



MATERIAL SAFETY DATA SHEET

Revision Date: 10/6/2009

MSDSUSA/ANSI/EN/150000066681/Version 4.0

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

| | |
|---|---|
| Product Name | ArmorCoat(TM) Reducer |
| Product Identification Number(s) | 911-629 |
| Manufacturer/Supplier | ArmorCoat USA, LLC P.O. Box 3974 Missoula, MT 59806 US +1-800-433-6903 |
| MSDS Prepared by | ArmorCoat USA, LLC |
| Chemical Name | ethyl-3-ethoxypropionate |
| Synonym(s) | 12470-0A 970309 |
| Molecular Formula | C7H14O3 |
| Molecular Weight | 146.19 |
| Product Use | solvent |
| OSHA Status | hazardous |

For emergency health, safety, and environmental information, call 1-800-433-6903.

For emergency transportation information, in the United States: call CHEMTREC at 800-424-9300 or call 423-229-2000.

2. COMPOSITION INFORMATION ON INGREDIENTS

(Typical composition is given, and it may vary. A certificate of analysis can be provided, if available.)

| <u>Weight %</u> | <u>Component CAS</u> | <u>Registry No.</u> |
|-----------------|--------------------------|---------------------|
| 100% | ethyl 3-ethoxypropionate | 763-69-9 |

3. HAZARDS IDENTIFICATION

CAUTION!
COMBUSTIBLE LIQUID AND VAPOR HIGH VAPOR
CONCENTRATIONS MAY CAUSE DROWSINESS
POTENTIAL PEROXIDE FORMER

HMIS® Hazard Ratings: Health - 1, Flammability -2, Chemical Reactivity -1

HMIS® rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

4. FIRST-AID MEASURES

Inhalation: Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.



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Eyes: Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention if symptoms persist.

Skin: Wash with soap and water. Get medical attention if symptoms occur.

Ingestion: Seek medical advice.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Water spray, carbon dioxide, dry chemical, foam

Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing. Use water spray to keep fire-exposed containers cool. Material will float and may ignite on surface of water.

Hazardous Combustion Products: Carbon dioxide, carbon monoxide

Unusual Fire and Explosion Hazards: Combustible. Forms peroxides of unknown stability if material becomes uninhibited.

6. ACCIDENTAL RELEASE MEASURES

Use personal protective equipment. Eliminate all ignition sources. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

For Large Spills: Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.

7. HANDLING AND STORAGE

Personal Precautionary Measures: Avoid breathing high vapor concentrations. Use only with adequate ventilation. Wash thoroughly after handling.

Prevention of Fire and Explosion: Keep away from heat and flame. Keep from contact with oxidizing materials. Minimize exposure to air. Do not distill to near dryness. Periodically test for peroxide formation on long-term storage. If peroxide formation is suspected, do not open or move container. After opening, purge container with nitrogen before re-closing. Do not allow to evaporate to near dryness. Keep inhibited.

Storage: Keep container tightly closed. Store away from heat and light.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Country specific exposure limits have not been established or are not applicable unless listed below.

ETHYL 3-ETHOXYPROPIONATE

ArmorCoat USA occupational exposure limit:

Time Weighted Average (TWA): 50 ppm,

ArmorCoat USA occupational exposure limit:

Short Term Exposure Limit (STEL): 100 ppm,

Ventilation: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.



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Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

Eye Protection: It is a good industrial hygiene practice to minimize eye contact.

Skin Protection: It is a good industrial hygiene practice to minimize skin contact.

Recommended Decontamination Facilities: Eye bath, washing facilities

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: liquid

Color: colorless

Odor: ester, pungent

Odor Threshold: 0.02 ppm

Specific Gravity: 0.95 (20 °C)

Vapor Pressure: 25 °C; 2.0 mbar

Vapor Density: 5.0

Freezing Point: <-50 °C

Boiling Point: 165 °C

Evaporation Rate: 0.12 (n-butyl acetate = 1)

Viscosity: 1.20 mPa.s (25 °C),

Solubility in Water: 29 g/l

Octanol/Water Partition Coefficient: P: 22.4; log P: 1.35

Flash Point: 59 °C (Setaflash closed cup)

Autoignition Temperature: 377 °C (ASTM E659)

Thermal Decomposition Temperature: (HPDTA) No exotherm to 400°C

10. STABILITY AND REACTIVITY

Stability: Stable. Forms peroxides if material becomes uninhibited.

Incompatibility: Material reacts with strong oxidizing agents.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity data, if available, are listed below. Additional toxicity data may be available on request.

| | |
|----------------------------------|--|
| Oral LD-50:(male rat) | >5,000 mg/kg(highest dose tested) |
| Oral LD-50:(female rat) | 4,300 mg/kg |
| Inhalation LC-50: (rat) | 6 hours: > 1000 ppm (highest concentration tested) |
| Dermal LD-50: (guinea pig) | > 20 ml/kg (highest dose tested) |
| Skin Irritation (guinea pig) | slight |
| Eye Irritation (rabbit) | slight |
| Skin Sensitization: (guinea pig) | none |



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12. ECOLOGICAL INFORMATION

Acute toxicity data, if available, are listed below. Additional toxicity data may be available on request.

This material is readily biodegraded and is not likely to bioconcentrate.

Oxygen Demand Data:

BOD-5: 370 mg/g

BOD-20: 560 mg/g

COD (Chemical Oxygen Demand):: 1,920 mg/g

ThBOD: 1,970 mg/g

Acute Aquatic Effects Data:

96 h LC-50 (fathead minnow): 50 mg/l NOEC: 25 mg/l

48 h EC-50 (Daphnia magna): > 480 mg/l NOEC: 470 mg/l

72 h EC-50 (Selenastrum capricornutum): > 115 mg/l

13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.



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DOT (USA)

Class combustible liquid, Packing group III for quantities of 450 liters (119 gallons) or more; not regulated for smaller quantities

Possible Shipping Description(s):

not regulated

UN 3272 Esters, n.o.s. (ethyl 3-ethoxypropionate) combustible liquid III

Sea - IMDG (International Maritime Dangerous Goods)

Possible Shipping Description(s):

UN 3272 ESTERS, N.O.S. (ethyl 3-ethoxypropionate) 3 III

Air - ICAO (International Civil Aviation Organization)

Possible Shipping Description(s):

UN 3272 Esters, n.o.s. (ethyl 3-ethoxypropionate) 3 III

15.REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS (Canada) Status: controlled

WHMIS (Canada) Hazard Classification: B/3

SARA 311-312 Hazard Classification(s):
fire hazard

SARA 313: none, unless listed below

Carcinogenicity Classification (components present at 0.1% or more): none, unless listed below



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TSCA (US Toxic Substances Control Act): This product is listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act):

This product is listed on the DSL. Any impurities present in this product are exempt from listing.

EINECS (European Inventory of Existing Commercial Chemical Substances): This product is listed on EINECS or otherwise complies with EINECS requirements. **EINECS Number:** 212112-9

AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme): This product is listed on AICS or otherwise complies with NICNAS.

MITI (Japanese Handbook of Existing and New Chemical Substances): This product is listed in the Handbook or has been approved in Japan by new substance notification.

ECL (Korean Toxic Substances Control Act): This product is listed on the Korean inventory or otherwise complies with the Korean Toxic Substances Control Act.

Philippines Inventory (PICCS) : This product is listed on the Philippine Inventory or otherwise complies with PICCS.

Inventory of Existing Chemical Substances in China: All components of this product are listed on the Inventory of Existing Chemical Substances in China (IECSC).

16. OTHER INFORMATION

Visit our website at www.EASTMAN.com or email emnmsds@eastman.com

The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information. Users should make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials, the safety and health of employees and customers, and the protection of the environment.

Highlighted areas indicate new or changed information.