

Material Safety Data Sheet

Date Created: 03/07/2009

Date Updated: 02/06/2010

Version: 1.0

Section 1 - Product And Company Information

Product Ethylene Glycol Monomethyl Ether (EM)
Product No D011
Company Dynamic N.A. Inc
Address 23 Captains Walk, Milford, CT 06460, U.S.A.
Phone 1 914 965 2077
Fax 1 914 375 2093

Section 2 - Composition/Information On Ingredients

Synonyms 2-Methoxyethanol, Methyl glycol
CAS # 109-86-4
Formula C₃H₈O₂

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

OSHA Hazards: Combustible Liquid, Target Organ Effect, Harmful by skin absorption., Teratogen, Reproductive hazard

Target Organs: Blood, Kidney, Liver, Lungs, Central nervous system, Male reproductive system., Immune system., Thymus., Bone marrow

GHS Label elements, including precautionary statements

Signal word: Danger

Hazard statement(s)

H226 Flammable liquid and vapour.
H303 May be harmful if swallowed.
H312 Harmful in contact with skin.
H316 Causes mild skin irritation.
H320 Causes eye irritation.
H331 Toxic if inhaled.
H360 May damage fertility or the unborn child.

Precautionary statement(s)

P201 Obtain special instructions before use.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P311 Call a POISON CENTER or doctor/physician.

HMIS CLASSIFICATION

Health hazard: 1

Chronic Health Hazard: *

Flammability: 2

Physical hazards: 0

NFPA RATING

Health hazard: 2

Fire: 2

Reactivity Hazard: 0

POTENTIAL HEALTH EFFECTS

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Skin: Harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed.

Section 4 - First Aid Measures

GENERAL ADVICE

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Material Safety Data Sheet

Date Created: 03/07/2009

Date Updated: 02/06/2010

Version: 1.0

IF INHALED

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

IN CASE OF SKIN CONTACT

Wash off with soap and plenty of water. Consult a physician.

IN CASE OF EYE CONTACT

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

IF SWALLOWED

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5 - Fire Fighting Measures

SUITABLE EXTINGUISHING MEDIA

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Wear self contained breathing apparatus for fire fighting if necessary.

FURTHER INFORMATION

Use water spray to cool unopened containers.

Section 6 - Accidental Release Measures

PERSONAL PRECAUTIONS

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

ENVIRONMENTAL PRECAUTIONS

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

Section 7 - Handling and Storage

PRECAUTIONS FOR SAFE HANDLING

Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

CONDITIONS FOR SAFE STORAGE

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.

Section 8 - Exposure Controls / Personal Protection

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION

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. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

HAND PROTECTION

Handle with gloves.

EYE PROTECTION

Face shield and safety glasses

SKIN AND BODY PROTECTION

Material Safety Data Sheet

Date Created: 03/07/2009

Date Updated: 02/06/2010

Version: 1.0

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

HYGIENE MEASURES

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Section 9 - Physical And Chemical Properties

Appearance	Colorless clear liquid
Molecular Weight:	76.09 g/mol
pH	5.0 - 7.0 at 25 °C (77 °F)
Melting point	-85 °C (-121 °F) - lit.
Boiling point	124 - 125 °C (255 - 257 °F) - lit.
Flash point	40 °C (104 °F) - closed cup
Ignition temperature	310 °C (590 °F)
Lower explosion limit	2.5 %(V)
Upper explosion limit	24.5 %(V)
Vapour pressure	10 hPa (8 mmHg) at 20 °C (68 °F)
Density	0.965 g/cm ³ at 25 °C (77 °F)
Water solubility	soluble
Partition coefficient:	log Pow: -0.8
Relative vapour Density	2.63 - (Air = 1.0)

Section 10 - Stability and Reactivity

CHEMICAL STABILITY

Stable under recommended storage conditions.

POSSIBILITY OF HAZARDOUS REACTIONS

Vapours may form explosive mixture with air.

CONDITIONS TO AVOID

Heat. 45°C

Heat, flames and sparks.

MATERIALS TO AVOID

Strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous decomposition products formed under fire conditions. - Carbon oxides

THERMAL DECOMPOSITION

204 - 232 °C

Section 11 - Toxicological Information

ACUTE TOXICITY

LD50 Oral - rat - 2,370 mg/kg

Remarks: Behavioral: Altered sleep time (including change in righting reflex). Lungs, Thorax, or Respiration: Other changes.

LC50 Inhalation - rat - 7 h - 1500 ppm

LD50 Dermal - rabbit - 1,280 mg/kg

LD50 Intraperitoneal - rat - 2,500 mg/kg

SKIN CORROSION/IRRITATION

Skin - rabbit - Mild skin irritation - 24 h

SERIOUS EYE DAMAGE/EYE IRRITATION

Eyes - rabbit - Mild eye irritation - 24 h

RESPIRATORY OR SKIN SENSITIZATION

n/a

GERM CELL MUTAGENICITY

n/a

CARCINOGENICITY

Material Safety Data Sheet

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IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

REPRODUCTIVE TOXICITY

May cause congenital malformation in the fetus.

Presumed human reproductive toxicant

May cause reproductive disorders.

SPECIFIC TARGET ORGAN TOXICITY - single exposure (GHS)

n/a

SPECIFIC TARGET ORGAN TOXICITY - repeated exposure (GHS)

n/a

ASPIRATION HAZARD

n/a

POTENTIAL HEALTH EFFECTS

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion: May be harmful if swallowed.

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Eyes: May cause eye irritation.

ADDITIONAL INFORMATION

RTECS: KL5775000

Section 12 - Ecological Information

TOXICITY

Toxicity to fish:

LC50 - Lepomis macrochirus (Bluegill) - 10,000 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates:

LC50 - Daphnia magna (Water flea) - 10,000 mg/l - 24 h

PERSISTENCE AND DEGRADABILITY

n/a

BIOACCUMULATIVE POTENTIAL

n/a

MOBILITY IN SOIL

n/a

PBT AND VPVB ASSESSMENT

n/a

OTHER ADVERSE EFFECTS

n/a

Section 13 - Disposal Considerations

PRODUCT

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber.

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

CONTAMINATED PACKAGING

Dispose of as unused product.

Section 14 - Transport Information

DOT (US)

UN-Number: 1188

Class: 3

Packing group: III

Proper shipping name: Ethylene glycol monomethyl ether

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Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN-Number: 1188

Class: 3

Packing group: III

EMS-No: F-E, S-D

Proper shipping name: ethylene glycol monomethyl ether

Marine pollutant: No

IATA

UN-Number: 1188

Class: 3

Packing group: III

Proper shipping name: Ethylene glycol monomethyl ether

Section 15 - Regulatory Information

OSHA HAZARDS

Combustible Liquid, Target Organ Effect, Harmful by skin absorption., Teratogen, Reproductive hazard

DSL STATUS

All components of this product are on the Canadian DSL list.

SARA 302 COMPONENTS

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

2-Methoxyethanol

CAS-No.:109-86-4

Revision Date: 2007-07-01

SARA 311/312 HAZARDS

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Section 16 - Other Information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.