SAFETY DATA SHEET

ROTOVARIO 530 080 Silver

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : ROTOVARIO 530 080 Silver
Product code : 072318G60

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
Flammable solids : Category 1
Eye irritation : Category 2A
Specific target organ toxicity - single exposure : Category 3 (Central nervous system)

GHS label elements
Hazard pictograms :  

Signal word : Danger
SAFETY DATA SHEET

ROTOVARIO 530 080 Silver

Version 1.0
Revision Date: 03/21/2018
SDS Number: 102000000394
Date of last issue: -
Date of first issue: 03/21/2018

Hazard statements:
H228 Flammable solid.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements:

Prevention:
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 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
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.
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 components which must be listed on the label:
Acetic acid ethyl ester

Other hazards
None known.
SAFETY DATA SHEET

ROTOVARIO 530 080 Silver

Version 1.0  Revision Date: 03/21/2018  SDS Number: 102000000394  Date of last issue: -  Date of first issue: 03/21/2018

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

<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>Acetic acid ethyl ester</td>
<td>141-78-6</td>
<td>&gt;= 30 -&lt; 50</td>
</tr>
<tr>
<td>Fatty acids, C14-18 and C16-18-unsatd.</td>
<td>67701-06-8</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 : 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 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 : Causes serious eye irritation.  May cause drowsiness or dizziness.

SECTION 5. FIREFIGHTING MEASURES
SAFETY DATA SHEET

ROTOVARIO 530 080 Silver

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date:</th>
<th>SDS Number:</th>
<th>Date of last issue:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>03/21/2018</td>
<td>102000000394</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Date of first issue: 03/21/2018</td>
</tr>
</tbody>
</table>

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 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.
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 vapours/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.

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 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>Acetic acid ethyl ester</td>
<td>141-78-6</td>
<td>VLE-PPT</td>
<td>400 ppm</td>
<td>NOM-010-STPS-2014</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>400 ppm</td>
<td>ACGIH</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 : 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
Odour : characteristic
Odour Threshold : No data available
pH : No data available
Melting point/freezing point : No data available
Boiling point/boiling range : 76 °C

Flash point : -4 °C

Evaporation rate : No data available
Flammability (solid, gas) : No data available
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
Density : 1.98 g/cm3

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 Vapours 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.
- Vapours 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.

Components:

Acetic acid ethyl ester:
- Acute oral toxicity: (Rat): 5,620 mg/kg
- Acute inhalation toxicity: LC50 (Rat): 56 mg/l
  Exposure time: 4 h
  Test atmosphere: vapour
- Acute dermal toxicity: LD50 (Rabbit): > 18,000 mg/kg

Fatty acids, C14-18 and C16-18-unsatd.:
- Acute oral toxicity: LD50 (Rat): > 5,000 mg/kg
- Acute inhalation toxicity: LC50 (Rat): > 46 mg/l
  Exposure time: 1 h
  Test atmosphere: dust/mist
- Acute dermal toxicity: LD50 (Rabbit): > 3,160 mg/kg
SKIN CORROSION/IRRITATION
Not classified based on available information.

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
May cause drowsiness or dizziness.

STOT - REPEATED EXPOSURE
Not classified based on available information.

ASPIRATION TOXICITY
Not classified based on available information.

FURTHER INFORMATION

COMPONENTS:
Fatty acids, C14-18 and C16-18-unsatd.
Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

ECOTOXICITY

COMPONENTS:
Acetic acid ethyl ester:
Toxicity to daphnia and other aquatic invertebrates: (Daphnia (water flea)): 717 mg/l
Persistence and degradability
No data available

Bioaccumulative potential
No data available

Other adverse effects
No data available

Components:
Fatty acids, C14-18 and C16-18-unsatd.: 
Additional ecological information : 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.
(Aлюminium 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.

National Regulations
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
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 : This product contains one or several components that are not on the Canadian DSL nor NDSL.
TSCA : On TSCA Inventory

SECTION 16. OTHER INFORMATION

Full text of other abbreviations
ACGIH : USA. ACGIH Threshold Limit Values (TLV)
MX OEL : Mexico. Occupational Exposure Limits
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.
<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date</th>
<th>SDS Number</th>
<th>Date of last issue</th>
<th>Date of first issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>03/21/2018</td>
<td>102000000394</td>
<td>-</td>
<td>03/21/2018</td>
</tr>
</tbody>
</table>

MX / EN