1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 9302 UNIPAK 500 SILVER LITHO
Product code : 014244RC0M1
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中医 3 号
Guentersthal 4
91235 Hartenstein
Germany
Telephone : +8607567228600
+499152770
Emergency telephone number : National Emergency Response Hotline for Chemical Incident (China):0532-83889090
国家化学事故应急咨询电话 (中国): 0532-83889090
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
E-mail address : Riko.Huang@altana.com
msds.eckart@altana.com
Telefax : +8607567228601
+499152777008

2. HAZARDS IDENTIFICATION

Emergency Overview

<table>
<thead>
<tr>
<th>Appearance</th>
<th>liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour</td>
<td>characteristic</td>
</tr>
</tbody>
</table>

Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

GHS Classification

<table>
<thead>
<tr>
<th>Short-term (acute) aquatic hazard</th>
<th>Category 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-term (chronic) aquatic hazard</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

GHS label elements

<table>
<thead>
<tr>
<th>Hazard pictograms</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal word</td>
<td>None</td>
</tr>
</tbody>
</table>
Hazard statements: H401 Toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:
Prevention: P273 Avoid release to the environment.
Disposal: P501 Dispose of contents/container to an approved waste disposal plant.

Physical and chemical hazards
Not classified based on available information.

Health hazards
Not classified based on available information.

Environmental hazards
Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Other hazards which do not result in classification
No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substance / Mixture</th>
<th>Substance name</th>
<th>Hazardous components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixture</td>
<td></td>
<td>Chemical name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CAS-No.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Concentration (% w/w)</td>
</tr>
<tr>
<td>Aluminium powder</td>
<td>7429-90-5</td>
<td>&gt;= 20 - &lt; 25</td>
</tr>
<tr>
<td>Distillates, petroleum, solvent-refined middle</td>
<td>64741-91-9</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>Distillates, petroleum, solvent-refined middle</td>
<td>64741-91-9</td>
<td>&gt;= 1 - &lt; 10</td>
</tr>
<tr>
<td>Propanoic acid, 2-methyl-, 2,2-dimethyl-1-(1-methylethyl)-1,3-propanediyl ester</td>
<td>6846-50-0</td>
<td>&gt;= 1 - &lt; 2.5</td>
</tr>
<tr>
<td>Ethene, homopolymer</td>
<td>9002-88-4</td>
<td>&gt;= 1 - &lt; 10</td>
</tr>
<tr>
<td>Amines, hydrogenated tallow alkyl</td>
<td>61788-45-2 (90640-32-7)</td>
<td>&gt;= 0.25 - &lt; 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

General advice:
Move the victim to fresh air.
Do not leave the victim unattended.
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 skin contact: Wash off immediately with soap and plenty of water.

In case of eye contact: Immediately flush eye(s) with plenty of water. 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.

Most important symptoms and effects, both acute and delayed: None known.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Dry sand
ABC powder
Foam

Unsuitable extinguishing media: High volume water jet

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Evacuate personnel to safe areas.

Environmental precautions: Prevent product from entering drains. If the product contaminates rivers and lakes or drains inform
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).
- Wipe up with absorbent material (e.g. cloth, fleece).
- Do not flush with water.
- Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

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

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

Avoidance of contact:
- Acids
- Bases
- Oxidizing agents

Storage:
Conditions for safe storage:
- Earthing of containers and apparatuses is essential.
- Reaction with water liberates extremely flammable gas (hydrogen).
- Take measures to prevent the build up of electrostatic charge.
- Use explosion-proof equipment.
- Store in original container.
- Keep containers tightly closed in a cool, well-ventilated place.
- Keep away from sources of ignition - No smoking.
- Keep container closed when not in use.
- 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.

Technical measures/Precautions:
- Protect from humidity and water.

Materials to avoid:
- Do not store near acids.
- 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 exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium powder</td>
<td>7429-90-5</td>
<td>PC-TWA (Total dust)</td>
<td>3 mg/m³ (Aluminium)</td>
<td>GBZ 2.1-2007</td>
</tr>
<tr>
<td>Ethene, homopolymer</td>
<td>9002-88-4</td>
<td>PC-TWA (Total)</td>
<td>5 mg/m³</td>
<td>GBZ 2.1-2007</td>
</tr>
<tr>
<td>Aluminium powder</td>
<td>7429-90-5</td>
<td>PC-TWA (Total dust)</td>
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</tr>
</tbody>
</table>

Personal protective equipment

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

No personal respiratory protective equipment normally required.

Eye/face protection: Goggles
Safety glasses

Hand protection

Material: Solvent-resistant gloves (butyl-rubber)

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: General industrial hygiene practice.
9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid
Propellant : No data available
Colour : No data available
Odour : characteristic
Odour Threshold : No data available
pH : No data available
Melting point/freezing point : No data available
Boiling point/boiling range : 260 °C
Flash point : 101 °C
Evaporation rate : No data available
Flammability (solid, gas) : No data available
Flammability (liquids) : No data available
Burning rate : No data available
Auto-flammability : No data available
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) : No data available
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
  Viscosity, kinematic : > 21 mm2/s (40 °C)
Flow time : No data available
Solvent separation : No data available
Explosive properties : No data available
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
SAFETY DATA SHEET according to GB/T 16483 and GB/T 17519

9302 UNIPAK 500 SILVER LITHO

Molecular weight : No data available
Minimum explosible 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
Particle size : No data available
Particle Size Distribution : No data available

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 : Contact with acids and alkalis may release hydrogen.
Stable under recommended storage conditions.
Conditions to avoid : Do not allow evaporation to dryness.
Incompatible materials : AcidsBasesOxidizing agents

11. TOXICOLOGICAL INFORMATION

Acute toxicity
Not classified based on available information.

Components:
Distillates, petroleum, solvent-refined middle:
Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Distillates, petroleum, solvent-refined middle:
Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Amines, hydrogenated tallow alkyl:
Acute oral toxicity : LD50 (Rat): > 2,000 - 5,000 mg/kg
Method: OECD Test Guideline 401

Skin corrosion/irritation
Not classified based on available information.

Components:
Propanoic acid, 2-methyl-, 2,2-dimethyl-1-(1-methylethyl)-1,3-propanediyl ester:
Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: No skin irritation
Amines, hydrogenated tallow alkyl:
Result: Skin irritation

Remarks: May cause skin irritation in susceptible persons.

**Serious eye damage/eye irritation**
Not classified based on available information.

**Components:**
Propanoic acid, 2-methyl-, 2,2-dimethyl-1-(1-methylethyl)-1,3-propanediyl ester:
Species: Rabbit
Result: No eye irritation
Exposure time: 72 h
Method: OECD Test Guideline 405

Amines, hydrogenated tallow alkyl:
Result: Irreversible effects on the eye

Remarks: May cause irreversible eye damage.

**Respiratory or skin sensitisation**

**Skin sensitisation**
Not classified based on available information.

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

**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:**
Amines, hydrogenated tallow alkyl:
Target Organs: Liver, Gastrointestinal tract, Immune system
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

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

**Components:**
Amines, hydrogenated tallow alkyl:
May be fatal if swallowed and enters airways.

**Further information**

**Product:**
Remarks: No data available

**Components:**
Amines, hydrogenated tallow alkyl:
Remarks: Solvents may degrease the skin.
12. ECOLOGICAL INFORMATION

Ecotoxicity

**Product:**

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

**Components:**

**Propanoic acid, 2-methyl-, 2,2-dimethyl-1-(1-methylethyl)-1,3-propanediyl ester:**
Toxicity to daphnia and other aquatic invertebrates:
(Daphnia (water flea)): 2.46 mg/l

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

**Amines, hydrogenated tallow alkyl:**

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

**Ecotoxicology Assessment**
Acute aquatic toxicity : Very toxic to aquatic life.

**Persistence and degradability**
No data available

**Bioaccumulative potential**
No data available

**Mobility in soil**
No data available

**Other adverse effects**

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

**Components:**

**Amines, hydrogenated tallow alkyl:**
Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.
13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste from residues : The product should not be allowed to enter drains, water courses or the soil. In accordance with local and national regulations.

Contaminated packaging : 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

Regulations on Safety Management of Hazardous Chemicals
Catalogue of Hazardous Chemicals : Listed
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; E fullest 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 Obervable 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.

CN / EN