Effective Date: June 1, 2015

Product #(s) –002, DEF

Safety Data Sheet

For Emergency Call:
CHEM-TEL (800) 255-3924 24 Hour Assistance

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: TRCair Ultrapure Diesel Exhaust Fluid

CAS Number: 57-13-6 / 7732-18-5
Recommended Uses: To lower NO_x concentration in the exhaust emissions from diesel engines.
Company Identification
Manufacturer's Name: ZECOL PRODUCTS COMPANY
Address: 4635 Willow Drive, Medina, MN 55340
Telephone – General Information: (763) 478-3438

2. HAZARDS IDENTIFICATION

Hazard Classes: None

Signal Word: None

Hazard Statements: None.
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Precautionary Statements:

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children,
P103	Read label before use.

Hazard Pictograms: None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	Typical Weight Percentage	CAS Number
Urea	32.5%	57-13-6
Water	67.5%	7732-18-5

4. FIRST AID

Eyes: If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention.

Skin: Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water. If irritation or redness develops, seek medical attention.

Inhalation: First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air. Seek immediate medical attention

Ingestion: **Ingestion**: If swallowed, seek emergency medical attention. If victim is drowsy or unconscious and vomiting, place on left side with head down and do not give anything by mouth to an unconscious person. Do not induce vomiting unless told to by physician or poison center.

Medical Conditions: None known.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Use material that is appropriate for the surrounding fire.

Specific Hazards: None known.

Hazardous Combustion Products: May include oxides of carbon, oxides of nitrogen and ammonia.

Special Firefighting Procedures: For fires beyond the initial stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Isolate immediate hazard area and keep unauthorized personnel out. Cool equipment exposed to fire with water, if it can be done with minimal risk.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

Environmental Precautions: Stop spill/release if it can be done with minimal risk. Prevent spilled material from entering sewers, storm drains, other unauthorized treatment drainage systems, and natural waterways.

Methods for Containment and Clean-Up: Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand, earth or other non-combustible material, and place in suitable container for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Use good personal hygiene practice.

Conditions for Safe Storage: Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

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Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
Urea	---	---	---	---

Engineering Controls: If current ventilation practices are not adequate to minimize exposure, additional ventilation or exhaust systems may be required.

Specific Personal Protective Equipment

Eye/Face Protection: While contact with this material is no expected to cause irritation, the use of approved eye protection to safeguard against potential eye contact is considered good practice.

Skin: Not required based on the hazards of the material. However, it is considered good practice to wear gloves when handling chemicals. Suggested gloves: Nitrile, Viton, Butyl.

Respiratory Protection: Respiratory protection is not usually required.

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. Air-purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration as directed by regulation or the manufacturer's instructions, in oxygen deficient (less than 19.5% oxygen) situations or under conditions that are immediately dangerous to life and health (IDLH).

Use a positive pressure air supplied respirator if there is potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

Other Protective Equipment: A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.

Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

9. PHYSICAL AND CHEMICAL PROPERTIES (approximate values based on propylene glyco)

Appearance: Clear, colorless liquid
Odor: Slight ammonia
Odor threshold: No data
pH: Not applicable
Melting/Freezing Point: -12˚C / 10.4˚F
Boiling point (at 1 atm): 104˚C / 219 ˚F
Flash Point: Non-flammable
Auto-Ignition Temperature: Non-flammable
Evaporation rate (butyl acetate = 1): No data
Flammability (solid, gas): Not applicable
Explosive Limits: Non-flammable
Vapor Pressure: No data
Vapor Density (air = 1): No data
Specific gravity (H_20 = 1): 1.087 – 1.093 @ 20˚C / 68 ˚F

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Solubility in water: Soluble
Partition Coefficient: No data
Decomposition Temperature: No data
Viscosity: No data

10. STABILITY AND REACTIVITY

Stability (thermal, light, etc.): Stable under normal conditions of storage and handling.

Conditions to Avoid: None known

Incompatibility (materials to avoid): Avoid contact with acids, oxidizers, alkalis.

Hazardous Decomposition Products: May include oxides of carbon, oxides of nitrogen and ammonia.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:

Product/Ingredient Name	Result	Species	Dose
Urea	LD50 Oral	Rat Mouse	15.3 g/kg 11.5 g/kg

Skin Corrosion/Irritation: Causes mild irritation.

Serious Eye Damage/Irritation: Causes mild irritation.

Signs and Symptoms: High concentrations can cause minor respiratory irritation. Ingestion can cause headaches, irritation of the digestive tract, nausea, diarrhea, vomiting and transient disorientation.

Skin Sensitization: None reported

Respiratory Sensitization: None reported

Germ Cell Mutagenicity: There is insufficient information available to conclude that urea is mutagenic.

Carcinogenicity: There is insufficient information available to conclude that urea is carcinogenic. It is not listed by NTP, IARC or OSHA.

Reproductive Toxicity: There is insufficient information available to conclude that urea causes reproductive toxicity.

Specific Target Organ Toxicity (Single Exposure): None reported.

Specific Target Organ Toxicity (Repeated Exposure): None reported

12. ECOLOGICAL INFORMATION

Toxicity: Material is aquatically non-toxic.

Ingredient Name	Result	Species	Exposure
Urea	Acute LC50 > 9.1 g/L Fresh Water Acute EC50 > 10.0 g/L Fresh Water	Fish Daphnia	96 hr 24 hr

Persistence and Degradability: In the soil, urea degrades rapidly, usually within 24 hours; however, degradation may be slower depending on soil type, moisture content and urea formulation. The biodegradation rate increases with increasing temperature and presence of phytoplankton.

Bioaccumulative Potential: Risk of bioaccumulation is low (BCF <500 and low log K_{ow} <4). BCF = 1 Log Kow is -1.59

Mobility in Soil: The soil mobility is high based on an organic carbon partition coefficient of 8. In

Other Adverse Effects: None known

13. DISPOSAL CONSIDERATIONS

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations.

Recycle wherever possible. Large volumes may be suitable for re-distillation or, if contaminated, incinerated. Can be disposed of in a sewage treatment facility.

This material, if discarded as produced, is not a RCRA "listed" or "characteristic" hazardous waste. Use which results in chemical or physical change of this material could subject it to additional regulation as a hazardous waste.

14. TRANSPORT INFORMATION

DOT/TDG Proper Shipping Name: Not Regulated
DOT/TDG Identification Number: Not Regulated
DOT Hazard Class: None / **TDG Hazard Class:** None
DOT/TDG Packing Group: Not Regulated
ERG Guide Number: None
Marine Pollutant: No

15. REGULATORY INFORMATION

TSCA: Components are listed on the TSCA inventory.

DSL: Components are listed on the DSL inventory.

OSHA (Occupational Safety and Health Administration): This material is NOT considered to be hazardous as defined by the OSHA Hazard Communication Standard**.**

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This material has not been identified as a carcinogen by NTP, IARC or OSHA

CERCLA/SARA – Section 302 Extremely Hazardous Substances and TPQ (in pounds): This material does NOT contain chemicals subject to the reporting requirements of SARA 302 and 40 CFR 355 Appendix A and B.

EPA (CERCLA) Reportable Quantity (in pounds): This material does NOT contain chemicals subject to the reporting requirements of 40 CFR 302.4.

CERCLA/SARA - Sections 311/312 (Title III Hazard Categories):
Acute: No Chronic: No Fire: No Reactivity: No

CERCLA/SARA – Section 313 and 40 CFR 372: This material does NOT contain chemicals subject to the reporting requirements of SARA 313 and SARA Title III and 40 CFR:

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material does NOT contain detectable chemicals known to the State of California to cause cancer and/or reproductive toxicity.

Canada:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the Regulations.

WHMIS Hazard Class: None

16. OTHER INFORMATION

Issue Date: June 1, 2015
Previous Issue Date: May 30, 2012
Change: Minor wording changes.

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