SAFETY DATA SHEET  
according to Regulation (EC) No. 1907/2006

TOPSTAR UV FPG 721 1000 Silver

Version 3.0  Revision Date: 05.09.2017  SDS Number: 102000023638  Print Date: 19.11.2018  Date of first issue: 15.03.2016

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

1.1 Product identifier
   Trade name: TOPSTAR UV FPG 721 1000 Silver
   Material number: 022238N20

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  H315: Causes skin irritation.
   Eye irritation, Category 2  H319: Causes serious eye irritation.
   Skin sensitisation, Category 1  H317: May cause an allergic skin reaction.
   Chronic aquatic toxicity, Category 3  H412: Harmful to aquatic life with long lasting effects.

   Classification (67/548/EEC, 1999/45/EC)
   Irritant  R36/38: Irritating to eyes and skin.
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Sensitising
R43: May cause sensitisation by skin contact.

Irritant

Dangerous for the environment
R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms:

Signal word: Warning

Hazard statements:
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H412: Harmful to aquatic life with long lasting effects.

Precautionary statements:
Prevention:
P273: Avoid release to the environment.
P280: Wear protective gloves.
Response:
P321: Specific treatment (see supplemental first aid instructions on this label).
P333 + P313: If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313: If eye irritation persists: Get medical advice/attention.
Disposal:
P501: Dispose of contents/container to an approved waste disposal plant.

Hazardous components which must be listed on the label:
Glycerol, propoxylated, esters with acrylic acid 52408-84-1
Propylidynetrimethanol, ethoxylated, esters with acrylic acid 28961-43-5
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide 162881-26-7

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

### Hazardous components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No. EC-No. Registration number</th>
<th>Classification (67/548/EEC)</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propenoic acid, 2-hydroxyethyl ester, polymer with 1,3-diisocyanatomethyl benzene, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and me</td>
<td>72403-50-0</td>
<td>XI; XI; R36/38</td>
<td>Skin Irrit. 2; H315 Eye Irrit. 2; H319</td>
<td>&gt;= 25 - &lt; 50</td>
</tr>
<tr>
<td>Glycerol, propoxylated, esters with acrylic acid</td>
<td>52408-84-1 500-114-5 01-2119487948-12</td>
<td>XI; XI; R36; XI; R43</td>
<td>Eye Irrit. 2; H319 Skin Sens. 1; H317</td>
<td>&gt;= 25 - &lt; 50</td>
</tr>
<tr>
<td>Propyldyntrimethanol, ethoxylated, esters with acrylic acid</td>
<td>28961-43-5 500-066-5 01-2119489900-30</td>
<td>XI; XI; R36-R43</td>
<td>Eye Irrit. 2; H319 Skin Sens. 1; H317</td>
<td>&gt;= 25 - &lt; 50</td>
</tr>
<tr>
<td>aluminium powder (stabilised)</td>
<td>7429-90-5 231-072-3</td>
<td>F; R11</td>
<td>Flam. Sol. 1; H228</td>
<td>&gt;= 1 - &lt; 10</td>
</tr>
<tr>
<td>phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide</td>
<td>162881-26-7 423-340-5 01-2119489401-38</td>
<td>R43 R53</td>
<td>Skin Sens. 1A; H317 Aquatic Chronic 4; H413</td>
<td>&gt;= 0,25 - &lt; 1</td>
</tr>
<tr>
<td>2-hydroxy-1-(4-(4-(2-hydroxy-2-methylpropionyl)benzyl)phenyl)-2- methylpropan-1-one</td>
<td>474510-57-1 444-860-9 01-2119904050-59</td>
<td>Xn; R48/22 N; R50-R53</td>
<td>STOT RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic 1; H410</td>
<td>&gt;= 0,25 - &lt; 1</td>
</tr>
</tbody>
</table>

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.
For explanation of abbreviations see section 16.
If inhaled: If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.

In case of skin contact: 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. 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.

4.2 Most important symptoms and effects, both acute and delayed
This information is not available.

4.3 Indication of any immediate medical attention and special treatment needed
This information is not available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media: This information is not available.

Unsuitable extinguishing media: High volume water jet

5.2 Special hazards arising from the substance or mixture
Specific hazards during firefighting: Do not allow run-off from fire fighting to enter drains or water courses.

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

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.
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Use personal protective equipment.

6.2 Environmental precautions

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.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up:
- Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
- Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

This information is not available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling:
- 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.

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

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

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers:
- Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.

Other data:
- 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

<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>
</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.

<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 (Respirable)</td>
<td>2 mg/m³</td>
<td>SE AFS (2011-12-16)</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>Glycerol, propoxylated, esters with acrylic acid (52408-84-1)</td>
<td>Workers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>1.92 mg/kg</td>
</tr>
</tbody>
</table>
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#### Workers

<table>
<thead>
<tr>
<th>Substance</th>
<th>Environmental Compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylidynetrimethanol, ethoxylated, esters with acrylic acid (28961-43-5)</td>
<td>Soil</td>
<td>0.00111 mg/kg</td>
</tr>
</tbody>
</table>

#### Consumers

<table>
<thead>
<tr>
<th>Substance</th>
<th>Environmental Compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol, propoxylated, esters with acrylic acid (52408-84-1)</td>
<td>Soil</td>
<td>0.00111 mg/kg</td>
</tr>
</tbody>
</table>

**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>Glycerol, propoxylated, esters with acrylic acid (52408-84-1)</td>
<td>Soil</td>
<td>0.00111 mg/kg</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th></th>
<th>Fresh water</th>
<th>Fresh water sediment</th>
<th>Marine water</th>
<th>Marine sediment</th>
<th>STP</th>
<th>Soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylidynetrimethanol, ethoxylated, esters with acrylic acid (28961-43-5)</td>
<td>Fresh water</td>
<td>0,00574 mg/l</td>
<td>0,01697 mg/kg</td>
<td>0,000574 mg/l</td>
<td>10 mg/l</td>
<td>0,00587 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>0,00082 mg/kg</td>
<td>0,001697 mg/kg</td>
<td>0,000195 mg/l</td>
<td>10 mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STP</td>
<td></td>
<td></td>
<td>0,000195 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0,0749 mg/l</td>
<td>0,0082 mg/kg</td>
<td>0,00082 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>aluminium (7429-90-5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fresh water</td>
<td>0,00195 mg/l</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>0,00082 mg/kg</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>STP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0,000195 mg/l</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>0,00082 mg/kg</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.2 Exposure controls

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

**Hand protection**
- **Remarks**: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

**Skin and body protection**: Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Respiratory protection**: This information is not available.

**Environmental exposure controls**: This information is not available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- **Appearance**: liquid
- **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
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: No decomposition if stored and applied as directed.

10.4 Conditions to avoid
Conditions to avoid: No data available

10.5 Incompatible materials
Materials to avoid: This information is not available.

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:**

162881-26-7:
- **Acute oral toxicity:** LD50 (Rat): > 2.000 mg/kg
  Method: OECD Test Guideline 401
- **Acute dermal toxicity:** LD50 (Rat): > 2.000 mg/kg
  Method: OECD Test Guideline 402

474510-57-1:
- **Acute oral toxicity:** LD50 (Rat): > 2.000 mg/kg
- **Acute dermal toxicity:** LD50 (Rat): > 2.000 mg/kg

Skin corrosion/irritation

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

**Components:**

28961-43-5:
Remarks: May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

**Product:**
Remarks: Eye irritation

**Components:**

28961-43-5:
Remarks: May cause irreversible eye damage.

Respiratory or skin sensitisation

**Product:**
Remarks: Causes sensitisation.

**Components:**

28961-43-5:
Remarks: Causes sensitisation.

Further information

**Product:**
**TOPSTAR UV FPG 721 1000 Silver**

**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: Remarks: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life with long lasting effects.

**Components:**

28961-43-5:

Remarks: No data available

**SECTION 13: Disposal considerations**

13.1 Waste treatment methods

**Product:**

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. In accordance with local and national regulations.

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 73/78 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).
   : Not applicable

15.2 Chemical safety assessment
   This information is not available.

SECTION 16: Other information

Full text of R-Phrases
R11: Highly flammable.
R36: Irritating to eyes.
R36/38: Irritating to eyes and skin.
R43: May cause sensitisation by skin contact.
R48/22: Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R50: Very toxic to aquatic organisms.
R53: May cause long-term adverse effects in the aquatic environment.
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Full text of H-Statements

H228 : Flammable solid.
H315 : Causes skin irritation.
H317 : May cause an allergic skin reaction.
H319 : Causes serious eye irritation.
H373 : May cause damage to organs through prolonged or repeated exposure.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.
H413 : May cause long lasting harmful effects to aquatic life.

Full text of other abbreviations

Aquatic Acute : Acute aquatic toxicity
Aquatic Chronic : Chronic aquatic toxicity
Eye Irrit. : Eye irritation
Flam. Sol. : Flammable solids
Skin Irrit. : Skin irritation
Skin Sens. : Skin sensitisation
STOT RE : Specific target organ toxicity - repeated exposure

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; 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; 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
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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