



MSDS Number: 601

MATERIAL SAFETY DATA SHEET

SECTION I: Chemical Product and Company Identification

PRODUCT IDENTIFICATION:

duraflame® illuma-fuel® Bio-Ethanol Fuel

DISTRIBUTOR'S NAME AND ADDRESS:

Duraflame, Inc.

P.O. Box 1230, Stockton, CA 95201

Telephone: (209) 461-6600

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EMERGENCY CONTACT:

John Wilding, Risk Manager

Day Hours: 8:00am - 5:00pm PST; (209) 461-6600

Night: (209) 948-8661

TRANSPORTATION EMERGENCIES:

CHEMTREC: 800-424-9300 (Continental U.S.)

(202) 483-7616 (Alaska, Hawaii)

DATE REVISED: September 25, 2012

HEALTH EMERGENCIES:

Los Angeles Poison Information Center

(323) 222-3212

SECTION II: Composition/ Information on Ingredients

COMPONENT	CAS NO.	Volume %	EXPOSURE LIMITS	
			OSHA / PEL	ACGIH / TLV
Ethyl Alcohol	64-17-5	88.0 - 92.0	N.E.	N.E.
Water	7732-18-5	2.8 - 7.0	N.E.	N.E.
Isopropanol	67-63-0	4.8	N.E.	N.E.
Contains Bitrex® (denatonium benzoate) Bitrex produces an extremely bitter taste that has proved effective in reducing ingestion by humans and animals.	N.A.	N.A.	N.A.	N.A.

SECTION III: Hazards Identification

Emergency Overview:

Potential Health Effects

Eye Contact: Can cause eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes.

Inhalation: Breathing of vapor or mist is possible.

Ingestion: Swallowing small amounts of this material is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Skin Contact: May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, and skin burns.

Chronic Effects - Carcinogenicity:

This product contains ethanol. IARC (International Agency for Research on Cancer) has determined that exposure to ethanol through chronic human consumption of alcoholic beverages can cause cancer. The relevance of this finding to ethanol exposure in industrial environments is uncertain.

Symptoms of Exposure:

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness).

Target Organ Effects:

This product contains ethanol. Alcoholic beverage consumption has been associated with brain damage, heart damage, and pancreatitis in humans. The relevance of these findings to ethanol exposure in industrial environments is uncertain. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: liver abnormalities, kidney damage, testis damage. Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans: liver abnormalities, eye damage liver damage.

Developmental Information:

This product contains ethanol. Alcoholic beverage consumption has been associated with birth defects in humans. The relevance of this finding to ethanol exposure in industrial environments is uncertain.

SECTION IV: First Aid Measures**Inhalation:**

If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

Ingestion (swallowing):

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Eyes:

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

Skin contact:

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Note to Physicians:

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lung (for example, asthma-like conditions), liver, kidney, eye.

SECTION V: Fire Fighting Measures

Flash Point: 70° - 99°F (21.1 - 37.2C) TCC

Explosive Limit: (for product) Lower 3.5 Upper 21.2 %

Hazardous Products of Combustion:

May form: carbon dioxide and carbon monoxide, various hydrocarbons.

Fire and Explosion Hazard:

Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flame sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

Extinguishing Media:

Alcohol foam, carbon dioxide, dry chemical.

Special Fire-fighting Procedures:

Wear a self-contained breathing apparatus with a full-face piece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

SECTION VI: Accidental Release Measures**Small Spill**

Absorb liquid on vermiculite, floor absorbent or other absorbent material.

Large Spill

Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams, or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum-transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal.

SECTION VII: Handling and Storage**Handling:**

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

SECTION VIII: Exposure Control / Personal Protection**Engineering Controls:**

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

Eye Protection:

Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

Skin Protection:

Wear resistant gloves (consult your safety equipment supplier). To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory Protections:

If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative should be implemented to reduce exposure.

Exposure GuidelinesComponent

ETHYL ALCOHOL (64-17-5)

OSHA VPEL 1000.000 ppm - TWA

ACGIH TLV 1000.000 ppm - TWA

ISOPROPANOL (67-63-0)

OSHA VPEL 400.000 ppm - TWA

OSHA VPEL 500.000 ppm - STEL

ACGIH TLV 400.000 ppm - TWA

ACGIH TLV 500.000 ppm - STEL

WATER (7732-18-5)

No exposure limits established

SECTION IX: Physical and Chemical Properties

Appearance: No data
Specific Gravity: 0.810 - 0.812 @ 60.0 °F
Boiling Point: > 173 °F (78.3 C) @ 760 mmHg
Vapor Pressure: < 44.000 mmHg @ 68.0 °F
Specific Vapor Density: 1.600 @ AIR=1
State: Liquid
Physical Form: Homogeneous Solution
Solubility in water: Complete

Freezing Point: < 148.0 °F (64.4 C)
Percent Volatile (70°F): 100.0 %
Evaporation Rate (70°F): Slower than ethyl ether
pH: N.A.
Viscosity: 1.2 cps
Odor: Sweet, characteristic alcohol like odor
Color: Clear, colorless liquid
Liquid Density: 6.75 lbs/gal @ 60° F

SECTION X: Stability and Reactivity

Chemical Stability: Stable
(Avoid contact with strong oxidizers, excessive heat, sparks or open flame)

Hazardous Polymerization:

Does not occur.

Hazardous Decomposition Products:

May form: carbon dioxide and carbon monoxide,
various hydrocarbons.

Incompatibility: Avoid contact with: Acetyl chloride, potassium dioxide, bromine pentafluoride, acetyl bromine, acetyl chloride, platinum, sodium or other oxidizing agents may result in a violent reaction.

SECTION XI: Toxicological Properties

No data

SECTION XII: Ecological Information

No data

SECTION XIII: Disposal Considerations

Waste Disposal Method

Incinerate under safe conditions; observe all federal, state and local laws concerning health and environment.

SECTION XIV: Transportation Information

DOT Information - 49 CFR 172.101

DOT Description:

Proper Shipping Name:	DENATURED ALCOHOL
Hazard Class:	3,
Packing Group:	II
UN Number:	1987

Container/Mode:

1 LITER BOTTLE (6/1L. CS) / TRUCK PACKAGE

NOS Component:

None

RQ (Reportable Quantity) - 49 CFR 172.101

Not applicable

Bill of Lading Description:

duraflame® illuma-fuel® Bio-Ethanol Fuel

Product Code Number: 60001

SECTION XV: Regulatory Information (Not meant to be all-inclusive)

US Federal Regulations

TSCA (Toxic Substances Control Act) Status

TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4(a)

None listed

SARA 302 Components - 40 CFR 355 Appendix A

None

Section 311/312 Hazard Class - 40 CFR 370.2

Immediate (X)

Delayed (X)

Fire (X)

Reactive ()

SARA 313 Components - 40 CFR 372.65

None

International Regulations

Inventory Status

Not determined

State and Local Regulations

California Proposition 65

None

New Jersey RTK Label Information

ETHYL ALCOHOL 64-17-5

ISOPROPYL ALCOHOL 67-63-0

Pennsylvania RTK Label Information

ETHANOL 64-17-5

2-PROPANOL 67-63-0

SECTION XVI: Other Information

First Issued: 9/25/2012

Willer de Oliveira

Previous Revision: N/A

Reason For Current Revision:

Legend:	CAS No.	Chemical Abstract Service Number	N.E.	Not Established
	PEL	Permissible Exposure Limit, per OSHA	N.A.	Not Applicable
	ACGIH	American Conference of Govt. and Ind. Hygienists		
	TLV	Threshold Limit Value, Per ACGIH		

Duraflame, Inc., believes that the information in this document is accurate as of the date issued and is offered in good faith, but without warranty or representation. Since some ingredients are purchased from third parties, Duraflame, Inc., in good faith, relies on information provided by these third parties. Since conditions of use are beyond our control, we do not assume any responsibility for the result of its use. This information is offered solely for the consideration, investigation, and verification by our customers, storers, handlers and users of this product. Further, this information and the product are furnished on the condition that the users receiving them shall make their own determination as to the suitability of the product for their particular purpose, and on the condition that they assume the risk of their use thereof.

Duraflame, Inc., reserves the right to revise this Material Safety Data Sheet periodically as new information becomes available.