SECTION 1. IDENTIFICATION

Product name : Ultrashine UV FPG 8244
Product code : 021733HW0

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 the Hazardous Products Regulations
Skin irritation : Category 2
Eye irritation : Category 2A
Skin sensitization : Category 1
Specific target organ systemic toxicity - repeated exposure : Category 2

GHS label elements
SAFETY DATA SHEET

Ultrashine UV FPG 8244

Version 1.0

Revision Date: 03/27/2018

SDS Number: 102000023166

Date of last issue: -

Date of first issue: 03/27/2018

Hazard pictograms

Signal Word: Warning

Hazard Statements:
- 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.

Precautionary Statements:

Prevention:
- P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
- P264 Wash skin thoroughly after handling.
- P272 Contaminated work clothing must not be allowed out of the workplace.
- P280 Wear protective gloves/ eye protection/ face protection.

Response:
- P302 + P352 IF ON SKIN: Wash with plenty of water.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P314 Get medical advice/ attention if you feel unwell.
- 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 ingredients which must be listed on the label:
- Poly(oxy-1,2-ethanediyl). .alpha.-hydro.-omega. .-{[1-oxo-2-propen-1-yl]oxy} ., ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1)
- Methanone, 1,1'-(phenylphosphinylidene)bis[1-(2,4,6-trimethylphenyl)-Poly(oxy(methyl-1,2-ethanediyl)). .alpha..alpha..alpha.."-1,2,3-propanetriyltris[.omega. .-{(1-
oxo-2-propen-1-yl]oxy]-1-Propanone, 1,1’-(methylene-di-4,1-phenylene)bis[2-hydroxy-2-methyl-2-Propenoic acid, 1,1’-[2-ethyl-2-[(1-oxo-2-propen-1-yl)oxy]methyl]-1,3-propanediyl] ester

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous ingredients</th>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly(oxy-1,2-ethanediyl), .alpha.-hydro-\omega.-(1-oxo-2-propen-1-yl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1)</td>
<td>28961-43-5</td>
<td>&gt;= 30 - &lt; 50</td>
<td></td>
</tr>
<tr>
<td>2-Propenoic acid, polymer with 2,2-bis(hydroxymethyl)-1,3-propanediol, methyloxirane and oxirane</td>
<td>144086-02-2</td>
<td>&gt;= 20 - &lt; 30</td>
<td></td>
</tr>
<tr>
<td>Alkoxylated multifunctional acrylate oligomer</td>
<td>104634-06-2</td>
<td>&gt;= 5 - &lt; 10</td>
<td></td>
</tr>
<tr>
<td>Methanone, 1,1’-(phenylphosphinylidene)bis[1-(2,4,6-trimethylphenyl)]-</td>
<td>162881-26-7</td>
<td>&gt;= 1 - &lt; 5</td>
<td></td>
</tr>
<tr>
<td>Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,alpha.,alpha.”-1,2,3-propanetriyltris,[omega.-(1-oxo-2-propen-1-yl)oxy]-</td>
<td>52408-84-1</td>
<td>&gt;= 1 - &lt; 5</td>
<td></td>
</tr>
<tr>
<td>1-Propanone, 1,1’-(methylene-di-4,1-phenylene)bis[2-hydroxy-2-methyl-</td>
<td>474510-57-1</td>
<td>&gt;= 1 - &lt; 5</td>
<td></td>
</tr>
<tr>
<td>Aluminum</td>
<td>7429-90-5</td>
<td>&gt;= 1 - &lt; 5</td>
<td></td>
</tr>
<tr>
<td>2-Propenoic acid, 1,1’-[2-ethyl-2-[(1-oxo-2-propen-1-yl)oxy]methyl]-1,3-propanediyl] ester</td>
<td>15625-89-5</td>
<td>&gt;= 0.1 - &lt; 1</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

General advice
Move out of dangerous area.
Show this material 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
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.

Most important symptoms and effects, both acute and delayed:
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause damage to organs through prolonged or repeated exposure.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:
Carbon dioxide (CO2)
Dry sand
Dry powder

Unsuitable extinguishing media:
High volume water jet

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:
Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and:
Use personal protective equipment.
emergency procedures

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

SECTION 7. HANDLING AND STORAGE

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

Advice on safe handling : 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. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Conditions for safe storage : 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.

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

## Personal protective equipment

### Hand protection

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

### Eye protection

**Remarks**: Wear face-shield and protective suit for abnormal processing problems.

### Skin and body protection

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

### Hygiene measures

**Remarks**: 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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>silver</td>
</tr>
<tr>
<td>Odor</td>
<td>characteristic</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Boiling point/boiling range : > 100 °C
Flash point : > 100 °C
Evaporation rate : No data available
Flammability (solid, gas) : No data available
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

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 : No decomposition if stored and applied as directed.
Conditions to avoid : No data available

SECTION 11. TOXICOLOGICAL INFORMATION
Acute toxicity
Not classified based on available information.

Ingredients:
Methanone, 1,1'-(phenylphosphinylidene)bis[1-(2,4,6-trimethylphenyl)-:
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

1-Propanone, 1,1'-(methylene-di-4,1-phenylene)bis[2-hydroxy-2-methyl-:
Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Acute dermal toxicity: LD50 (Rat): > 2,000 mg/kg

Skin corrosion/irritation
Causes skin irritation.

**Ingredients:**
Poly(oxy-1,2-ethanediyl), .alpha.-hydro.-omega.-[(1-oxo-2-propen-1-yl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1):
Result: Skin irritation
Remarks: May cause skin irritation and/or dermatitis.

2-Propenoic acid, polymer with 2,2-bis(hydroxymethyl)-1,3-propanediol, methyloxirane and oxirane:
Remarks: May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation
Causes serious eye irritation.

**Ingredients:**
Poly(oxy-1,2-ethanediyl), .alpha.-hydro.-omega.-[(1-oxo-2-propen-1-yl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1):
Remarks: Vapors may cause irritation to the eyes, respiratory system and the skin.

2-Propenoic acid, polymer with 2,2-bis(hydroxymethyl)-1,3-propanediol, methyloxirane and oxirane:
Remarks: May cause irreversible eye damage.

Respiratory or skin sensitization

Skin sensitization
May cause an allergic skin reaction.

**Respiratory sensitization**
Not classified based on available information.

**Ingredients:**
Poly(oxy-1,2-ethanediyl), .alpha.-hydro.-omega.-[(1-oxo-2-propen-1-yl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1):
Result: May cause sensitization by skin contact.
SAFETY DATA SHEET

Ultrashine UV FPG 8244

Remarks: Causes sensitization.
May cause sensitization 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**
May cause damage to organs through prolonged or repeated exposure.

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

**Further information**

**Ingredients:**
Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-(1-oxo-2-propen-1-yl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1):
Remarks: No data available

2-Propenoic acid, polymer with 2,2-bis(hydroxymethyl)-1,3-propanediol, methyloxirane and oxirane:
Remarks: No data available

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ingredients:**
Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-(1-oxo-2-propen-1-yl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1):
Toxicity to daphnia and other aquatic invertebrates:
(Daphnia): 10,232.73 mg/l
Persistence and degradability
No data available

Bioaccumulative potential
No data available

Other adverse effects
No data available

Ingredients:
Poly(oxy-1,2-ethanediyl), alpha-hydro-omega-[(1-oxo-2-propen-1-yl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1):
Additional ecological information
: No data available

2-Propenoic acid, polymer with 2,2-bis(hydroxymethyl)-1,3-propanediol, methyloxirane and oxirane:
Additional ecological information
: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
  Toxic to aquatic life with long lasting effects.

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.
  In accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulations
IATA-DGR
UN/ID No.
: UN 3082
Proper shipping name
: Environmentally hazardous substance, liquid, n.o.s.
  (2-hydroxy-1-(4-(4-(2-hydroxy-2-
methyl(propionyl)(benzyl)(phenyl)-2-methyl(propan-1-one)

Class : 9
Packing group : III
Labels : Miscellaneous Dangerous Goods
Packing instruction (cargo aircraft) : 964
Packing instruction (passenger aircraft) : 964

IMDG-Code
UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(2-hydroxy-1-(4-(4-(2-hydroxy-2-methyl(propionyl)(benzyl)(phenyl)-2-methyl(propan-1-one)

Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

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

Domestic regulation

TDG
Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

NPRI Ingredients : Aluminum
Benzene, methyl-

The ingredients 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 : Not On TSCA Inventory

Canadian lists
No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations
ACGIH : USA. ACGIH Threshold Limit Values (TLV)
CA AB OEL : Canada. Alberta, Occupational Health and Safety Code (table 2; OEL)
CA BC OEL : Canada. British Columbia OEL
CA QC OEL : Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
ACGIH / TWA : 8-hour, time-weighted average
CA AB OEL / TWA : 8-hour Occupational exposure limit
CA BC OEL / TWA : 8-hour time weighted average
CA QC OEL / TWA EV : Time-weighted average exposure value

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 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; 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

Revision Date : 03/27/2018

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.

CA / Z8