SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
   Trade name : ROTOVARIO UV FPG 950 214 Silver
   Product code : 053610N20 053610N20

1.2 Relevant identified uses of the substance or mixture and uses advised against
   This information is not available.

1.3 Details of the supplier of the safety data sheet
   Company : ECKART GmbH
              Guentersthal 4
              91235 Hartenstein
   Telephone : +499152770
   Telefax : +499152777008
   E-mail address of person responsible for the SDS : msds.eckart@altana.com

1.4 Emergency telephone number
   GBK Gefahrgut Büro 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

2.1 Classification of the substance or mixture
   Classification (REGULATION (EC) No 1272/2008)
   Skin irritation, Category 2
   Eye irritation, Category 2
   Skin sensitisation, Category 1
   H315: Causes skin irritation.
   H319: Causes serious eye irritation.
   H317: May cause an allergic skin reaction.

2.2 Label elements
   Labelling (REGULATION (EC) No 1272/2008)
   Hazard pictograms : ![Warning symbol]
Signal word : Warning

Hazard statements : H315 Causes skin irritation.
                    H317 May cause an allergic skin reaction.
                    H319 Causes serious eye irritation.

Precautionary statements :
             P280 Wear protective gloves/ eye protection/ face protection.
Response: P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
          P337 + P313 If eye irritation persists: Get medical advice/ attention.
          P362 + P364 Take off contaminated clothing and wash it before reuse.
Disposal: P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:
- Propyldinetrimethanol, ethoxylated, esters with acrylic acid
- Glycerol, propoxylated, esters with acrylic acid
- 2,2-bis(acryloyloxyethyl)butyl acrylate

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Classification REGULATION (EC) No 1272/2008</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propyldinetrimethanol, ethoxylated, esters with</td>
<td>28961-43-5</td>
<td>Eye Irrit. 2; H319 Skin Sens. 1; H317</td>
<td>&gt;= 25 - &lt; 50</td>
</tr>
<tr>
<td>acrylic acid</td>
<td>500-066-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>01-2119489900-30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>aluminium powder (stabilised)</td>
<td>7429-90-5</td>
<td>Flam. Sol. 1; H228</td>
<td>&gt;= 25 - &lt; 50</td>
</tr>
<tr>
<td></td>
<td>231-072-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>013-002-00-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>01-2119529243-45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol, propoxylated, esters with acrylic acid</td>
<td>52408-84-1</td>
<td>Eye Irrit. 2; H319 Skin Sens. 1; H317</td>
<td>&gt;= 1 - &lt; 10</td>
</tr>
<tr>
<td></td>
<td>500-114-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>01-2119487948-12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>dodecylphosphonic acid</td>
<td>5137-70-2</td>
<td>Skin Corr. 1B; H314</td>
<td>&gt;= 3 - &lt; 5</td>
</tr>
</tbody>
</table>
SECTION 4: First aid measures

4.1 Description of first aid measures

General advice: No hazards which require special first aid measures.

If inhaled: If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of eye contact: Remove contact lenses.
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.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

SECTION 5: Firefighting measures

5.1 Extinguishing media

5.2 Special hazards arising from the substance or mixture

5.3 Advice for firefighters

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Further information: Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.2 Environmental precautions

6.3 Methods and material for containment and cleaning up

Methods for cleaning up: Do not flush with water.

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling: For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.

Advice on protection against fire and explosion: Normal measures for preventive fire protection.

Hygiene measures: General industrial hygiene practice.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: Electrical installations / working materials must comply with the technological safety standards.

Further information on storage stability: No decomposition if stored and applied as directed.

7.3 Specific end use(s)

This information is not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

**Occupational Exposure Limits**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Basis (Version Date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium powder (stabilised)</td>
<td>7429-90-5</td>
<td>NGV (Total)</td>
<td>5 mg/m³</td>
<td>SE AFS (2011-12-16)</td>
</tr>
<tr>
<td>Further information</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Workplace Atmospheres - Size fraction definitions for measurement of airborne particles, 1st ED., 1993., Section 2.11 and having sampling characteristics as specified in paragraph 5.3. Total dust refers to all the particles (aerosols) trapped in a filter in the sampling apparatus described in Methods, Sampling of total dust and respirable dust, method nr 1010, published by the National Board of Occupational Safety and Health, now Work Environment Authority. The filter diameter shall normally be 37 mm but can also be 25 mm. Despite its name, not the total amount of airborne particles is measured by this method.

<table>
<thead>
<tr>
<th>NGV (Respirable)</th>
<th>SE AFS (2011-12-16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 mg/m3</td>
<td></td>
</tr>
</tbody>
</table>

Further information
Inhalable dust refers to the dust fraction as defined in the Swedish Standard SS-EN 481, Workplace Atmospheres - Size fraction definitions for measurement of airborne particles, 1st ED., 1993., Section 2.3 and having sampling characteristics as specified in paragraph 5.1. Respirable dust refers to the dust fraction as defined in the Swedish Standard SS-EN 481, Workplace Atmospheres - Size fraction definitions for measurement of airborne particles, 1st ED., 1993., Section 2.11 and having sampling characteristics as specified in paragraph 5.3. Total dust refers to all the particles (aerosols) trapped in a filter in the sampling apparatus described in Methods, Sampling of total dust and respirable dust, method nr 1010, published by the National Board of Occupational Safety and Health, now Work Environment Authority. The filter diameter shall normally be 37 mm but can also be 25 mm. Despite its name, not the total amount of airborne particles is measured by this method.

**Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:**

<table>
<thead>
<tr>
<th>Substance name</th>
<th>End Use</th>
<th>Exposure routes</th>
<th>Potential health effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylidynetrimethanol, ethoxylated, esters with acrylic acid</td>
<td>Workers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>0,8 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>16,2 mg/m3</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>0,5 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>4,9 mg/m3</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Ingestion</td>
<td>long term – systemic effects</td>
<td>1,4 mg/kg</td>
</tr>
<tr>
<td>aluminium powder (stabilised)</td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – local effects</td>
<td>3,72 mg/m3</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Oral</td>
<td>long term – systemic effects</td>
<td>3,95 mg/kg</td>
</tr>
<tr>
<td>Glycerol, propoxylated, esters with acrylic acid</td>
<td>Workers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>1,92 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>16,22 mg/m3</td>
</tr>
</tbody>
</table>
Consumers | Ingestion | long term – systemic effects | 1,39 mg/kg
--- | --- | --- | ---
Consumers | Skin contact | long term – systemic effects | 1,15 mg/kg
Consumers | Inhalation | long term – systemic effects | 4,87 mg/m3
2,2-bis(acryloyloxy)methyl) butyl acrylate | Workers | Inhalation | long term – systemic effects | 16,2 mg/m3
Consumers | Ingestion | long term – systemic effects | 1,39 mg/kg
Consumers | Inhalation | long term – systemic effects | 4,9 mg/m3

**Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:**

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Environmental Compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylidynetrimethanol, ethoxylated, esters with acrylic acid</td>
<td>Soil</td>
<td>0,00587 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Fresh water</td>
<td>0,00195 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>0,0082 mg/kg</td>
</tr>
<tr>
<td></td>
<td>STP</td>
<td>10 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0,000195 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>0,00082 mg/kg</td>
</tr>
<tr>
<td>aluminium powder (stabilised)</td>
<td>Fresh water</td>
<td>0,0749 mg/l</td>
</tr>
<tr>
<td></td>
<td>clarification plant</td>
<td>20 mg/l</td>
</tr>
<tr>
<td>Glycerol, propoxylated, esters with acrylic acid</td>
<td>Soil</td>
<td>0,00111 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Fresh water</td>
<td>0,00574 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>0,01697 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0,000574 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>0,001697 mg/kg</td>
</tr>
<tr>
<td></td>
<td>STP</td>
<td>10 mg/l</td>
</tr>
<tr>
<td>2,2-bis(acryloyloxy)methyl)butyl acrylate</td>
<td>Soil</td>
<td>0,0043 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Fresh water</td>
<td>0,00147 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>0,0062 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0,000147 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>0,00062 mg/kg</td>
</tr>
<tr>
<td></td>
<td>STP</td>
<td>6,25 mg/l</td>
</tr>
</tbody>
</table>

**8.2 Exposure controls**

**Personal protective equipment**

- **Eye protection**: Safety glasses
- **Skin and body protection**: Protective suit
- **Respiratory protection**: No personal respiratory protective equipment normally required.
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- **Appearance**: Pasty solid
- **Colour**: silver
- **Odour**: No data available
- **Odour Threshold**: No data available
- **pH**: No data available
- **Freezing point**: No data available
- **Boiling point/boiling range**: > 100 °C
- **Flash point**: > 100 °C
- **Evaporation rate**: No data available
- **Flammability (solid, gas)**: The product is not flammable.
- **Self-ignition**: No data available
- **Auto-ignition temperature**: No data available
- **Smoldering temperature**: No data available
- ** Decomposition temperature**: No data available
- **Explosive properties**: No data available
- **Oxidizing properties**: No data available
- **Upper explosion limit / Upper flammability limit**: No data available
- **Lower explosion limit / Lower flammability limit**: No data available
- **Vapour pressure**: No data available
- **Relative vapour density**: No data available
- **Relative density**: No data available
- **Density**: No data available
- **Bulk density**: No data available
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

ROTOVARIO UV FPG 950 214 Silver

Version 1.2
Revision Date: 13.09.2017
SDS Number: 102000021558
Print Date: 20.11.2018
Date of first issue: 05.01.2017

Water solubility : No data available
Solubility in other solvents : No data available
Partition coefficient: n-octanol/water : No data available
Decomposition temperature : No data available
Viscosity, dynamic : No data available
Viscosity, kinematic : No data available
Flow time : No data available

9.2 Other information
No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
No decomposition if stored and applied as directed.

10.2 Chemical stability
No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions
Hazardous reactions : Stable under recommended storage conditions.

10.4 Conditions to avoid
Conditions to avoid : No data available

10.5 Incompatible materials

10.6 Hazardous decomposition products
Contact with water or humid air : This information is not available.

Thermal decomposition : This information is not available.
SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Components:
aluminium powder (stabilised):
Acute inhalation toxicity : LC50 (Rat): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Skin corrosion/irritation

Components:
Propylidynetrimethanol, ethoxylated, esters with acrylic acid:
Remarks: May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

Product:
Result: Eye irritation

Components:
Propylidynetrimethanol, ethoxylated, esters with acrylic acid:
Remarks: May cause irreversible eye damage.

Respiratory or skin sensitisation

Components:
Propylidynetrimethanol, ethoxylated, esters with acrylic acid:
Remarks: Causes sensitisation.

Further information

Product:
Remarks: No data available

Components:
Propylidynetrimethanol, ethoxylated, esters with acrylic acid:
Remarks: No data available
SECTION 12: Ecological information

12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment

Product: Assessment
: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Product: Additional ecological information
: No data available

Components:

Propylidynetrimethanol, ethoxylated, esters with acrylic acid:

Additional ecological information
: No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Contaminated packaging
: Empty containers should be taken to an approved waste handling site for recycling or disposal.
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

ROTOVARIO UV FPG 950 214 Silver

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Date of first issue: 05.01.2017

SECTION 14: Transport information

14.1 UN number
14.2 UN proper shipping name
14.3 Transport hazard class(es)
14.4 Packing group
14.5 Environmental hazards
14.6 Special precautions for user
Remarks: Not classified as dangerous in the meaning of transport regulations.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).
Remarks: Not applicable

15.2 Chemical safety assessment
This information is not available.

SECTION 16: Other information

Full text of H-Statements
H228: Flammable solid.
H314: Causes severe skin burns and eye damage.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H319: Causes serious eye irritation.

Full text of other abbreviations
Eye Dam.: Serious eye damage
Eye Irrit.: Eye irritation
Flam. Sol.: Flammable solids
Skin Corr.: Skin corrosion
Skin Irrit.: Skin irritation
Skin Sens.: Skin sensitisation
SE AFS: Sweden. Occupational Exposure Limit Values
SE AFS / NGV: Time Weighted Average
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

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.

SE / EN