

MATERIAL SAFETY DATA SHEET

SECTION 1 - MANUFACTURER INFORMATION

MANUF / DIST: DETAILS MANUFACTURING & DISTRIBUTING
814 SOUTH DUFF AVE
AMES, IOWA 50010

PREPARER/CONTACT: LUKE STAGG

EMERGENCY PHONE: 515-233-6555

MEDICAL/CHEMICAL EMERGENCY 24 HOURS INFOTRAC 800-535-5053

TRADE NAME / SYNONYMS. . . : EMERALD ENGINE

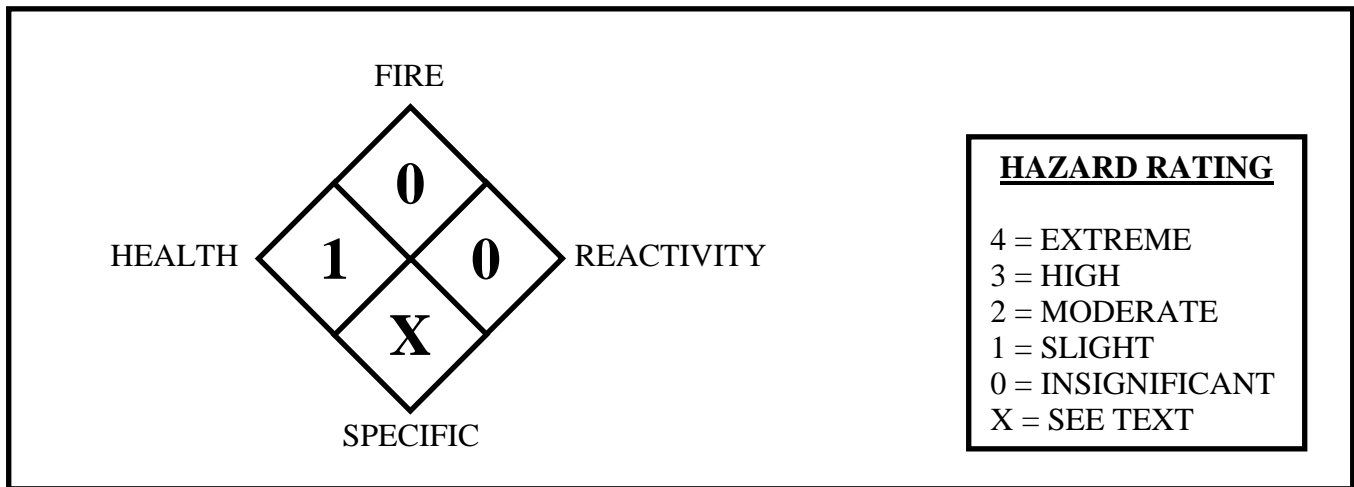
CHEMICAL NAME / SYNONYMS: NOT APPLICABLE

CHEMICAL FAMILY. : NOT APPLICABLE

FORMULA. : Proprietary

PRODUCT CODE. : EE1,5,15,30,55

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM:



SECTION 2 - HAZARDOUS INGREDIENTS

NAMES OF HAZARDOUS INGREDIENTS: See CFR29§1910.1200 (i)-(13)

CHEMICAL / COMMON NAME	CAS#	PERCENTAGE	PEL-OSHA	TLV-ACGIH
2 Butoxy Ethanol (Skin)	111-76-2	>1	50PPM	25PPM
Potassium Hydroxide	1310-58-3	>1	N.E.	2mg/m3

THIS PRODUCT DOES **NOT** CONTAIN CARCINOGENS: (NTP, IARC, OSHA):

SECTION 3 - HEALTH HAZARD DATA

HEALTH EFFECTS (Acute and Chronic):

Acute:

DETAILS MANUFACTURING & DISTRIBUTING

MATERIAL SAFETY DATA SHEET

- a) Eyes -Can cause severe irritation, redness, tearing, blurred vision.
- b) Skin - Prolonged or repeated contact can cause moderate irritation, defatting, dermatitis
- c) Inhalation - Breathing of dust or mist can cause mild to severe irritation of nasal or respiratory passage.
- d) Ingestion - Can cause gastro-intestinal irritation, nausea, vomiting and diarrhea.

Chronic

- a) Overexposure to glycol ethers (in it's pure state) has been found to cause anemia, liver abnormalities, kidney damage, lung damage and blood abnormalities in laboratory animals.

PRIMARY ROUTES OF ENTRY:

- a) Skin b) Inhalation

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing skin, eye and respiratory disorders may be aggravated by exposure to product.

EMERGENCY FIRST AID PROCEDURES:

- a) Skin - Immediately flush skin with lots of running water for at least 30 minutes. Remove contaminated clothing and shoes. Wash before reuse.
- b) Eyes - Flush immediately with large quantities of running water for at least 15 minutes. Consult physician.
- c) Inhalation - If affected, remove individual to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep person warm, quiet and get medical attention.
- d) Ingestion - Do not induce vomiting. call physician immediately. If conscious give lots of water or milk. Do not give anything by mouth to an unconscious or convulsing person.

SECTION 4 - CHEMICAL DATA

BOILING POINT (F) : >212
VAPOR PRESSURE (mmHg) : < 20
VAPOR DENSITY (AIR=1) : 0.6

SPECIFIC GRAVITY (WATER=1) : 1.1
PERCENT VOLATILE BY VOLUME (%) . . . : > 80.00
EVAPORATION RATE (WATER=1) : 1

SOLUBILITY IN WATER: 100%.

APPEARANCE AND ODOR INFORMATION: Green liquid with a lime odor.

MATERIAL SAFETY DATA SHEET

SECTION 5 - FIRE + PHYSICAL HAZARD DATA

FLASH POINT (Method Used): None FLAMMABLE LIMITS: LEL= N/A UEL= N/A

EXTINGUISHING MEDIA: Not considered a fire hazard.

SPECIAL FIRE FIGHTING PROCEDURES: N/A

UNUSUAL FIRE AND EXPLOSION HAZARDS: N/A

INCOMPATIBILITY (Material To Avoid):

Avoid contact with acids and strong oxidizers such as permanganate, chlorine, etc.

HAZARDOUS DECOMPOSITION PRODUCTS: None

HAZARDOUS POLYMERIZATION WILL NOT OCCUR

THIS PRODUCT IS STABLE

SECTION 6 - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Absorb the large spill on suitable absorbant. Wash the residue down the drain or pit with plenty of water. Small spills can be flushed down the drain with plenty of water.

WASTE DISPOSAL METHODS:

Dispose of according to local, state and federal regulations for biodegradable detergents.

SECTION 7 - EXPOSURE CONTROL INFORMATION

VENTILATION:

LOCAL EXHAUST: Below TLV(s)

MECHANICAL (GENERAL): EXPLOSION PROOF

SPECIAL: N/A

OTHER: N/A

RESPIRATORY PROTECTION:

An appropriate NIOSH approved hydrocarbon canister or respirator for organic vapor should be worn if needed.

PROTECTIVE GLOVES:

Wear - resistant gloves such as nitrile rubber, PVC, etc.

DETAILS MANUFACTURING & DISTRIBUTING

MATERIAL SAFETY DATA SHEET

OTHER PROTECTIVE EQUIPMENT:

Eye wash and quick drench facilities.

OTHER ENGINEERING CONTROLS: None Known

WORK PRACTICES:

Eye wash fountain and safety shower should be easily accessible. Discard properly such items as rags and trash soaked with the product. Provide adequate ventilation.

HYGIENIC PRACTICES:

Avoid contact with eyes, skin and clothing. Avoid inhalation of product vapors. Wash thoroughly after handling and before eating, drinking or smoking. Remove contaminated clothing promptly and wash thoroughly before reused.

SECTION 8 - SPECIAL PRECAUTION

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

- a) Do not store under freezing conditions or above 120 degrees F.
- b) Protect from physical damage and keep tightly closed.
- c) Do not store near acids or acidic materials and oxidizers.

MAINTENANCE PRECAUTIONS:

When working with FLAMMABLE material electrically ground all equipment and use only non-sparking tools.

OTHER PRECAUTIONS:

Containers, even those that have been emptied will retain product residue and vapors. Always obey hazard warnings.

SHIPPING INFO, UN/NA #'s, Secondary container label INFO NECESSARY OR SUGGESTED:

COMPOUNDS, CLEANING LIQUID, 8, NA-1760, PG II, CORROSIVE (Potassium Hydroxide)

KEEP OUT OF THE REACH OF CHILDREN!