



Product Data Sheet
Material Safety Data Sheet
FLORIDA CHEMICAL CO., INC.

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PRODUCT DATA SHEET

Preparation Date: August 2005

DESCRIPTION

E-Z-Mulise® is a proprietary blend of non-ionic surfactants. E-Z-Mulise® is ideal for use with citrus terpenes, d-Limonene, orange oil, and other natural oils. E-Z-Mulise® is a complete surfactant/emulsifier package, reducing the need for other builders or ingredients in your formulation.

E-Z-Mulise® does NOT contain suspect nonyl-phenol found in other emulsifiers. E-Z-Mulise® is hard water resistant.

APPEARANCE & ODOR

Off-white viscous liquid with a mild, fatty odor.

USES & APPLICATIONS

E-Z-Mulise® can be used to make stable d-Limonene and water macro-emulsions. E-Z-Mulise® is formulated to produce “safe & easy” stable emulsions with d-Limonene, citrus terpenes, orange oil, and other natural oils. E-Z-Mulise® is a complete surfactant/emulsifier system, reducing the need for additional ingredients or builders. E-Z-Mulise® can be added to d-Limonene, citrus terpenes, and orange oil to make final formulations with good water-rinsing attributes.

E-Z-Mulise® is not intended for making clear micro-emulsions. Florida Chemical’s Citrus Burst® 3 is suggested for all micro-emulsion applications.

REGULATORY STATUS

E-Z-Mulise® contains NO nonyl-phenols. It is non-hazardous and biodegradable. E-Z-Mulise® is not listed on California Proposition 65. E-Z-Mulise® is not considered a carcinogen, developmental toxicant or mutagenic.

PACKAGING

E-Z-Mulise® is packaged in poly containers as follows:

1-Gallon Pail	-	9 Pounds Net Weight	-	4 kg Net Weight
5-Gallon Pail	-	45 Pounds Net Weight	-	20 kg Net Weight
55-Gallon Drum	-	450 Pounds Net Weight	-	204 kg Net Weight

STORAGE AND HANDLING

Store in a warehouse with a fire prevention system. Avoid contact with incompatible chemicals listed in section IV. Store in tightly sealed full containers in well-ventilated controlled warehouse conditions.

Caution: The user should conduct his/her own experiments and establish proper procedures and controls before attempting use on critical parts.

MATERIAL SAFETY DATA SHEET

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Emergency Phone Numbers:

Florida Chemical: (863) 294-8483

CHEMTREC 24 Hour Number (800) 424-9300

Outside United States: Call CHEMTREC Collect

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Section I - IDENTIFICATION

Trade Name: E-Z-Mulse®

Product Code: 311000

Chemical Name or Synonym: Nonionic surfactant blend

Section II - INGREDIENTS

Ingredient Name	CAS Number	Percent
Nonionic blend	61791-12-6, 68131-39-5	85%
Water	7732-18-5	15%

Section III - PHYSICAL DATA

Flash Point:	(>93.9° C), >201° F CCCFP
Specific Gravity:	(1.028 g/ml), 8.55 lb/gal (@25° C)
Percent Volatiles:	15% (Water)
Vapor Pressure:	Not Determined
Vapor Density:	Estimated heavier than air
Viscosity:	103 cps (@25° C)
Evaporation Rate:	Estimated slower than Butyl Acetate
Pour Point:	- 1 C
pH Value:	5.3 (10% in H2O)
Freezing Point:	(28.4° F), -2° C

Section IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point, closed cup: (>93.9° C), >201°F CCCFP

OSHA Flammability Classification: Will Burn.

Extinguishing Media: Dry chemical, foam, water fog.

Fire Fighting Equipment/Instructions: Firefighters should wear full fire-fighting turn-out gear (full Bunker gear) including NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Unusual Fire and Explosive Hazards: Product will burn under fire conditions.

Hazardous Decomposition Materials (Under Fire Conditions): Oxides of carbon

MATERIAL SAFETY DATA SHEET (cont.)

311000 - E-Z-Mulse®

Section V - HEALTH HAZARD DATA

Emergency Overview: Caution! May cause irritation to the eyes, skin and respiratory system.

Health Effects:

Eyes: This produce may cause irritation to the eyes.

Skin: Prolonged and/or repeated contact may cause irritation and redness.

Inhalation: Inhalation of vapors or mists of the product may be irritating to the respiratory system.

Ingestion: Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.

Emergency & First Aid Procedures:

Eyes: Immediately flush eyes with water for at least 15 minutes while holding eyelids open. If irritation persists get medical attention.

Skin: For skin contact flush with large amounts of water. If irritation persists, get medical attention.

Inhalation: If symptoms are experienced, remove source of contamination or move victim to fresh air. If symptoms persist, get medical attention. If affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.

Ingestion: If ingestion of a large amount does occur, seek medical attention

Section VI - TOXICOLOGICAL DATA

Acute Eye Irritation: Eye irritation, rabbit. Severely irritating. Data for a main component.

Acute Skin Irritation: Skin irritation, rabbit. Severely irritating. Data for a main component.

Acute Dermal Toxicity: LD50 - lethal dose 50% of test species, 2500 mg/kg, rabbit. Data for a main component.

Acute Respiratory Irritation: No test data found for product.

Acute Inhalation Toxicity: No test data found for product.

Acute Oral Toxicity: LD50 - lethal dose 50% of test species, >2000 mg/kg, rat. Data for a main component.

Chronic Toxicity: This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be "probable" or "suspected" human carcinogens. No additional test data found for this product.

Ecotoxicological Information: No data found for this product.

Chemical Fate Information: No data found for this product.

Section VII - REACTIVITY DATA

Chemical Stability: Stable under normal conditions

Incompatibility: This product may react with strong oxidizing agents.

Hazardous Polymerization: Will not occur

Hazardous Decomposition Products: None known

Section VIII - SPILL, LEAK, DISPOSAL PROCEDURES

Emergency Action: Isolate spill or leak area immediately. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering.

Do not touch or walk through spilled material. Wear appropriate personal protective equipment during cleanup. Small

Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Large

Spills: Dike ahead of liquid spill for later disposal. Prevent entry into waterways, sewers, basements or confined areas.

Disposal Instructions: Chemical additions, processing or otherwise altering this material may make the material management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate.

The transportation, storage, treatment and disposal of this material must be conducted in compliance with all applicable federal, state, and local regulations.

Section IX - SPECIAL PROTECTION INFORMATION

Engineering Control: Use general ventilation. Local exhaust is suggested for use, where possible, in enclosed or confined spaces.

Personal Protective Equipment:

Eyes/Face: Wear chemical goggles; face shield (if splashing is possible).

MATERIAL SAFETY DATA SHEET (cont.)

311000 - E-Z-Mulse®

Skin: Wear suitable protective clothing. Use impervious gloves.

Respiratory: If vapors are present or irritation is experienced, NIOSH approved respiratory protection for organic vapors should be worn.

General: Eye wash fountain and emergency showers are recommended.

Section X - HANDLING & STORAGE

Handling Procedures: Wash thoroughly after handling. As with all chemicals, good industrial hygiene practices should be followed when handling this material.

Storage Procedures: Store in a dry, well-ventilated area.

Section XI - ECOLOGICAL INFORMATION

Ecotoxicity: No data available on finished product.

Section XII - REGULATORY INFORMATION

Inventories: All components of this product are listed on the following inventories:

USA (TSCA)

Canada (DSL)

Europe (EINECS/ELINCS/Polymer/NLP)

Australia (AICS)

Korea (ECL)

Philippines (PICCS)

There is no calculable reportable quantity (RQ) for this product.

Section XII - TRANSPORTATION INFORMATION

The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

TDG Status: Non Dangerous

IMO Status: Not Regulated

IATA Status: Not Regulated

Section XIII - ADDITIONAL INFORMATION

Hazard Ratings

HMIS

1 Health Hazard - Slight
1 Flammability - Slight
0 Reactivity - Minimal
X PPE

NFPA

1 Health Hazard - Slight
1 Flammability - Slight
0 Reactivity

Key Legend Information:

ACGIH American Conference of Governmental Industrial Hygienists

OSHA Occupational Safety and Health Administration

NTP National Toxicology Program

IARC International Agency for Research on Cancer

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 obtained by the user. No warranty is expressed or implied regarding the accuracy of this data, the results to be obtained from the use thereof, or that any such use will not infringe any patent. 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. This information is furnished upon the condition the person receiving it shall determine the suitability for the particular purpose. This MSDS is to be used as a guideline for safe work practices and emergency response.