1. PRODUCT AND COMPANY IDENTIFICATION

COPPER GLEAM 125 ADDITIVE

Revision date: 01/01/2004

Supplier
Rohm and Haas Electronic Materials LLC
455 Forest Street
Marlborough, MA 01752 United States of America

For non-emergency information contact: 508-481-7950

Emergency telephone number
Chemtrec 800-424-9300
Rohm and Haas Emergency 215-592-3000

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>&gt; 85.0 %</td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>&lt; 1.0 %</td>
</tr>
<tr>
<td>Oxyalkylene Polymer</td>
<td></td>
<td>&lt; 10.0 %</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance
Form       liquid
Colour     clear
Odour      slight

Hazard Summary
CAUTION!
Contact with eyes, skin, and mucous membranes may cause irritation.

Potential Health Effects

Primary Routes of Entry: Inhalation, ingestion, eye and skin contact.

Eyes: May cause pain, transient irritation and superficial corneal effects.
Skin: Material may cause irritation.

Ingestion: Swallowing may have the following effects:
irritation of mouth, throat and digestive tract

Inhalation: Inhalation may have the following effects:
irritation of nose, throat and respiratory tract

Target Organs: Eye
Respiratory System
Skin
Carcinogenicity
Not considered carcinogenic by NTP, IARC, and OSHA

4. FIRST AID MEASURES

Inhalation: Remove from exposure. If there is difficulty in breathing, give oxygen. Seek medical attention if symptoms persist.

Skin contact: Wash skin with water. Continue washing for at least 15 minutes. Obtain medical attention if blistering occurs or redness persists.

Eye contact: Immediately flush the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Ingestion: Wash out mouth with water. Have victim drink 1-3 glasses of water to dilute stomach contents. Immediate medical attention is required. Never administer anything by mouth if a victim is losing consciousness, is unconscious or is convulsing.

Notes to physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash point >93 °C (199 °F )
Lower explosion limit not applicable
Upper explosion limit not applicable

Suitable extinguishing media: Not readily combustible. Select extinguishing agent appropriate to other materials involved.

Specific hazards during fire fighting: No specific measures necessary.

Special protective equipment for fire-fighters: Wear full protective clothing and self-contained breathing apparatus.

Further information: This product may give rise to hazardous vapors in a fire.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Wear suitable protective clothing.
Environmental precautions
Prevent the material from entering drains or water courses.
Do not discharge directly to a water source.
Advise Authorities if spillage has entered watercourse or sewer or has contaminated soil or vegetation.

Methods for cleaning up
Cover with absorbent or contain. Collect and dispose.

7. HANDLING AND STORAGE

Handling
Use only in well-ventilated areas. Avoid breathing vapor. Avoid contact with eyes, skin and clothing. Keep container tightly closed.
Further information on storage conditions: No special precautions necessary.

Storage
Storage conditions: Store in original container. Storage area should be: cool dry well ventilated out of direct sunlight away from incompatible materials

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limit(s)
Exposure limits are listed below, if they exist.

<table>
<thead>
<tr>
<th>Component</th>
<th>Regulation</th>
<th>Type of listing</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>ACGIH</td>
<td>TWA</td>
<td>262 mg/m3 200 ppm</td>
</tr>
<tr>
<td>ACGIH</td>
<td>STEL</td>
<td>328 mg/m3 250 ppm</td>
<td></td>
</tr>
<tr>
<td>ACGIH</td>
<td>SKIN_DES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA_TRANS</td>
<td>PEL</td>
<td>260 mg/m3 200 ppm</td>
<td></td>
</tr>
<tr>
<td>Z1A</td>
<td>TWA</td>
<td>260 mg/m3 200 ppm</td>
<td></td>
</tr>
<tr>
<td>Z1A</td>
<td>STEL</td>
<td>325 mg/m3 250 ppm</td>
<td></td>
</tr>
<tr>
<td>Z1A</td>
<td>SKIN_FINAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rohm and Haas</td>
<td>TWA</td>
<td>200 ppm</td>
<td></td>
</tr>
<tr>
<td>Rohm and Haas</td>
<td>STEL</td>
<td>250 ppm</td>
<td></td>
</tr>
<tr>
<td>Rohm and Haas</td>
<td>Absorbed via skin</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Eye protection: goggles

Hand protection: Nitrile rubber gloves. Other chemical resistant gloves may be recommended by your safety professional.

Skin and body protection: Normal work wear.

Respiratory protection: No personal respiratory protective equipment normally required. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.

Engineering measures: Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (local exhaust), and control of process conditions.
9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
   Form liquid
   Colour clear
   Odour slight
pH 3
Boiling point/range 100 °C (212 °F)
Flash point >93 °C (199 °F)
Lower explosion limit not applicable
Upper explosion limit not applicable
Vapour pressure Similar to water

Component: Methanol
   Vapour pressure 96.0 mmHg at 20 °C
Relative vapour density Heavier than air.
Water solubility completely soluble
Relative density 1.00 - 1.01
Evaporation rate Slower than ether
VOC's 19.9 g/l

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Hazardous reactions Stable under normal conditions.

Conditions to avoid contact with incompatible materials Exposure to sunlight.

Materials to avoid cyanides Carbonates sulfides Strong oxidizers Reducing agents Combustible organic materials bases

Hazardous decomposition products Carbon monoxide, carbon dioxide, oxides of sulfur, nitrogen oxides (NOx), acids, Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.
Component: Methanol
   Acute oral toxicity LD50 mouse 7,300 mg/kg

Component: Methanol
Acute oral toxicity  LD50 rat  > 5,000 mg/kg
A large dose may have the following effects:
central nervous system depression
loss of consciousness
temporary or permanent blindness

Component: Methanol
Acute inhalation toxicity  LC50 rat  64,000 mg/m³

Component: Methanol
Acute dermal toxicity  LD50 rabbit  15,800 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.

Methanol
Ecotoxicity effects
Toxicity to fish  LC50
10,000 mg/l

13. DISPOSAL CONSIDERATIONS

Environmental precautions: Prevent the material from entering drains or water courses. Do not discharge directly to a water source. Advise Authorities if spillage has entered watercourse or sewer or has contaminated soil or vegetation.

Disposal
Dispose in accordance with all local, state (provincial), and federal regulations. Under RCRA, it is the responsibility of the product's user to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This is because the product uses, transformations, mixtures, processes, etc. may render the resulting materials hazardous. Do not remove label until container is thoroughly cleaned. Empty containers may contain hazardous residues. This material and its container must be disposed of in a safe way.

14. TRANSPORT INFORMATION

DOT
Not regulated for transport

IMO/IMDG
Not regulated (Not dangerous for transport)

15. REGULATORY INFORMATION

SARA TITLE III: Section 311/312 Categorizations (40CFR370): Immediate health hazard
SARA TITLE III: Section 313 Information (40CFR372)
This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.

U.S. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D):
U.S. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
This product does not contain any substances subject to Section 12(b) export notification.

US. Toxic Substances Control Act (TSCA) All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

California (Proposition 65)
This product does not contain materials which the State of California has found to cause cancer, birth defects or other reproductive harm.

16. OTHER INFORMATION

Hazard Rating

<table>
<thead>
<tr>
<th></th>
<th>Health</th>
<th>Fire</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Legend

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Governmental Industrial Hygienists</td>
</tr>
<tr>
<td>BAc</td>
<td>Butyl acetate</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>STEL</td>
<td>Short Term Exposure Limit (STEL):</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>TWA</td>
<td>Time Weighted Average (TWA):</td>
</tr>
<tr>
<td></td>
<td>Bar denotes a revision from prior MSDS.</td>
</tr>
</tbody>
</table>

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.