Date of Issue: 11 May 1999  
Revision: draft  
ID: cpmsgre  

**BIS(CYCLOPENTADIENYL)MAGNESIUM/SQUALANE MIXTURE**

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY.

**Product Name**  
Bis(cyclopentadienyl)magnesium; Squalane mixture

**Formula**  
(C_10H_12)_2Mg and C_30H_52

**Company Identification**  
See footer.

2. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance/Preparation**  
Bis(cyclopentadienyl)magnesium and Squalane

**Components/Impurities**  
None

**EINECS No.**  
Not available.

**CAS No.**  
1284-72-6 and 111-01-3

3. HAZARDS IDENTIFICATION

Pyrophoric liquid mixture. Decomposes violently in water. Skin contact can cause severe burns. Fumes may cause skin and eye irritation. Avoid inhalation of fumes.

4. FIRST AID MEASURES

Prompt medical attention is required in all cases of exposure to Bis(cyclopentadienyl)magnesium/squalane mixture and its by-products. Rescue personnel should be equipped with appropriate protective equipment (e.g. Self-contained breathing apparatus) to prevent unnecessary exposure and must be aware of the pyrophoric nature of Bis(cyclopentadienyl)magnesium/squalane mixture.

**Skin**  
Contact may cause severe burns. Fumes may cause irritation. Immediately flush affected areas with large quantities of water. Remove affected clothing as rapidly as possible only if not stuck to skin.

**Eyes**  
Contact may cause severe burns. Fumes may cause irritation. Persons with potential exposure to Bis(cyclopentadienyl)magnesium/squalane mixture should not wear contact lenses. Flush contaminated eyes with large quantities of water for at least 15 minutes. Hold eyelids open to ensure complete flushing.

**Inhalation**  
May cause irritation. Move exposed personnel to an uncontaminated area quickly using self-contained breathing apparatus. If breathing is difficult, give oxygen. If breathing has stopped, apply artificial respiration. Medical assistance should be sought immediately. Keep victim warm and quiet.

5. FIRE-FIGHTING MEASURES

**Extinguishing Media**  
Always use dry powder, soda ash or lime. Never use water, foam or halogenated compounds to fight fires involving organometallic materials. Without risk, stop flow of this compound to the fire. Without risk, and if safe to do so, move container(s) away from fire area.

**Exposure Hazards**  
In a controlled fire any unreacted Bis(cyclopentadienyl)magnesium/squalane mixture may re-ignite when contact with air or water is renewed.

**Special Protective Equipment for Fire-Fighters**  
Self-contained breathing apparatus, face shield and safety goggles, safety shoes and fire resistant gloves.

6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions**  
Evacuate area. Use appropriate protective equipment. Purge equipment with inert gas before attempting repairs. Ensure adequate ventilation. If leak is in container call one of the emergency numbers as appropriate (See footer).

**Environmental Precautions**  
Try to stop release, if safe to do so. For fire-fighting measures see Section 5.

**Clean up methods**  
Contact Epichem for specific advice.

7. HANDLING AND STORAGE

**Handling**  
Valve outlet seals must remain in place unless container is secured and valve outlet piped to use point. Use a check valve or trap to prevent hazardous back flow into the container. Any equipment used for Bis(cyclopentadienyl)magnesium/squalane mixture service must be thoroughly cleaned and prepared to eliminate contamination and must be maintained in a leak-free state. All air and moisture in the system must be eliminated before use.

**Storage**  
Protect containers from physical damage. Do not allow temperatures to exceed (125F)51C. Store away from flammable material.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Controls**  
OSHA or ACGIH: None established.

**OES and MEL**  
None established.

**Ensure adequate ventilation.**

**Personal Protection**  
Self-contained breathing apparatus, rubber gloves, face shield and safety goggles, safety shoes and fire-resistant garments. Safety shower and eyewash.

9. PHYSICAL AND CHEMICAL PROPERTIES

**Boiling Point:** (C_10H_12)_2Mg (432F) 222C; squalane (~662F) ~350C
10. STABILITY AND REACTIVITY

Conditions to avoid
Reacts pyrophorically in air.

Note: Bis(cyclopentadienyl)magnesium/squalane mixture is stable indefinitely in an inert atmosphere at room temperature.

Materials to avoid
Avoid oxidizers, water and air

Hazardous Decomposition Products
Cyclopentadiene, Magnesium oxides, CO, CO₂

11. TOXICOLOGICAL INFORMATION

Magnesium compounds are generally of low toxicity. However, Cyclopentadiene is a severe irritant to human tissue and is toxic.

TLV 75ppm

Squalane is an irritant. Irritation Data:
SKN-RBT 100 mg/24H MLD
SKN-GPG 100 mg/24H MLD

Bis(cyclopentadienyl)magnesium or squalane are not listed in the IARC, NTP, or OSHA Subpart Z as a carcinogen or potential carcinogen.

Mixture are excluded from reporting requirements under TSCA ruling 3 (2)(B).

12. ECOLOGICAL INFORMATION

No specific data available.

13. DISPOSAL CONSIDERATIONS

Regional and National regulations should be followed during waste disposal. Contact an Epichem representative for disposal of container and any unused quantities.

14. TRANSPORT INFORMATION

UN No: 2845
CLASS: 4.2
PG I
ECCN#: EAR99
IMDG Code: 4254
Shipping Name: Pyrophoric liquid, organic, n.o.s.
     (Bis(cyclopentadienyl)Magnesium/Squalane mixture)

15. REGULATORY INFORMATION

Classification
Highly Flammable, Corrosive, Irritant

Risk and Safety Phrases
R14: Reacts violently with water.
R17: Spontaneously flammable in air.
R34: Causes burns.
S16: Keep away from sources of ignition – No smoking.
S43a: In case of fire use dry powder or lime - Never use water.
S45: In case of accident or if you feel unwell seek medical advice immediately. (Show label where possible)

16. OTHER INFORMATION

Ensure operators understand the pyrophoric nature of the product. Before using this product, it is recommended that a risk assessment and safety study be carried out. Further information on the use of this product can be obtained from the Technical Product Manager at the nearest Epichem facility.

SAFETY NOTICE: In order to provide our customers with the highest quality material and maintain our high standards of safety, the surface temperature of the bubbler will be monitored during the transportation of our products. We would like to monitor the surface temperature of the bubbler using a tempilabel. Tempilabel is a temperature monitoring strip ranging from 120F to 150F (49C to 66C) which will indicate the temperature during shipment. This strip will turn black at one of the four ratings shown if the temperature is reached (normally a silver center). If the temperature monitor is changed, please notify an Epichem representative immediately and we will assist you in proper measures to be taken. We ask for your cooperation in our efforts of quality assurance and safety. If you have any questions or comments, please contact an Epichem representative. We thank you for your cooperation. Your assistance is greatly appreciated.

Information contained in this material safety data sheet is offered without charge for use by technically qualified personnel at their discretion and risk. All statements, technical information and recommendations contained herein are based on tests and data which we believe to be reliable, but the accuracy or completeness thereof is not guaranteed nor warranty of any kind is made with respect thereto. This information is not intended as a license to operate under or a recommendation to practice or infringe any patent of this Company or others covering any process, compensation of matter or use.

Since the Company shall have no control of the use of the product described herein, the Company assumes no liability for loss or damage incurred from the proper or improper use of such product.

EPICHEM LIMITED
POWER ROAD, BROMBOROUGH,
WIRRAL, MERSEYSIDE, L62 3QF, U.K.
Tel: 44 (0)151 334 2774
Fax: 44 (0)151 334 6422

EPICHEM INCORPORATED
26 WARD HILL AVE, PO BOX 8230
HAVERHILL, MA, 01835, USA
Tel: 1 978 374 5200
Fax: 1 978 374 6474

24 EMERGENCY CONTACT NUMBERS
Europe: 44 151 334 2774
United States: Chemtrec: (800) 424 9300
Other International Countries: Chemtrec: (703) 527 3887