

Initial Preparation Date: 3/30/09

Last Revision Date: 2/12/13

Effective Date: 4/22/13

MATERIAL SAFETY DATA SHEET

PRODUCT IDENTITY: BLUE DEF™ DIESEL EXHAUST FLUID

1. CHEMICAL PRODUCT & COMPANY INFORMATION

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NORTHBROOK, ILLINOIS 60062
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2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Material</u>	<u>CAS#</u>	<u>% by Wt.</u>	<u>TLV (ACGIH)</u>	
			<u>STEL</u>	<u>TWA</u>
Urea	57-13-6	32.5	Not established	10 mg/m ³ (AIHA WEEL)
Water	7732-18-5	67.5	N/A	N/A

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Effects of overexposure may include irritation of the nose, throat and digestive tract, headaches, coughing, nausea, vomiting and transient disorientation.

Lowest Known LD50 (Oral) for Urea:

Cattle 510 mg/kg
Mouse 11,500 – 13,000 mg/kg
Rabbit 8,200 mg/kg
Rat 14,300 – 15,000 mg/kg

Lowest Known LD50 (Skin):

Not known

Carcinogeny:

Not identified as a carcinogen

National Toxicology Program:

Not identified as a carcinogen

International Agency for Research on Cancer:

Not identified as a carcinogen

OSHA:

Not identified as a carcinogen

Ingestion: Do NOT induce vomiting. First aid is not normally required; however, if swallowed and symptoms such as dizziness and headache develop, seek medical attention. Never give anything by mouth to an unconscious person.

Notes to Physician: Treat symptomatically and monitor.

5. FIRE FIGHTING MEASURES

FIRE & EXPLOSION HAZARD DATA

Flammable Properties: Product is not flammable. Closed containers may rupture with exposure to excess heat or flame due to internal container pressure.

Flash Point: None

Flammability Limits: Percentage of vapor concentration at which product can ignite in presence of spark:

LEL: No data

UEL: No data

Hazardous Combustion Products: Closed containers exposed to extreme heat can rupture due to pressure building. Carbon oxides, nitrogen oxides, ammonia, biuret, cyanuric acid and other irritating fumes and smoke.

Extinguishing Media: Use extinguishing agent suitable for type of surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.

Fire Fighting Instructions: Isolate immediate hazard area and keep unauthorized personnel out. Stop spill / release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk. Water spray may be useful in minimizing or dispersing vapors. Cool equipment exposed to fire with water, if it can be done with minimal risk.

Protective Equipment For Fire Fighters: Firefighters should use proper protective equipment, such as a self-contained breathing apparatus with full face piece operated in positive pressure mode, suitable for the type of fire / environment they are working to contain and extinguish.

6. ACCIDENTAL RELEASE MEASURES

Protect People: Wear appropriate protective equipment, including respiratory protection, as conditions warrant. (See Section 8.)

Protect the Environment: It is recommended that spilled material is prevented from entering sewers, storm drains or natural watercourses, contain material with a dike or with appropriate absorbent materials such as sand, clay, soil or commercially available absorbent material that is non-combustible and inert. Place reclaimed liquid and absorbent into recovery or salvage drums for disposal (Refer to Section 13 for appropriate disposal). The EPA has no established reportable quantity for spills for this material (Refer to Section 15), secondary containment is not specified.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
pH:	9.0 – 10.0
Boiling Point:	>212°F
Crystallization Point:	12°F
Pounds/Gallon:	9.09
Specific Gravity (Water =1):	1.09
Vapor Pressure (mm of Hg):	Not applicable
Vapor Density (Air=1):	0.6 H ₂ O, >1
Water Solubility:	100%
Appearance:	Colorless, clear liquid
Odor:	Ammonia
Evaporation Rate:	<1

10. STABILITY & REACTIVITY DATA

Stability: Stable under normal conditions of storage and handling.

Conditions to Avoid: Avoid excessive heat, sparks and open flame. Do not mix with any other chemicals or products.

Incompatibility (Materials to Avoid): Avoid contact with strong oxidizing agents such as chlorine (bleach), peroxides, chromates, nitric acid, perchlorates, concentrated oxygen or permanganates. Contact can generate heat, fires, explosions and release toxic fumes (see Section 5). In addition, urea reacts with calcium hypochlorite or sodium hypochlorite to form the explosive nitrogen trichloride.

Hazardous Decomposition Products: If involved in a fire, oxides of carbon and nitrogen may be generated; exposure to heat may generate ammonia fumes.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

No identified or known information available on mutagenicity, target organs or developmental toxicity.

Toxicological data: There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

Ingredients	LC ₅₀ (4 hr) Inh, rat	LD ₅₀	
		Oral	Dermal
Urea	N/Av	8,471 mg/kg (rat)	8,200 mg/kg (rabbit)

SARA Title III:

SARA 302, Extremely Hazardous Substances, 40 CFR 355: No extremely hazardous substances are in this product.

SARA 311 and 312, MSDS Requirements, 40 CFR 370 Hazard Classes: **Urea**. No hazards resulting from the material as supplied. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SARA 313: SARA 313, Toxic Chemicals Notification, 40 CFR 372: This material is not subject to SARA notification requirements, since it does not contain any Toxic Chemical constituents above de minimus concentrations.

California Proposition 65: This material does not contain chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm.

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

WHMIS Information: This product is not a WHMIS controlled product in Canada. Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's workplace education program.

16. OTHER INFORMATION

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