SAFETY DATA SHEET
METALSTAR UV 21-2065 GOLD

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : METALSTAR UV 21-2065 GOLD
Product code : 046430DP0

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
Acute toxicity (Oral) : Category 4
Skin irritation : Category 2
Eye irritation : Category 2A
Skin sensitization : Category 1
Reproductive toxicity : Category 1B
Acute aquatic toxicity : Category 1
Chronic aquatic toxicity : Category 1

GHS label elements

Date of last issue: 03/27/2018
Date of first issue: 03/26/2018
Hazard pictograms

Signal Word: Danger

Hazard Statements:
- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H360 May damage fertility or the unborn child.
- H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

Prevention:
- **P201** Obtain special instructions before use.
- **P202** Do not handle until all safety precautions have been read and understood.
- **P261** Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
- **P264** Wash skin thoroughly after handling.
- **P270** Do not eat, drink or smoke when using this product.
- **P272** Contaminated work clothing must not be allowed out of the workplace.
- **P273** Avoid release to the environment.
- **P280** Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
- **P301 + P312 + P330** IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
- **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.
- **P308 + P313** IF exposed or concerned: Get medical advice/ attention.
- **P333 + P313** If skin irritation or rash occurs: Get medical advice/ attention.
- **P362 + P364** Take off contaminated clothing and wash it before reuse.
- **P391** Collect spillage.

Storage:
P405 Store locked up.

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous ingredients which must be listed on the label:

- Copper
- 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)
- Ethanone, 2,2-dimethoxy-1,2-diphenyl-
- Zinc
- Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, 2-propenoate
- Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.,.alpha.'-.alpha.'-.alpha.'-.1,2,3-propanetriyltris[.omega.-[(1-oxo-2-propen-1-yl)oxy]-
- Polyester acrylate
- 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

### Hazardous ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
<td>&gt;= 30 - &lt; 50</td>
</tr>
<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;= 10 - &lt; 20</td>
</tr>
<tr>
<td>Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, 2-propenoate</td>
<td>55818-57-0</td>
<td>&gt;= 1 - &lt; 5</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>
</tr>
<tr>
<td>Polyester acrylate</td>
<td>Not Assigned</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td>1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-</td>
<td>119313-12-1</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
</tbody>
</table>

**SECTION 4. FIRST AID MEASURES**
General advice

Take the victim into fresh air.
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

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.
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

Harmful if swallowed.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May damage fertility or the unborn child.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Special powder against metal fire
Dry sand
ABC powder

Unsuitable extinguishing media

Water
High volume water jet

Specific hazards during fire fighting

Do not allow run-off from fire fighting to enter drains or water courses.

Specific extinguishing methods

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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 emergency procedures: Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment.

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.

Pick up and transfer to properly labeled containers. Do not flush with water. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

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: Keep away from heat and sources of ignition.
No smoking.

Normal measures for preventive fire protection.
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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.

Hygiene measures:
- General industrial hygiene practice.

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:
- Keep away from sources of ignition - No smoking.
- Do not store near combustible materials.
- Keep containers tightly closed in a cool, well-ventilated place.
- To maintain product quality, do not store in heat or direct sunlight.
- 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.

Materials to avoid:
- Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.
- Do not store together with oxidizing and self-igniting products.

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

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### Exposure Permissible Concentration

<table>
<thead>
<tr>
<th>Substance</th>
<th>8-hour TWA</th>
<th>15-minute TWA</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>1 mg/m³ (Copper)</td>
<td>2 mg/m³ (Copper)</td>
<td>MX OEL</td>
</tr>
<tr>
<td></td>
<td>LMPE-PPT</td>
<td>LMPE-CT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.2 mg/m³ (Copper)</td>
<td>0.2 mg/m³ (Copper)</td>
<td>NOM-010-STPS-2014</td>
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<tr>
<td></td>
<td>VLE-PPT (Fumes)</td>
<td>VLE-PPT (Dust and mist)</td>
<td>NOM-010-STPS-2014</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>TWA</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td>TWA (Dust and mist)</td>
<td>TWA (Fumes)</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>

### Personal protective equipment

**Respiratory protection:**
- Use suitable breathing protection if workplace concentration requires.
- Respirator with a vapor filter (EN 141)

**Hand protection**
- Material: Solvent-resistant gloves (butyl-rubber)

**Remarks:**
- Take note of the information given by the producer concerning permeability and breakthrough times, and of special workplace conditions (mechanical strain, duration of contact). The exact breakthrough 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: Safety glasses
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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>gold</td>
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<tr>
<td>Odor</td>
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<td>Odor Threshold</td>
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<tr>
<td>pH</td>
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<td>Melting point/freezing point</td>
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<td>Initial boiling point and boiling range</td>
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<td>Flash point</td>
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<tr>
<td>Evaporation rate</td>
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<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit / Upper flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit / Lower flammability limit</td>
<td>No data available</td>
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<tr>
<td>Vapor pressure</td>
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<td>Relative density</td>
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<tr>
<td>Density</td>
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<tr>
<td>Solubility (ies)</td>
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</tr>
<tr>
<td>Water solubility</td>
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<tr>
<td>Partition coefficient: n-octanol/water</td>
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<tr>
<td>Autoignition temperature</td>
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<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
</tbody>
</table>

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: Stable under recommended storage conditions. No decomposition if stored and applied as directed.

Conditions to avoid: Do not allow evaporation to dryness.

Hazardous decomposition products:
Thermal decomposition: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity
Harmful if swallowed.

Ingredients:
Copper:
Acute oral toxicity: Assessment: The component/mixture is moderately toxic after single ingestion.

Skin corrosion/irritation
Causes skin irritation.

Ingredients:
Copper:
Remarks: May cause skin irritation in susceptible persons.

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.

Serious eye damage/eye irritation
Causes serious eye irritation.

Ingredients:
Copper:
Result: Eye irritation
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.

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.

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
May damage fertility or the unborn child.

Ingredients:
1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-:
Reproductive toxicity - Assessment: Clear evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments

STOT-single exposure
Not classified based on available information.

STOT-repeated exposure
Not classified based on available information.

Aspiration toxicity
Not classified based on available information.
Further information

Ingredients:

Copper:
Remarks: No data available

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

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

Copper:
M-Factor (Acute aquatic toxicity) : 10

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

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:

Copper:
Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
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Very toxic to aquatic life with long lasting effects.

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

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

Domestic regulation

NOM-002-SCT
Not regulated as a dangerous good

Special precautions for user

Remarks: For single packagings <=5L / 5 kg, or combination packagings containing inner packagings <= 5L / 5 kg net per inner packaging. SV375 ADR, 2.10.2.7 IMDG-Code, A197 IATA-DGR may be applied.

International Regulations

IATA-DGR
UN/ID No.: UN 3082
Proper shipping name: Environmentally hazardous substance, liquid, n.o.s.
(Copper metal powder)
Class: 9
Packing group: III
Labels: Miscellaneous Dangerous Goods
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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. (Copper metal powder)

Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes
Remarks : For single packagings <=5L / 5 kg, or combination packagings containing inner packagings <= 5L / 5 kg net per inner packaging, SV375 ADR, 2.10.2.7 IMDG-Code, A197 IATA-DGR may be applied.

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

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.

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 : On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

Full text of other abbreviations
ACGIH : USA. ACGIH Threshold Limit Values (TLV)
MX OEL : Mexico. Occupational Exposure Limits
NOM-010-STPS-2014 : Mexico. Norm NOM-010-STPS-2014 on Chemicals Polluting the Work Environment - Identification, Assessment and Control - Appendix 1 Occupational Exposure Limits
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