

SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

MANUF / DIST: DETAILS MANUFACTURING AND DISTRIBUTING
504 E. LINCOLN WAY
AMES, IOWA 50010

PREPARER / CONTACT: LUKE STAGG
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TRADE NAME / SYNONYMS: **EMERALD ENGINE**

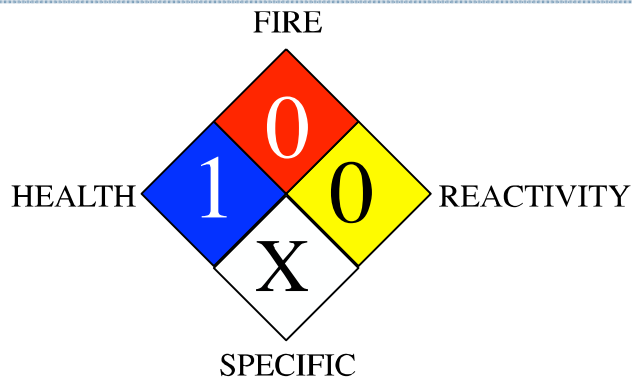
CHEMICAL NAME / SYNONYMS: NOT APPLICABLE
CHEMICAL FAMILY: NOT APPLICABLE
FORMULA: PROPRIETARY
PRODUCT CODE: EE 1, 5, 15, 30, 55

SECTION 2. HAZARDOUS IDENTIFICATION

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM:

HAZARD WARNING

- 4 - Extreme
- 3 - High
- 2 - Moderate
- 1 - Slight
- 0 - Insignificant
- X- See Section IV & V of SDS Sheet



Signal Word: WARNING! - FOR HEALTH EFFECTS (Acute and Chronic): SEE SECTION 11

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

NAMES OF HAZARDOUS INGREDIENTS: See CFR29§1910.1200 (i)-(13) [exact % withheld as trade secret]

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):

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SECTION 4 - FIRST AID MEASURES

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 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Not considered a fire hazard.

SPECIAL FIRE FIGHTING PROCEDURES: N/A

UNUSUAL FIRE AND EXPLOSION HAZARDS: N/A

SECTION 6 - ACCIDENTAL RELEASE MEASURES

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

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

SECTION 7 - HANDLING AND STORAGE

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:

OTHER PRECAUTIONS:

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

INCOMPATIBILITY (Material To Avoid):

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

HAZARDOUS DECOMPOSITION PRODUCTS: None

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

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.

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:

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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 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (F):	>212	SPECIFIC GRAVITY (WATER=1):	1.1
VAPOR PRESSURE (mmHg):	N/D	PERCENT VOLATILE BY VOLUME (%):	> 80.00
VAPOR DENSITY (AIR=1):	N/D	EVAPORATION RATE (WATER=1):	1
SOLUBILITY IN WATER: 100%.		APPEARANCE,ODOR,VISCOSITY::	Thin green liquid with a lime odor.
FLASH POINT (Method Used): None		FLAMMABLE LIMITS: LEL= N/A	UEL= N/A
pH	9+	Melting pt-N/A /freezing pt 30+-°F/Relative density N/A	

SECTION 10 - STABILITY AND REACTIVITY

HAZARDOUS POLYMERIZATION WILL NOT OCCUR

THIS PRODUCT IS STABLE

SECTION 11 - TOXICOLOGICAL INFORMATION

FOR NUMERICAL MEASURES OF TOXICITY SEE SECTION 3, COLUMNS (PEL-OSHA)AND(TLV-ACGIH)

HEALTH EFFECTS (Acute and Chronic):

Acute:

- 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 gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic:

- a) Overexposure to glycol ethers (in its 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

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

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

SECTION 12 - ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: N/A

100% BIODEGRADABLE

ECOTOXICOLOGICAL INFORMATION: N/A

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS:

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

SECTION 14 - TRANSPORT INFORMATION

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

Contains 2 Butoxyethanol 6.1, UN2369, PG 3, KEEP AWAY FROM FOOD

KEEP OUT OF THE REACH OF CHILDREN!

SECTION 15 - REGULATORY INFORMATION

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

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SECTION 16 - OTHER INFORMATION

KEEP OUT OF THE REACH OF CHILDREN!

IN CLOSE COOPERATION OF THE US GOVERNMENT'S PAPER REDUCTION ACT, AND ALSO IN EFFORT TO PROVIDE FULL AND COMPLETE INFORMATION AS SUGGESTED BY THE OSHA GUIDELINES, AND KEEPING IN ALIGNMENT WITH THE SOCIETY for CHEMICAL HAZARD COMMUNICATION (SCHC) AND WE HAVE BEEN ABLE TO KEEP ALL IN 4 PAGES..

THESE SDS SHEETS ARE WRITTEN IN AN EFFORT TO PROVIDE INFORMATION TO THE WORKER IN THE WORKPLACE AND IN SUCH A WAY IT CAN BE UNDERSTOOD.

We have enjoyed many compliments as to the readability and understandable content, and take great pride in providing these Safety Data Sheets to the use of our customers.

The International Labour Organization has suggested 16 sections of the sheets, and we have re adjusted the 8 part, and rearranged the information, and renamed the sheets from MATERIAL Safety Data Sheets to SAFETY DATA SHEETS. THE INFORMATION CONTAINED HEREIN IS BELIEVED TO BE ACCURATE. IT IS PROVIDED FOR A CONTINUING SAFETY PROGRAM INITIATED BY THE MANUFACTURER/DISTRIBUTOR NAMED ON THIS SHEET. IT IS NOT INTENDED TO CONSTITUTE PERFORMANCE INFORMATION CONCERNING THE PRODUCT. NO EXPRESS WARRANTY, OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS MADE WITH RESPECT TO THE PRODUCT OR THE INFORMATION CONTAINED HEREIN.

Please note that several items were left out of section 9 because they do not affect the worker in the workplace. Partition coefficient: n-octanol/water;
• Auto-ignition temperature; • Decomposition temperature and Odor threshold.