Safety Data Sheet

Powers-All DEF

SECTION 1: IDENTIFICATION

1.1 IDENTIFICATION

Product Form	Mixture
Trade Name	Powers-All DEF

1.2 RECOMMENDED USE AND RESTRICTIONS ON USE

Use of the substance/mixture	Diesel Exhaust Fluid

1.3 SUPPLIER ADDRESS

Details of the supplier of the data sheet:

Supplier Address

LF Powers Co, Inc

40 South 5th Street

Waterbury, CT 06720

Company Contact Number - 1-800-624-5654

www.info@lfpowers.com

1.3 EMERGENCY TELEPHONE NUMBER

Emergency number	**CHEMTREC: 1-800-424-9300; Outside the US/Canada =1-703-527-3887**

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS US Classification

Not classified

2.2 GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

GHS US labeling

No labeling applicable

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2.3 OTHER HAZARDS NOT CONTRIBUTING TO THE CLASSIFICATION

Other hazards not contributing to the classification	Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

2.4 UNKNOWN ACUTE TOXICITY (GHS US)

Not applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 SUBSTANCES

Not Applicable

3.2 MIXERS

Name	Product Identifier	%	GHS US Classification
Water	(CAS-No.)7732-18-5	67.5	Not Classified
Urea	(CAS-No.)57-13-6	32.5	Not Classified

Full text of hazard classes and H-statements: see section 16

Product Information

SECTION 4: FIRST AID MEASURES

4.1 DESCTIPTION OF FIRST AID MEASURES

First-aid measures general	Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.
First-aid measures after inhalation	When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.
First-aid measures after skin contact	Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Discontinue use and obtain medical attention if irritation develops and persists.
First-aid measures after eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS (ACUTE AND DELAYED)

Potential Adverse human health effects and symptoms	Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects	Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after inhalation	Prolonged exposure to liquid may cause a mild irritation.
Symptoms/effects after skin contact	May cause mild skin irritation.
Symptoms/effects after eye contact	Prolonged exposure to liquid may cause a mild irritation.
Symptoms/effects after ingestion	Ingestion of small amounts would not be expected to produce toxicity.

4.3 IMMEDICATE MEDICAL ATTENTION AND SPECIAL TREATMENT, IF NECESSARY

Treat symptomatically

SECTION 5: FIRE-FIGHTING MEASURES

5.1 SUITABLE (AND UNSUITABLE) EXTINGUISHING MEDIA

Suitable extinguishing media	Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2 SPECIFIC HAZARDS ARISING FROM THE CHEMICAL

Fire hazard	This product is not flammable. Hazardous combustion products, carbon oxides (CO and CO2). Nitrogen oxides (NOx). Ammonia.
Explosion hazard	Product is not explosive.

5.3 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS

Fire fighting instructions	Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers.
Protection during firefighting	Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: ACCIDENTIAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

General Measures	Avoid breathing dust, mist or spray. Avoid prolonged contact with eyes, skin and clothing.

61a FOR NON-EMERGENCY PERSONNEL

Protective equipment	Personal protective equipment. For further information refer to section 13.
Emergency procedures	Evacuate unnecessary personnel.

6b FOR EMERGENCY RESPONDERS

Protective equipment	Equipment cleanup crew with proper protection.
Emergency procedures	Stop leak if safe to do so. Ventilate area.

6.2 ENVIRONMENTAL PRECAUTIONS

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3 MEDTHODS AND MATERIAL FOR CONTAINMENT AND CLEAN UP

For containment	Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up	Clear up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material (sand, vermiculite or other appropriate material), then place in suitable container.

6.4 REFERENCE TO OTHER SECTIONS

For further information refer to section 8: "exposure controls/personal protection." For disposal of residues refer to section 13: "Disposal considerations."

SECTION 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Additional hazards when processed	When heated to decomposition, emits toxic fumes
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Technical Measures	Comply with applicable regulations.
Storage conditions	Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from extremely high or low temperatures, incompatible materials.
Incompatible materials	Strong acids. Strong bases. Strong oxidizers. Strong alkalis.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROGECTION

8.1 CONTROL PARAMETERS

LF Powers DEF

No additional information available

Water (7732-18-5)

No additional information available

Urea (57-13-6)

USA - AIHA - Occupational Exposure Limits

Weel TWA (mg/m^3)	10 mg/m^3

8.2 APPROPRIATE ENGINEERING CONTROLS

Appropriate engineering controls	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

8.3 INDIVIDUAL PROTECTION MEASURES/PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment:

In case of splash hazard: safety glasses

Materials for protective clothing:

Not applicable

Hand protection:

Wear chemically resistant protective gloves.

Eye protection:

In case of splash hazard: chemical goggles or safety glasses

Skin and body protection:

Wear suitable protective clothing

Respirator protection:

If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn

Personal protective equipment symbol(s):

Other information:

When using do not eat, drink or smoke.

Product Information

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Appearance	Clear, colorless liquid
Color	Colorless
Odor	Fair odor of ammonia
Odor threshold	No data available
pH	9.8-10
Melting point	No data available
Freezing point	-12 °C 11°F
Boiling point	104 °C 219°F
Flash point	No data available
Relative evaporation rate (butyl acetate=1)	No data available
Flammability (solid, gas)	No data available
Vapor pressure	No data available
Relative vapor density at 20 ^{0}C	No data available
Relative density	1.087 - 1.903 g/cm^{3} @ 20°C (68°F)
Specific gravity / density	9.0909 lbs./USG - 4.13 kg / 3.785L @ 20°C (68°F)
Solubility	Water soluble
Log Pow	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosion limits	No data available
Explosive properties	No data available
Oxidizing properties	No data available

9.2 OTHER INFORMATION

No additional information available.

SECTION 10. STABILITY AND REACTIVITY

10.1 REACTIVITY

Hazardous reactions will not occur under normal conditions.

10.2 CHEMICAL STABLILITY

Stable under normal conditions.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

Hazardous polymerization does not occur.

10.4 CONDITIONS TO AVOID

Extremely high or low temperatures. Incompatible materials.

10.5 INCOMPATABLE MATERIALS

Strong acids. Strong bases. Strong oxidizers. Strong alkalis.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Carbon oxides (CO, C^{O}2). Nitrogen oxides (Nox). Ammonia

Product Information

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10.5 INCOMPATABLE MATERIALS

Strong acids. Strong bases. Strong oxidizers. Strong alkalis.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Carbon oxides (CO, $C^{O}2$). Nitrogen oxides (Nox). Ammonia

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity (oral)	Not classified (Based on available data, the classification criteria are not met).
Acute toxicity (dermal)	Not classified (Based on available data, the classification criteria are not met).
Acute toxicity (inhalation)	Not classified (Based on available data, the classification criteria are not met).

WATER (7732-18-15)	
LD50 oral rat	>90 ml/kg
UREA (57-13-6)	
LD50 oral rat	5000-15,000 mg/kg
LC50 inhalation rat (mg/l)	Urea dust at 22 mg/m3 caused mild irritation (species not sp

Skin corrosion/irritation	Not classified (Based on available data, the classification criteria are not met) pH 9.8-10
Serious eye damage/irritation	Not classified (Based on available data, the classification criteria are not met) pH 9.8-10
Respiratory or skin sensitization	Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	Not classified (Based on available data, the classification criteria are not met)
STOT - single exposure	Not classified (Based on available data, the classification criteria are not met)
STOT - repeated exposure	Not classified (Based on available data, the classification criteria are not met)

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Aspiration hazard	Not classified (Based on available data, the classification criteria are not met)
Viscosity, kinematic	No data available
Likely routes of exposure	Ingestion. Inhalation. Skin and eye contact
Potential Adverse human health effects and symptoms	Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects	Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after inhalation	Prolonged exposure to liquid may cause a mild irritation.
Symptoms/effects after skin contact	May cause mild skin irritation.
Symptoms/effects after eye contact	Prolonged exposure to liquid may cause a mild irritation.
Symptoms/effects after ingestion	Ingestion of small amounts would not be expected to produce toxicity.

SECTION 12: ECOLOGICAL INFORMATION

12.1 TOXICITY

LC50 Fish 1	16200-18300 mg/l (Exposure time: 96h - Species: Poecilia reticulata)
EC50 Daphina 1	3910 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

12.2 PERSISTANCE AND DEGRADEABILITY

No additional information available.

12.3 BIOACCUMULATIVE POTIENTIAL

UREA 57-13-6

BCF fish 1	< 10
Log Pow	-1.59 (at 25 °C)

12.4 MOBILITY IN SOIL

No additional information available.

12.5 OTHER ADVERSE EFFECTS

No additional information available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 DISPOSAL METHODS

Product/Packaging disposal recommendations	Comply with local regulations for disposal

SECTION 14: TRANSPORT INFORMATION

Department of Transportation (DOT)	In accordance with DOT
	Not regulated
Transportation of Dangerous Goods	Not regulated
Transport by sea	Not regulated
Air transport	Not regulated

Product Information

POWERS-ALL

SECTION 15: REGULATORY INFORMATION

15.1 FEDERAL REGULATIONS

WATER (7732-18-15)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

UREA (57-13-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2 INTERNATIONAL REGULATIONS

CANADA
WATER (7732-18-15)
Listed on the Canadian DSK (Domestic Substances List)
UREA (57-13-6)
Listed on the Canadian DSK (Domestic Substances List)

EU REGULATIONS
WATER (7732-18-15)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
UREA (57-13-6)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

NATIONAL REGULATIONS
WATER (7732-18-5)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on the NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
UREA (57-13-6)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the Korean ECL (Existing Chemicals List)
Listed on the NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

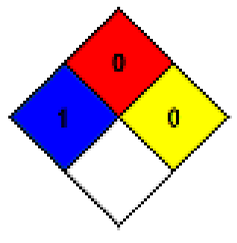
15.3: US STATE REGULATIONS

No additional information available

Product Information

SECTION 16: OTHER INFORMATION

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations



Revision Date	9/26/19
Other Information	None
NFPA health hazard	1 - Materials that, under emergency conditions, can cause significant irritation.
NFPA fire hazard	0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
NFPA reactivity	0 - Material that in themselves are normally stable, even under fire conditions.
Hazard Rating	
Health	1 Slight Hazard - Irritation or minor reversible injury possible
Flammability	0 Minimal Hazard - Materials that will not burn
Physical	0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.