- 95-63-6

California Permissible Exposure Limits for Chemical Contaminants
Aluminum 7429-90-5
Distillates (petroleum), hydrotreated light 64742-47-8
Benzene, 1,2,4-trimethyl- 95-63-6

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
TSCA list
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.
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.

US / Z8