SAFETY DATA SHEET
according to GB/T 16483 and GB/T 17519

Rotovario UV 900 114 Silver

Version 1.1
Revision Date: 2019/01/07
SDS Number: 102000021561
Print Date: 2019/01/14
Date of first issue: 2016/08/31

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Rotovario UV 900 114 Silver
Product code: 053498G60
Chemical nature: printing ink

Manufacturer or supplier’s details
Company: 爱卡特殊效果颜料（珠海）有限公司
Eckart GmbH
Address: 珠海市金湾区南水镇浪屿路 3 号
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91235 Hartenstein
Germany
Telephone: +8607567228600
+4991527770
E-mail address: Riko.Huang@altana.com
msds.eckart@altana.com
Telefax: +8607567228601
+499152777008

2. HAZARDS IDENTIFICATION

Emergency Overview
Appearance: Pasty solid
Colour: silver
Odour: characteristic
Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage.

GHS Classification
Skin corrosion/irritation: Category 2
Serious eye damage/eye irritation: Category 1
Skin sensitisation: Category 1

GHS label elements
Rotovario UV 900 114 Silver

Hazard pictograms:
- Signal word: Danger

Hazard statements:
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.

Precautionary statements:
- Prevention:
  - P210 Keep away from heat/sparks/open flames/hot surfaces.
  - No smoking.
  - P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
  - P280 Wear protective gloves/ eye protection/ face protection.

Response:
- P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
- P333 + P313 If skin irritation or rash occurs: 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.

Physical and chemical hazards
Not classified based on available information.

Health hazards
Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction.

Environmental hazards
Not classified based on available information.

Other hazards which do not result in classification
Combustible Solids
None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substance / Mixture</th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance name</td>
<td></td>
</tr>
</tbody>
</table>

Hazardous components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium powder</td>
<td>7429-90-5</td>
<td>&gt;= 25 &lt; 50</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

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

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

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.
Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed:
Keep respiratory tract clear.
Do NOT induce vomiting.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed:
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.

5. FIREFIGHTING MEASURES

Suitable extinguishing media:
Dry sand
Special powder against metal fire
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Unsuitable extinguishing media: Water
Foam
ABC powder
Carbon dioxide (CO2)

Specific hazards during firefighting: Do not allow run-off from fire fighting to enter drains or water courses.

Specific extinguishing methods: 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 firefighters: Wear self-contained breathing apparatus for firefighting if necessary.
Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Evacuate personnel to safe areas.
Use personal protective equipment.
Remove all sources of ignition.
Use personal protective equipment.
Avoid dust formation.

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.

7. HANDLING AND STORAGE

Handling Advice on protection against fire and explosion: Keep away from open flames, hot surfaces and sources of ignition.
Earthing of containers and apparatuses is essential.
Avoid dust formation.
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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.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Avoidance of contact:
Acids
Bases
Oxidizing agents
Highly halogenated compounds

Storage
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.
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.

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)</th>
<th>Control parameters / Permissible</th>
<th>Basis</th>
</tr>
</thead>
</table>

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<table>
<thead>
<tr>
<th>Exposure</th>
<th>Concentration</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium powder</td>
<td>7429-90-5</td>
<td>3 mg/m³ (Aluminium)</td>
</tr>
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<td>Aluminium powder</td>
<td>7429-90-5</td>
<td>3 mg/m³ (Aluminium)</td>
</tr>
</tbody>
</table>

**Personal protective equipment**

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

**Eye/face protection**: Wear face-shield and protective suit for abnormal processing problems.

**Skin and body protection**: Choose body protection according to the amount and concentration of the dangerous substance at the work place.  
Long sleeved clothing  
Safety shoes  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Hand protection**

**Material**: Solvent-resistant gloves

**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 break-through 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.

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

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance**: Pasty solid  
**Propellant**: No data available  
**Colour**: Silver  
**Odour**: Characteristic  
**Odour Threshold**: No data available
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pH : No data available
Melting point/freezing point : No data available
Boiling point/boiling range : > 100 °C
Flash point : > 100 °C
Evaporation rate : No data available
Flammability (solid, gas) : Combustible Solids

Flammability (liquids) : No data available
Burning rate : No data available
Auto-flammability : not auto-flammable
Burning number : 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
Solubility(ies)
Water solubility : insoluble
Partition coefficient: n-octanol/water : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Self-Accelerating decomposition temperature (SADT) : No data available
Temperature of Polymerisation (SAPT) : No data available
Viscosity : No data available
Viscosity, kinematic : No data available
Flow time : No data available
Solvent separation : No data available
Explosive properties : Not explosive
Oxidizing properties : No data available
Self-heating substances : No data available
Heat of combustion : No data available
Impact sensitivity : No data available
Surface tension : No data available
Conductivity : No data available
Sublimation point : No data available
Molecular weight : No data available
Minimum exploisible dust concentration : No data available
Dust deflagration index (Kst) : No data available
Dust explosion class : No data available
Radioactivity : No data available
Volatile organic compounds (VOC) content : No data available
Volatile organic compounds (VOC) content : No data available
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10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Reactivity</th>
<th>No decomposition if stored and applied as directed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical stability</td>
<td>No decomposition if stored and applied as directed.</td>
</tr>
<tr>
<td>Possibility of hazardous re-</td>
<td>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. Vapour/air-mixtures are explosive at intense warming. Stable under recommended storage conditions.</td>
</tr>
<tr>
<td>actions</td>
<td></td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>Do not allow to dry. No data available</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>Acids Bases Oxidizing agents Highly halogenated compounds</td>
</tr>
</tbody>
</table>

11. TOXICOLOGICAL INFORMATION

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

**Skin corrosion/irritation**
Causes skin irritation.

**Product:**
Remarks: May cause skin irritation and/or dermatitis.

**Components:**
Ethoxylated trimethylolpropane triacrylate:
Result: Skin irritation
Remarks: May cause skin irritation and/or dermatitis.

*Polyoxy(methyl-1,2-ethanediyl), α,α’,α”-1,2,3-propanetriyltris[ω-[(1-oxo-2-propenyl)oxy]*:* Remarks: May cause skin irritation and/or dermatitis.

**Serious eye damage/eye irritation**
Causes serious eye damage.

**Product:**
Remarks: May cause irreversible eye damage.

**Components:**
Ethoxylated trimethylolpropane triacrylate:
Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin.

*Polyoxy(methyl-1,2-ethanediyl), α,α’,α”-1,2,3-propanetriyltris[ω-[(1-oxo-2-propenyl)oxy]*:* Remarks: Eye irritation

**Respiratory or skin sensitisation**
Skin sensitisation
May cause an allergic skin reaction.
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Respiratory sensitisation
Not classified based on available information.

Product:
Remarks: Causes sensitisation.
May cause sensitisation of susceptible persons by skin contact.

Components:
Ethoxylated trimethylolpropane triacrylate:
Result: May cause sensitisation by skin contact.

Remarks: Causes sensitisation.
May cause sensitisation of susceptible persons by skin contact.

Poly[oxy(methyl-1,2-ethanediyl]), α,α',α''-1,2,3-propanetriyltris[ω-[(1-oxo-2-propenyl)oxy]]-
Remarks: Causes sensitisation.
May cause sensitisation of susceptible persons by skin contact.

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
Not classified based on available information.

STOT - repeated exposure
Not classified based on available information.

Components:
dodecylphosphonic acid:
Target Organs: Kidney
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Aspiration toxicity
Not classified based on available information.

Further information
Product:
Remarks: No data available

Components:
Ethoxylated trimethylolpropane triacrylate:
Remarks: No data available

Poly[oxy(methyl-1,2-ethanediyl]), α,α',α''-1,2,3-propanetriyltris[ω-[(1-oxo-2-propenyl)oxy]]-
Remarks: No data available
12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

**Ethoxylated trimethylolpropane triacrylate:**
Toxicity to daphnia and other aquatic invertebrates: (Daphnia (water flea)): 10,232.73 mg/l
dodecylphosphonic acid:

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

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects

**Product:**
Additional ecological information: No data available

Components:

**Ethoxylated trimethylolpropane triacrylate:**
Additional ecological information: No data available

**Poly[methyl-1,2-ethanediyl], α,α',α"-1,2,3-propanetriyltris[ω-[1-oxo-2-propenyl]oxy]-:**
Additional ecological information: No data available

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.
In accordance with local and national regulations.
14. TRANSPORT INFORMATION

International Regulations

Remarks : Not classified as dangerous in the meaning of transport regulations.

ADR : Not classified as dangerous in the meaning of transport regulations.

IATA-DGR : Not classified as dangerous in the meaning of transport regulations.

IMDG-Code : Not classified as dangerous in the meaning of transport regulations.

Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR

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

National Regulations

Remarks : Not classified as dangerous good under GB 6944/12268

15. REGULATORY INFORMATION

National regulatory information

Law on the Prevention and Control of Occupational Diseases: Applicable

16. OTHER INFORMATION

Full text of other abbreviations

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 Dan-
gurous 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

Date format : yyyy/mm/dd
GBZ 2.1-2007 / PC-TWA : Permissible concentration - time weighted average

Disclaimer

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.

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