SECTION 1. IDENTIFICATION

Product name : STAPA NDF 200 Aluminum Paste

Product code : 052315G60

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

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H228 Flammable solid.
                   H315 Causes skin irritation.
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.
- P264: Wash skin thoroughly after handling.
- P280: Wear protective gloves/eye protection/face protection.

**Response:**
- P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
- 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.

**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;= 10 - &lt; 20</td>
</tr>
<tr>
<td>Solvent naphtha (petroleum), light arom.</td>
<td>64742-95-6</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 specialist.

Most important symptoms and effects, both acute and delayed: Causes skin irritation.

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.
- 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>
</tr>
</thead>
<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>
</tr>
<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</td>
<td>15 Million</td>
<td>OSHA Z-3</td>
</tr>
</tbody>
</table>
### TWA (Respirable fraction) particles per cubic foot

<table>
<thead>
<tr>
<th>Substance</th>
<th>TWA (Respirable fraction)</th>
<th>Particles per cubic foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated light 64742-47-8</td>
<td>TWA</td>
<td>500 ppm 2,000 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>200 mg/m³ (total hydrocarbon vapor)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>400 ppm 1,600 mg/m³</td>
</tr>
<tr>
<td>Solvent naphtha (petroleum), 64742-95-6</td>
<td>TWA</td>
<td>500 ppm</td>
</tr>
</tbody>
</table>

### TWA (Total dust) particles per cubic foot

<table>
<thead>
<tr>
<th>Substance</th>
<th>TWA (Total dust)</th>
<th>Particles per cubic foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST (Mist)</td>
<td>10 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

### TWA (Respirable dust fraction) particles per cubic foot

<table>
<thead>
<tr>
<th>Substance</th>
<th>TWA (Respirable dust fraction)</th>
<th>Particles per cubic foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST (Mist)</td>
<td>5 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

### TWA (welding fumes) particles per cubic foot

<table>
<thead>
<tr>
<th>Substance</th>
<th>TWA (welding fumes)</th>
<th>Particles per cubic foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST (Mist)</td>
<td>5 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

### TWA (pyro powders) particles per cubic foot

<table>
<thead>
<tr>
<th>Substance</th>
<th>TWA (pyro powders)</th>
<th>Particles per cubic foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST (Mist)</td>
<td>5 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

### TWA (Fumes) particles per cubic foot

<table>
<thead>
<tr>
<th>Substance</th>
<th>TWA (Fumes)</th>
<th>Particles per cubic foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST (Mist)</td>
<td>5 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

### Distillates (petroleum), hydrotreated light 64742-47-8 particles per cubic foot

<table>
<thead>
<tr>
<th>Substance</th>
<th>TWA</th>
<th>Particles per cubic foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated light 64742-47-8</td>
<td>TWA</td>
<td>500 ppm 2,000 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>200 mg/m³ (total hydrocarbon vapor)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>400 ppm 1,600 mg/m³</td>
</tr>
<tr>
<td>Solvent naphtha (petroleum), 64742-95-6</td>
<td>TWA</td>
<td>500 ppm</td>
</tr>
</tbody>
</table>
# SAFETY DATA SHEET

**STAPA NDF 200 Aluminum Paste**

<table>
<thead>
<tr>
<th>light arom.</th>
<th>2,000 mg/m³</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA</td>
<td>500 ppm</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td></td>
<td>2,000 mg/m³</td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td>200 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td>(total hydrocarbon vapor)</td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td>200 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td>(total hydrocarbon vapor)</td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td>400 ppm</td>
<td>OSHA P0</td>
</tr>
<tr>
<td></td>
<td>1,600 mg/m³</td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td>400 ppm</td>
<td>OSHA P0</td>
</tr>
<tr>
<td></td>
<td>1,600 mg/m³</td>
<td></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**: No data available
- **Odor Threshold**: No data available
- **pH**: No data available
- **Melting point/freezing point**: No data available
- **Boiling point/boiling range**: 170 °C
- **Flash point**: 43 °C
- **Evaporation rate**: No data available
- **Flammability (solid, gas)**: The substance or mixture is a flammable solid with the category 1.
- **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
- **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.

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**
Not classified based on available information.

**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.

**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**
Acute aquatic toxicity: Toxic to aquatic life.
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
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

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</th>
</tr>
</thead>
</table>


SAFETY DATA SHEET

STAPA NDF 200 Aluminum Paste

Version 1.0
Revision Date: 04/11/2018
SDS Number: 102000023956
Date of last issue: -
Date of first issue: 04/11/2018

<table>
<thead>
<tr>
<th></th>
<th>(lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>cumene</td>
<td>98-82-8</td>
</tr>
<tr>
<td>Benzene, dimethyl-</td>
<td>1330-20-7</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

SARA 313:
The following components are subject to reporting levels established by SARA Title III, Section 313:
- Aluminum 7429-90-5 >= 70 - < 90 %

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
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307.
The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:
- Benzene, dimethyl- 1330-20-7 0.036 %

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:
- Benzene, dimethyl- 1330-20-7 0.036 %

US State Regulations
Massachusetts Right To Know
Aluminum 7429-90-5
Distillates (petroleum), hydrotreated light 64742-47-8
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
cumene 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 cumene, 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

California Permissible Exposure Limits for Chemical Contaminants
Aluminum 7429-90-5
Distillates (petroleum), hydrotreated light 64742-47-8

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.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td>NIOSH REL</td>
<td>USA. NIOSH Recommended Exposure Limits</td>
</tr>
<tr>
<td>OSHA P0</td>
<td>USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000</td>
</tr>
<tr>
<td>OSHA Z-1</td>
<td>USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants</td>
</tr>
<tr>
<td>OSHA Z-3</td>
<td>USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts</td>
</tr>
<tr>
<td>ACGIH / TWA</td>
<td>8-hour, time-weighted average</td>
</tr>
<tr>
<td>NIOSH REL / TWA</td>
<td>Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek</td>
</tr>
<tr>
<td>NIOSH REL / ST</td>
<td>STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday</td>
</tr>
<tr>
<td>OSHA P0 / TWA</td>
<td>8-hour time weighted average</td>
</tr>
<tr>
<td>OSHA Z-1 / TWA</td>
<td>8-hour time weighted average</td>
</tr>
<tr>
<td>OSHA Z-3 / TWA</td>
<td>8-hour time weighted average</td>
</tr>
</tbody>
</table>

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; HMIS - Hazardous Materials Identification System; 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; LD50 - Lethal Dose to 50% of a test population; LC50 - Lethal Concentration to 50 % of a test population; MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; 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

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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.

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