1 - Product and Company Information

ProductName	4-ETHYLPHENYLMAGNESIUM BROMIDE, 0.5M SOLUTION IN TETRAHYDROFURAN (NO BULK SALES ALLOWED)

2 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Highly flammable. Reacts violently with water, liberating extremely flammable gases. May form explosive peroxides. Causes burns.

3 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I
4-ETHYLPHENYLMAGNESIUM BROMIDE, 0.5M SOLUTION IN TETRAHYDROFURAN	None	None	None

Ingredient Name	Percent	CAS #	EC no	Annex I
4-ETHYLPHENYLMAGNESIUM BROMIDE	11.02	22873-28-5	None	None

TETRAHYDROFURAN 88.98 109-99-9 203-726-8 603-025-00-0
(Inhibitor free)
Symbols: F-Xi
R-Phrases: 11-19-36/37
Highly flammable. May form explosive peroxides. Irritating to eyes and respiratory system.

Formula	C8H9BrMg
Molecular Weight	209.4 AMU

4 - First Aid Measures

AFTER INHALATION
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT
In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

AFTER EYE CONTACT
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION
If swallowed, wash out mouth with water provided person is conscious. Call a physician. Do not induce vomiting.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA
Suitable: Dry chemical powder.
Unsuitable: Do not use water.

SPECIAL RISKS
Specific Hazard(s): Flammable liquid. Vapor may travel considerable distance to source of ignition and flash back. Emits toxic fumes under fire conditions.
Explosion Hazards: Vapor may travel considerable distance to source of ignition and flash back. Container explosion may occur under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL
Evacuate area. Shut off all sources of ignition. Use nonsparking tools.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP
Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING
Directions for Safe Handling: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE
Conditions of Storage: Keep container closed. Keep away from heat, sparks, and open flame. Handle and store under nitrogen. Unsuitable: In the absence of inhibitors, tetrahydrofuran tends to absorb and react with oxygen from the air to form explosive peroxides which may detonate when they become concentrated by evaporation or distillation, are combined with other compounds resulting in an explosive mixture or are disturbed by heat,
shock, or friction.
Incompatible Materials: Do not allow contact with water
Store at 2-8°C

SPECIAL REQUIREMENTS: Do not distill to dryness.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS
Safety shower and eye bath. Use nonsparking tools. Use only in a chemical fume hood.

GENERAL HYGIENE MEASURES
Wash thoroughly after handling. Discard contaminated shoes. Wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT
Respiratory Protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.
Hand Protection: Compatible chemical-resistant gloves.
Eye Protection: Chemical safety goggles.
Special Protective Measures: Faceshield (8-inch minimum).

9 - Physical and Chemical Properties

Appearance	Physical State: Liquid Color: Light - brown	
Property	**Value**	**At Temperature or Pressure**
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	N/A	
Flash Point	- 17.0 °C	Method: closed cup
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	N/A	
SG/Density	0.95 g/cm3	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

10 - Stability and Reactivity

STABILITY
Stable: Stable.
Conditions to Avoid: Do not allow water to enter container because of violent reaction.
Materials to Avoid: Acids, Alcohols, Oxidizing agents, Oxygen
Reacts violently with water.

HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Magnesium oxide, Hydrogen bromide gas.

HAZARDOUS POLYMERIZATION
Hazardous Polymerization: Will not occur

11 - Toxicological Information

SIGNS AND SYMPTOMS OF EXPOSURE
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.
Inhalation may result in spasm, inflammation and edema of the larynxand bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Can cause CNS depression. Exposure to high airborne concentrations can cause anesthetic effects.

ROUTE OF EXPOSURE
Skin Contact: Causes burns.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: Causes burns.
Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion: Harmful if swallowed.

TARGET ORGAN INFORMATION
Kidneys. Liver. Central nervous system.

CHRONIC EXPOSURE - CARCINOGEN
Result: This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL
Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR
UN#: 2924

Class: 3
PG: II
Subrisk: 8
Proper Shipping Name: Flammable liquid, corrosive, n.o.s.

IMDG
UN#: 2924
Class: 3
PG: II
Subrisk: 8
Proper Shipping Name: FLAMMABLE LIQUID, CORROSIVE, N.O.S.
Marine Pollutant: No
Severe Marine Pollutant: No
Technical Name: Required

IATA
UN#: 2924
Class: 3
PG: II
Subrisk: 8
Proper Shipping Name: Flammable liquid, corrosive, n.o.s.
Inhalation Packing Group I: No
Technical Name: Required

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES
INDICATION OF DANGER: F-C
Highly Flammable. Corrosive.
R-PHRASES: 11-14/15-19-34
Highly flammable. Reacts violently with water, liberating extremely flammable gases. May form explosive peroxides. Causes burns.
S-PHRASES: 16-33-43-26-36/37/39-45
Keep away from sources of ignition - no smoking. Take precautionary measures against static discharges. In case of fire, never use water. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Caution: Substance not yet fully tested (EU).

COUNTRY SPECIFIC INFORMATION

Germany
WGK: 1
Self-Classification

16 - Other Information