


Material Safety Data Sheet

1. Product and Company Identification

Product name : EMK 9600 (Stripper)
Other names :
Recommended use and restrictions on use : Photoresist Stripper.
Supplier detail : EMK Technologies Pte Ltd /21 Bukit Batok Crescent, Wcega Tower #14-76,Singapore 658065
Emergency phone number : Tel: +65.6684 7855 / Fax: +65.6684 7838

2. Hazard Identification

<p>Emergency classification : Inflammable Liquids (Category 4)</p> <p>Acute oral toxicity (Category 5)</p> <p>Skin Corrosion/Irritation (Category 1)</p> <p>Serious Eye Damage/Eye Irritation (Category 1)</p> <p>Respiratory allergies (Category 1)</p>
<p>• GHS label :</p> <div style="text-align: center;">  </div> <p>• Warning information : Danger !</p> <p>• Hazard statement : Flammable liquids.</p> <p>Swallowing may be harmful.</p> <p>Causes severe skin burns and eye damage.</p> <p>Cause serious eye damage.</p> <p>Inhalation may cause allergy or asthma symptoms or breathing difficulties.</p> <p>May cause skin allergies.</p> <p>Harmful to aquatic organisms.</p> <p>• Precautionary statement : Place container in a well-ventilated place.</p> <p>Away from heat, open flame.</p> <p>Clothes are contaminated, immediately take off.</p> <p>Goggles / mask.</p> <p>If contact with the eyes, seek medical care immediately with plenty of water after washing.</p> <p>Wear appropriate respiratory protection in the air does not circulate at.</p> <p>Wear suitable protective clothing, gloves.</p> <p>Do not breathe gas / flue gas / vapor / mist.</p> <p>Avoid release to the environment.</p>
Other hazards : -

3. Composition/Information on Ingredients

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Mixtures :

Chemical identity	
Names of ingredient	Concentration or Concentration range (% of contents)
Dimethyl sulfoxide (DMSO) CAS NO. : 67-68-5	70~90%
Tetramethyl ammonium hydroxide (TMAH) CAS NO. : 75-59-2	2~5%
Alkyl Amine	2~10%

4. First-Aid Measures

First-aid measures for different exposure routes :

- Inhalation : Move exposed person to fresh air. If not breathing, provide artificial respiration or oxygen by trained personnel. If heart has stopped beating, start cardiopulmonary resuscitation (CPR).
Call physician immediately.
- Skin Contact : Water thoroughly but the ease of cleaning. Remove all the contaminated clothing, shoes, and leather products. Thoroughly clean contaminated clothes before reuse. If irritation persists after flushing sense, seek medical care immediately.
- Eye Contact : Immediately flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower lids. If pain or irritation persists, promptly obtain medical attention.
- Ingestion : Drink plenty of water. Seek medical care immediately.

Most important symptoms and hazardous effects : Skin irritation, eye irritation.

Protection of First-aiders : Wear Class C protective gears and do first aid in a safe zone.

Notes to Physician : Inform them of their exposure pathways, to provide appropriate treatment according to their symptoms.

5. Fire-Fighting Measures

Extinguishing Media : Dry chemical powder, foam, carbon dioxide, water spray.

Fire and Explosion Hazards : May release CO, CO₂ and hydrocarbons.

Special Firefighting Procedures :

Security situation in the container away from the fire. Water mist to cool the tank exposed to fire until the fire goes out or container. Evacuate non-essential personnel. Away from tank ends. In a protected area or a safe distance from spray mist cooling containers exposed to fire until the fire goes out. Contaminated fire water must be collected separately, without rendering it into the sewage system.

Special Equipment for the Protection of Firefighters :

Firefighters must wear air respirators, fire fighting clothing, protective gloves.

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6. Accidental Release Measures

Personal Precautions :

- Evacuate all unnecessary and unprotected personnel.
- Keep upwind and keep away from low or confined area.
- Do not inhale vapor or mist.
- Wear appropriate personal protective equipment as specified in Section 8.

Environmental Precautions :

- Ventilation in the leakage area.
- Avoid heat, flames, sparks and other ignition sources.
- Remove sources of ignition.

Methods for Cleaning Up :

- Do not touch the spill.
- If safe to do so, stop or reduce spills.
- Prevent from entering sewers or confined space.
- Placed in appropriate containers for recycling or disposal.
- Notify the environmental protection unit or emergency treatment center.

7. Safe Handling and Storage Measures

Handling :

- Workplace provides good ventilation set local ventilation equipment (if necessary).
- Avoid inhalation of mist / vapors, prolonged or repeated contact with this substance.
- Prohibit smoking.
- Avoid contact with incompatible materials.
- Container when not in use need to be closed.
- Wash thoroughly with soap and water after handling.

Storage :

- Store in a cool, dry, and well-ventilated area.
- Keep away from heat and source of ignition.
- Keep containers tightly closed.
- Make sure all containers are labeled clearly.
- Stay away from incompatible materials and food area.
- Avoid smoking, naked lights, heat, or ignitions sources in work area.

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8. Exposure Controls / Personal Protection

Control parameters :			
Space must be stored in the overall ventilation device or local exhaust systems.			
Control Parameters			
8 hours time weighted average exposure limits TWA	Short-term exposure limits STEL	Maximum exposure limits CEILING	biological standards
-	-	-	-
Personal Protective Equipment :			
<ul style="list-style-type: none"> Respiratory Protection : Produce the steam required to wear a respirator. Use the filter canisters of organic solvents. Hand Protection : Chemical protective gloves. Eye Protection : Splash-proof safety goggles, Face shield. To provide emergency eye wash or quick shower unit. Skin and Body Protection : If risk of splashing, wear chemical protective clothing required and work boots. 			
Specific Hygiene Measures :			
<ul style="list-style-type: none"> Immediately change contaminated clothing after work. Appropriate warning before cleaning. Wash hands thoroughly after handling. Smoking and eating are prohibited in the work places. Maintain cleanness in the work places. 			

9. Physical and Chemical Properties

Appearance(physical state, color, etc.) : Liquid	Odor : -
Odor threshold : -	Melting point : -
pH : > 14	Boiling Point/Boiling Range : 187°C
Flammability : -	Flash Point : 100°C
Decomposition temperature : -	Method Used : Closed Cup
Autoignition temperature : -	Explosion limits : -
Vapor pressure : 0.45 hPa estimated	Vapor density : -
Density : 1.0791 g/cm ³	Solubility : Miscible with water
Partition coefficient n-octanol/water : -	Evaporation rate : -

10. Stability and Reactivity

Stability : Stable under normal conditions.
Possible Hazardous Reactions Occurring under Specific Conditions : Will not occur.
Conditions to Avoid :
<ul style="list-style-type: none"> Avoid heat, flames, sparks and other ignition sources.

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· Away from the water and sewer.
Materials to Avoid : Strong oxidizing agents (peroxides, chlorine, strong acids).
Hazardous Decomposition Products : CO 、CO ₂ 、Hydrocarbons.

11. Toxicological Information

Routes of exposure(inhalation, ingestion, skin and eye contact) : Inhalation, ingestion, skin and eye contact
<p>Symptoms :</p> <p>Headache, dizziness, nausea, skin irritation, eye irritation, eye pain burning sensation of the eyes and eyelids tingling.</p>
<p>Acute toxicity :</p> <p>Inhalation : Inhalation of high concentrations of vapor may cause respiratory irritation, headache, dizziness, nausea, and lack of coordination.</p> <p>Eye Contact : The substance is a serious irritant to the eyes, direct contact may cause eye burns, irritation, tearing, redness, swelling and Blurred vision.</p> <p>Skin Contact : The substance can cause severe irritation of the skin, direct contact may cause burns.</p> <p>Ingestion : Ingestion may cause gastrointestinal irritation or corrosive damage to the gastrointestinal tract.</p> <p>A large number of ingestion may cause nausea, vomiting, diarrhea and other symptoms.</p> <ul style="list-style-type: none"> • LD₅₀ : 66116 mg/kg (Rabbit , Oral) • LC₅₀ : -
<p>Chronic Toxicity or delayed Toxicity :</p> <ul style="list-style-type: none"> · Without the risk of cancer. · Animal experiments will be induced on the display without any risk of physical deformity of output. · Stimulate long-term or repeated exposure to the eyes may cause conjunctivitis.

12. Ecological Information

<p>Ecotoxicology :</p> <p>LC₅₀(fish) : 5846 mg/l/96H (estimated)</p> <p>EC₅₀(Aquatic Invertebrates) : 36731 mg/l/48H (estimated)</p> <p>Bioconcentration factor (BCF) : -</p>
<p>Persistence and degradability :</p> <p>Half-Life (Air) : -</p> <p>Half-Life (Water surface) : -</p> <p>Half-Life (Groundwater) : -</p> <p>Half-Life (Soil) : -</p>
Bioaccumulative potential :
Mobility in soil : Expected with a high degree of mobility in the soil.
other adverse effect : -

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13. Disposal Considerations

Methods of disposal :

- Incineration.
- Sanitary Landfill.
- Follow ROC Environmental Laws and Regulations.

14. Transport Information

UN number : 3267
UN classification number : Corrosive liquid, basic, organic, n.o.s.
Transport hazard class : 8
Packing group : III
Marine pollution : No
Specific precautionary transport measures and conditions :

15. Regulatory Information

Applicable Regulations :

- Regulations for Labor Safety and Health Installations
- Regulations for Chemical Hazard Communication
- Road Traffic Safety Regulations
- Industrial Waste Storage and Disposal Regulations
- Facility Standards

16. Other Information

Literature references	GHS SDS (http://ghs.cla.gov.tw/tw/Mark_SDS_List.asp?PageMode=GHS_SDS)		
Organization	Name : EMK Technologies Pte Ltd		
	Address/Telephone : 21 Bukit Batok Crescent, Wcega Tower #14-76,Singapore 658065 Tel: +65.6684 7855 / Fax: +65.6684 7838		
Date the GHS was prepared	24/09/2013	Revision	1.0
Note	• Symbols Explanations: “-” No information is available at this time. “/” Not applicable to this substance.		