Effective Date: May 10, 2016

Product #(s) –95006, 95025, 95033, 95055

Safety Data Sheet

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

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Zecol -50 RV Plus Anti-Freeze

CAS Number: 64-17-5 / 67-56-1
Recommended Uses: Anti-Freeze
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: Flammable Liquid Category 3
Carcinogenicity Category 1A
Toxic to Reproduction Category 1A
Specific Target Organ Toxicity (Single Exposure) Category 3
Specific Target Organ Toxicity (Repeated Exposure) Category 1

Signal Word: Danger

Hazard Statements:

H226	Flammable Liquid and Vapor.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects if swallowed.
H350	May cause cancer if swallowed.
H360	May damage fertility and the unborn child, including fetal alcohol syndrome, if swallowed.
H336	May cause drowsiness or dizziness.
H372	Causes damage to the liver, digestive, cardiovascular and central nervous system through prolonged or repeated exposure if swallowed.

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.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/Bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.

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P260	Do not breathe vapors/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303 + P361 + P353	If ON SKIN (or hair): Remove/Take of immediately all contaminated clothing. Rinse skin with water/shower
P304 +P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P308 + P311	IF exposed or concerned: Call a POISON CENTER/doctor.
P370 + P378	In case of fire: Use dry chemical, CO_2, alcohol-resistant foam, and water spray for extinction.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Disposal: Dispose of contents/container to a specialized waste disposal plant in accordance with local/regional regulations

Hazard Pictograms:

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	Typical Weight Percentage	CAS Number
Ethanol - Denatured	< 10 %	64-17-5
Methanol	< 1 %	67-56-1
Non-hazardous Ingredients	Balance	Varies

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: If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

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.

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Medical Conditions: Conditions which may be aggravated by exposure include liver, digestive, cardiovascular and central nervous systems.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical, CO_2, water spray or alcohol-resistant foam. Water spray is recommended to cool or protect exposed materials or structures. Water may be ineffective for extinguishment, unless used under favorable conditions by experienced fire fighters. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Specific Hazards: This material is flammable and can be ignited by heat, sparks, flames or other sources of ignition (e.g., static electricity, pilot lights or mechanical/electrical equipment). Flame is invisible in daylight. Vapors may travel considerable distances to a source of ignition where they can ignite, flashback or explode. May create vapor/air explosion hazard indoors, in confined spaces, outdoors or in sewers. If container is not properly cooled, it can rupture in the heat of a fire. Vapors are heavier than area and can accumulate in low areas.

Hazardous Combustion Products: Toxic gases and vapors; oxides of carbon and formaldehyde.

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. 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 and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Flammable. Spilling of liquid product will create a fire hazard and may form an explosive atmosphere. Keep all sources of ignition and hot metal surfaces away from spill/release if safe to do so. The use of explosion-proof equipment is recommended. Stay upwind and away from spill/release. For large spills, notify people down-wind of spill/release, isolate immediate hazard area and keep unauthorized personnel out. 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. Use foam on spills to minimize vapors. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water, notify appropriate authorities. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface water, may require notification of the National Response Center (phone number 800-424-8802).

Methods for Containment and Clean-Up: Notify relevant authorities in accordance with all applicable regulations. 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. If spilled on water remove with

appropriate methods (e.g., skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Keep away from ignition sources such as heat/sparks/open flames – No smoking. Take precautionary measures against static discharge. Non-sparking tools should be used. Wear protective gloves/clothing and eye/face protection. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment (see Section 8).

Flammable. May vaporize easily at ambient temperatures. The vapor is heavier than air and may create an explosive mixture of vapor and air. Beware of accumulation in confined spaces and low lying areas. Open container slowly to relieve any pressure. Electrostatic charge may accumulate and create a hazardous condition when handling or processing this material. To avoid fire or explosion, dissipate static electricity during transfer by bonding and grounding containers and equipment before transferring material. The use of explosion-proof equipment is recommended and may be required (see appropriate fire codes). Refer to NFPA-77 and/or API RP 2003 for specific bonding/grounding requirements. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames. Use good personal hygiene practice.

Conditions for Safe Storage: Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated areas away from heat and all sources of ignition. Post area "No Smoking or Open Flame." Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
Ethanol	---	1000 ppm	1000 ppm	---
Methanol	200 ppm (skin)	250 ppm (skin)	200 ppm (skin)	---

Engineering Controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional ventilation or exhaust systems may be required.

Specific Personal Protective Equipment

Eye/Face Protection: While contact with this material is not 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.

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)

Appearance: Clear, pink liquid
Odor: Mild
Odor threshold: No data
pH: Not applicable
Melting/Freezing Point: No data
Boiling point (at 1 atm): No data
Flash Point: 62 ˚C / >140 ˚F
Auto-Ignition Temperature: No data
Evaporation rate (butyl acetate = 1): No data
Flammability (solid, gas): Not applicable
Explosive Limits: No data
Vapor Pressure: No data
Vapor Density (air = 1): >1
Specific gravity (H_20 = 1): ~1
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: Exposure to elevated temperatures of propylene glycol can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems. Avoid direct sunlight or ultraviolet sources.

Incompatibility (materials to avoid): Avoid contact with strong acids, bases and oxidizers.

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Hazardous Decomposition Products: Decomposition products can include aldehydes, alcohols, ethers and organic acids.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:

Product/Ingredient Name	Result	Species	Dose
Propylene Glycol (major component)	LD50 Oral LD50 Dermal LC50 Inhalation (vapor)	Rat Rabbit Rat	22 g/kg >2 g/kg >317 mg/l – 2hr
Ethanol	LD50 Oral LC50 Inhalation (vapor)	Rat Rat	10.5 g/kg 133.8 mg/l (vapor)-4hr

Skin Corrosion/Irritation: Causes mild irritation.

Serious Eye Damage/Irritation: Causes mild irritation.

Signs and Symptoms: High concentrations can cause minor respiratory irritation, headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue. Ingestion can cause irritation of the digestive tract, drunkenness and stupor,

Skin Sensitization: None reported

Respiratory Sensitization: None reported

Germ Cell Mutagenicity: Ethanol has been classified as a category 2 mutagen.

Carcinogenicity: Ingestion of alcoholic beverages has been classified by NTP and IARC as carcinogenic to humans (Category 1A). Occupational exposures to ethanol, a minor component, and exposures other than by ingestion (i.e., dermal and inhalation) have not been associated with cancer in humans. This material is not listed by NTP, IARC or OSHA.

Reproductive Toxicity: Adverse reproductive effects are not anticipated from inhalation or dermal exposure. Excessive consumption of alcoholic beverages during pregnancy has been associated with effects on the developing fetus referred to collectively as the fetal alcohol syndrome. The effects most frequently manifested include psychomotor dysfunction, growth retardation and a characteristic cluster of facial anomalies. It also affects the reproductive system including reduced sperm count and motility and loss of libido in men, abnormal menstrual function, and decreased plasma estradiol and progesterone levels in women.

Methanol, a minor component, has produced fetotoxicity in rats and teratogenicity in mice exposed to high concentrations of methanol vapors.

Specific Target Organ Toxicity (Single Exposure): May cause drowsiness or dizziness.

Specific Target Organ Toxicity (Repeated Exposure): Chronic alcoholism has been associated with damage to the liver in humans (e.g., cirrhosis of the liver). Excessive consumption of alcoholic beverages has also been associated with adverse effects on the central nervous system, digestive system and cardiovascular system.

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12. ECOLOGICAL INFORMATION

Toxicity: Material is practically non-toxic to aquatic organisms on an acute basis.

Ingredient Name	Result	Species	Exposure
Propylene glycol	Acute EC50 = 40,613 mg/L Marine Water Acute LC50 = 18,340 mg/L Fresh Water	Fish Water Flea	96 hours 48 hours
Ethanol	Acute LC50 = 14.2 g/l Fresh Water Acute LC50 > 100 mg/l Fresh Water	Fish Invertebrate	96 hours 96 hours

Persistence and Degradability: Propylene glycol and ethanol biodegrade easily in water and soil.
Propylene glycol BOD5 = 69.0% Ethanol COD = 1.99 gO_2/g of ethanol
COD = 1.53 m/mg

Bioaccumulative Potential: Risk of bioaccumulation of Propylene glycol, the major component, is low (BCF <100 and low log K_{ow} <3). BCF = 0.09 - <10 Log K_{ow} = -1.07
Risk of bioaccumulation of Methanol is low (BCF <500 and low log K_{ow} <4). BCF = 0.2 - <10 Log K_{ow} = -0.35

Mobility in Soil: Propylene glycol, the major component, has a very low Henry's constant (1.2E-08 atm m^3/mol), volatilization from natural bodies of water or moist soil is not expected to be an important fate process. Potential for mobility in soil is very high (K_{oc} between 0 and 50). Using read across data from methanol, ethanol is highly mobile. Adsorption coefficient (K_{oc}) solid phase/liquid phase = 1

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, would not be a federally regulated RCRA "listed" hazardous waste. However, it would likely be identified as a federally regulated RCRA hazardous waste for the following characteristic of ignitability (D001). See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the SDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to 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

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ERG Guide Number: Not regulated
Marine Pollutant: No

15. REGULATORY INFORMATION

TSCA: All components are listed on the TSCA inventory.

DSL: All components are listed on the DSL inventory.

OSHA (Occupational Safety and Health Administration): This material is considered to be hazardous as defined by the OSHA Hazard Communication Standard**.**

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 contains the following chemicals subject to the reporting requirements of 40 CFR 302.4.

Component	Concentration	RQ
Methanol	< 1 %	5000 lbs

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 contains the following chemicals subject to the reporting requirements of SARA 313 and SARA Title III and 40 CFR:

Component	Concentration	de minimis
Methanol	< 1 %	1%

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material contains detectable chemicals known to the State of California to cause cancer and/or reproductive toxicity.

Component	Concentration	Effect
Methanol	< 1 %	Developmental
Ethanol	< 10 %	Developmental

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: B2, D2A, D2B

16. OTHER INFORMATION

Issue Date: May 10, 2016
Previous Issue Date: Sept. 30, 2015
Change: Updated Sec. 8 Methanol Exposure Limits and Sec. 14

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

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