



MATERIAL SAFETY DATA SHEET

HYBASE® M-11D

Version: 1.5
Date of Issue: 05/05/2006
Date printed: 05/10/2006

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : HYBASE® M-11D

Chemical name: Oil Soluble Magnesium Sulfonate, Overbased in #2 Fuel Oil

Use of substance/preparation: Petroleum Additive

Supplier: Chemtura USA Corporation
199 Benson Road
Middlebury, CT 06749 USA

Manufacturer: Chemtura USA Corporation
565 Coronation Drive
West Hill, Ontario M1E 2K3 Canada

Emergency telephone number: (24 hours) 732-826-6600, 724-756-2210, (24 hours) 800-424-9300
For additional emergency telephone numbers see section 16 of the Safety Data Sheet.

Environmental, Health and Safety Department: 866-430-2775

Customer Service: 800 325 6252, Canada, Canada (24 hour emergency #): 416-284-1661

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>% BY WEIGHT</u>
Oil soluble magnesium sulfonate CAS# Trade secret	55 - 80
Fuel Oil #2 CAS# 68476-30-2	20 - 45
Proprietary additive CAS# Trade secret	< 3

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION!

COMBUSTIBLE LIQUID

NORMAL PRECAUTIONS COMMON TO SAFE MANUFACTURING PRACTICE SHOULD BE FOLLOWED IN HANDLING AND STORAGE. USE ONLY WITH ADEQUATE VENTILATION.

SUMMARY OF RISKS (FUEL OIL): EXCESSIVE INHALATION OF AEROSOL OR MIST CAN CAUSE RESPIRATORY TRACT IRRITATION, HEADACHE, DIZZINESS, NAUSEA, STUPOR, CONVULSIONS, OR UNCONSCIOUSNESS, DEPENDING ON CONCENTRATION AND TIME OF EXPOSURE. SINCE INTESTINAL ABSORPTION ON LONGER CHAIN HYDROCARBONS IS LOWER THAN ABSORPTION FROM LIGHTER FUELS, A LESSER DEGREE OF SYSTEMIC EFFECTS AND MORE DIARRHEA MAY RESULT. WHEN REMOVED FROM



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EXPOSED AREA, AFFECTED PERSONS USUALLY EXPERIENCE COMPLETE RECOVERY. HEMORRHAGING AND PULMONARY EDEMA, PROGRESSING TO RENAL INVOLVEMENT AND CHEMICAL PNEUMONITIS, MAY RESULT IF OIL IS ASPIRATED INTO THE LUNGS. THESE RESULTS ARE MORE LIKELY WHEN VOMITING AFTER INGESTION RATHER THAN UPON INGESTION, AS IS OFTEN THE CASE WITH LOWER VISCOSITY FUELS. A COMPARATIVE RATIO OF ORAL-TO-ASPIRATED LETHAL DOSES MAY BE 1 PINT VS. 5 MILLILITERS. PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE IRRITATION OF THE HAIR FOLLICLES AND MAY BLOCK THE SEBACEOUS GLANDS, PRODUCING A RASH OF ACNE PIMPLES AND SPOTS, USUALLY ON ARMS AND LEGS.

4. FIRST AID MEASURES

Swallowing

Do not induce vomiting. Rinse mouth with water. Obtain medical attention.

Inhalation

Remove to fresh air. Obtain medical attention. Aspiration may cause pulmonary edema or aspiration pneumonia.

Skin contact

Remove contaminated clothing. Wash thoroughly with warm water using a mild soap. Obtain medical attention if irritation persists.

Eye contact

Immediately flush eyes with water and continue washing for several minutes. Obtain medical attention if irritation persists.

5. FIRE-FIGHTING MEASURES

Flash point: 140 °F 60 °C
Flammable limits
Lower limit: 0.7 %(V) (solvent)
Upper limit: 6.5 %(V) (solvent)

Autoignition temperature:
Not available

Special fire fighting procedures

Do not discharge extinguishing waters into streams, rivers and lakes.

Special protective equipment for firefighters

Body covering protective clothing, full "turn-out" gear.
Self-contained breathing apparatus.

Extinguishing media

Suitable: Extinguish with:
- dry chemical
- CO₂
- foam
- water fog

Unsuitable: - water jets

Unusual fire and explosion hazards

Heat from fire can generate flammable vapor.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear suitable protective equipment., Eliminate sources of ignition.

Environmental precautions

Product has very low solubility in water., Prevent from entering sewer system, surface water or soil.

Methods for cleaning up



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Small spills: Absorb on inert material such as sand, earth, vermiculite.
Collect for disposal.

Large spills Dike to contain spill.
Pump excess material into suitable container (metal drums, metal tank, or such).

7. HANDLING AND STORAGE

HANDLING

Handling precautions

Electrically bond and ground all containers and equipment before transfer or use of material., Avoid contact with eyes, skin and clothing., Avoid breathing vapor, aerosol and mist., Use with adequate ventilation., Wash thoroughly after handling.

STORAGE

Storage requirements

Store in a cool, dry place., Keep container tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

<u>Component</u> Fuel Oil #2	<u>Country</u>	<u>Type</u> OEL	<u>Value</u> 100 ppm	<u>Remark</u> Manufacturer's recommendation
<u>Component</u> Mineral Oil Mist	<u>Type</u> TWA (mist), ACGIH	<u>Value</u> 5.0 mg/m ³	<u>Remark</u> If used in way that generates a "mist" observe the limits for Mineral Oil Mist.	
	STEL (mist), ACGIH	10.0 mg/m ³		

PERSONAL PROTECTION

Respiratory protection

A approved respirator with dual organic vapor/mist and particulates cartridge if vapor concentration exceeds permissible exposure limit., Self-contained breathing apparatus in high vapor concentrations.

Hand protection / protective gloves

Neoprene

Eye protection

Safety goggles.

Skin protection

Rubber or plastic apron

Other protective equipment

Eye bath, Safety shower

ENGINEERING CONTROLS

Ventilation

Special, local ventilation is needed at points where vapors can be expected to escape to the workplace air.

9. PHYSICAL AND CHEMICAL PROPERTIES



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APPEARANCE

Color Brown
Odor Mild petroleum

OTHER PROPERTIES

Boiling point 150 - 370 °C
(solvent)
Density > 1 g/cm³
Vapor pressure 40 hPa (30.08 mmHg)
Vapor pressure
Solubility in water Insoluble
Solubility in organic solvents Soluble
Evaporation rate (Butyl Acetate=1) < 1
(solvent)
Partitioning coefficient Not available
Flash point 140 °F
60 °C
Method: Pensky-Martens closed cup ASTM D 93
Typically
Autoignition temperature Not available
Upper explosion limits 6.5 %(V)
(solvent)
Lower explosion limits 0.7 %(V)
(solvent)
Percent volatiles 42 %(m)

10. STABILITY AND REACTIVITY

Stability: Stable.

Stability - Conditions to avoid:
Stable under normal conditions.

Incompatible materials:
Strong oxidizing agents.

Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

SWALLOWING

Acute effects

Aspiration into the lungs may occur during injection or vomiting, resulting in lung injury and may be fatal.

May cause:

- irritation
- diarrhea

Component data	LD50 - Rat
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Fuel Oil #2 Acute toxicity - Swallowing:	Result: > 5,000 mg/kg Remark: Test results are based on analogy with a similar material.
<u>Component data</u> Oil soluble magnesium sulfonate Acute toxicity - Swallowing:	LD50 - Rat Result: > 25,000 mg/kg Remark: Test results are based on analogy with a similar material.

SKIN ABSORPTION

Acute effects

May be irritating to skin.

Effects may include those described for swallowing.

Prolonged or repeated contact may lead to skin irritation by dermatitis or oil acne.

<u>Component data</u> Fuel Oil #2 Acute toxicity - Skin absorption:	LD50 - Rabbit Result: > 2,000 mg/kg Remark: Test results are based on analogy with a similar material.
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INHALATION

Acute effects

No adverse health effects expected from vapor generated at ambient temperature.

High vapor concentrations cause the following effects:

- irritation of the eyes, nose, throat and respiratory tract
- headache
- central nervous system depression

<u>Component data</u> Fuel Oil #2 Acute toxicity - Inhalation:	LC50 - Rat Result: > 5500 mg/m3 Remark: Test results are based on analogy with a similar material.
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SKIN CONTACT

Prolonged and/or repeated contact may result in:

- defatting of the skin
- drying of the skin

EYE CONTACT

Acute effects

May cause:

- irritation

CARCINOGENICITY

Assessment Fuel oil: Lifetime skin painting tests indicate that materials of similar composition have produced skin cancer in experimental animals. The relationship of these results to humans has not been fully established. IARC Overall Carcinogenic Evaluation: Group 3.

12. ECOLOGICAL INFORMATION

No information available.

13. DISPOSAL CONSIDERATIONS

General: Dispose of waste material in compliance with all federal, state, and local regulations., Incinerate in a furnace or bury in



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an approved landfill where permitted under appropriate federal, provincial and local regulations.

Non-cleaned packages

Empty drums should be decontaminated and either passed to an approved drum reconditioner or destroyed. Containers that cannot be cleaned must be treated as waste.

14. TRANSPORT INFORMATION

DOT Classification

Not regulated by ground or rail if shipped or transported in containers less than 450 liters.

If shipped in containers >=450 l (119 US gal), this product is regulated as: COMBUSTIBLE LIQUID, N.O.S., NA 1993, PGIII, ERG 128

Technical description Fuel oil

IMDG Classification

Proper shipping name: PETROLEUM DISTILLATES, N.O.S.

Class: 3

UN ID #: UN 1268

Packing group: III

Technical description (Fuel oil)

ICAO Classification

Proper shipping name: PETROLEUM DISTILLATES, N.O.S.

Class: 3

UN ID #: UN 1268

Packing group: III

Technical description (Fuel oil)

15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40CFR372 (for SARA 313). This information must be included in MSDS's that are copied and distributed for this material. Components present in this product at a level which could require reporting under the statute are:

**** NONE ****

New Jersey Worker and Community Right-To-Know Act (Labeling Requirements)

Chemical name	CAS#	New Jersey TS Number
Fuel Oil #2	68476-30-2	
Oil soluble magnesium sulfonate	Trade secret	136411- 5415P
Magnesium carbonate	546-93-0	

EPA Hazard Categories (SARA 311, 312): Fire Hazard

CHEMICAL INVENTORY

<u>Canada:</u>	The ingredients of this product are on the DSL.
<u>Europe:</u>	The ingredients of this mixture are on the EINECS inventory.
<u>United States:</u>	The ingredients of this product are on the TSCA inventory.
<u>Australia:</u>	The ingredients of this product are on the AICS inventory.
<u>China:</u>	The ingredients of this product are on the IECSC inventory.
<u>Japan:</u>	The ingredients of this product are on the ENCS inventory.
<u>Korea:</u>	The ingredients of this product are on the ECL.



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16. OTHER INFORMATION

STP	Standard temperature and pressure
W/W	0 (HMIS)
1 (HMIS)	Slight hazard
2 (HMIS)	Moderate hazard
3 (HMIS)	Serious hazard
4 (HMIS)	Severe hazard
X (HMIS)	Personal protection rating to be supplied by user depending on use conditions

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