

**Material Safety Data Sheet**

May be used to comply with OSHA's Hazard Communication Standard, 29CFR1910.1200. Standard must be consulted for specific requirements.

QUICK IDENTIFIER  
Common Name: (used on label and list)

2 - 1 - 0

**SECTION 1 - GENERAL INFORMATION**

|  |                        |                         |                              |
|--|------------------------|-------------------------|------------------------------|
| Name   | ZECOL PRODUCTS COMPANY |                         |                              |
| Address  | 4635 WILLOW DRIVE      | Emergency Telephone No. | (CHEM-TEL)<br>1-800-255-3924 |
| City, State, and ZIP                                       | MEDINA, MN 55340       | Other Information Calls | (763) 478-3438               |
| Signature of Person Responsible for Preparation (Optional) |                        | Date Prepared           | OCT 1, 2006                  |

|  |          |
|--|----------|
| <b>H</b><br>HEALTH                           | <b>2</b> |
| <b>F</b><br>FLAMMABILITY                     | <b>1</b> |
| <b>R</b><br>REACTIVITY                       | <b>0</b> |
| Style NC-L503R<br><b>PERSONAL PROTECTION</b> | <b>0</b> |

**SECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY**

| Hazardous Component(s) [chemical & common name(s)] | %     | OSHA PEL ppm | ACGIH TLV ppm        | CAS NO.    |
|--|-------|--------------|----------------------|------------|
| Ethylene Glycol (Aerosol)                          | 80-95 | None         | 100mg/m <sup>3</sup> | 107-21-1   |
| Diethylene Glycol                                  | 0-5   | None         | None                 | 111-46-6   |
| Non-Hazardous Ingredients                          | >1%   |              |                      |            |
| Water  |       |              |                      | 7732-18-5  |
| 2-Ethyl Hexanoic Acid, Sodium Salt                 |       |              |                      | 19766-89-3 |
| Neodacanoic Acid, Sodium Salt                      |       |              |                      | 31548-27-3 |

**SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS**

|                       |                                     |                  |           |                                       |             |
|-----------------------|-------------------------------------|------------------|-----------|---------------------------------------|-------------|
| Boiling Point         | 340° F.                             | Freezing Point   | -36° F.   | Specific Gravity (H <sub>2</sub> O=1) | 1.07 - 1.14 |
| Vapor Density (Air=1) | ND                                  | pH               | 8.7 - 9.2 | Vapor Pressure (mm Hg)                | ND          |
| Solubility in Water   | 100 %                               | Percent Volatile | ND        | Evaporation Rate (N-Butyl Acetate=1)  | ND          |
| Appearance and Odor   | Yellow liquid. Characteristic odor. |                  |           | Coefficient of Water/Oil Distribution | ND          |
|                       |                                     |                  |           | Viscosity                             | ND          |

**SECTION 4 - FIRE & EXPLOSION DATA**

|                                 |   |                    |   |                                     |              |              |
|---------------------------------|---|--------------------|---|-------------------------------------|--------------|--------------|
| Flash Point                     | 254° F. 120° C.   | Method Used        | TOC   | Flammable Limits in Air % by Volume | LEL Lower ND | UEL Upper ND |
| Auto-Ignition Temperature       | ND  | Extinguisher Media | For large fires, use alcohol type or all-purpose foams. For small fires, use water spray, carbon dioxide or dry chemical. |                                     |              |              |
| Special Fire Fighting Procedure | Do not spray pool fires directly. Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored. |                    |   |                                     |              |              |

Unusual Fire and Explosion Hazards: A solid stream of water or foam directed into hot, burning liquid can cause frothing. Burning may produce carbon monoxide and carbon dioxide.

NFPA Classification: III B

The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment.

**SECTION 5 - PHYSICAL HAZARDS (REACTIVITY DATA) MULTI-MAXANTIFREEZE (cont.)**

|                                      |   |                     |            |
|--------------------------------------|---|---------------------|------------|
| Stability                            | <input type="checkbox"/> Unstable<br><input checked="" type="checkbox"/> Stable   | Conditions to Avoid | None       |
| Incompatibility (Materials to Avoid) | Normally unreactive, however, avoid strong bases at high temperatures, strong acids, strong oxidizing agents, & materials reactive with hydroxyl compounds. |                     |            |
| Hazardous Decomposition Products     | Carbon monoxide & carbon dioxide.   |                     |            |
| Hazardous Polymerization             | <input type="checkbox"/> May Occur<br><input checked="" type="checkbox"/> Will Not Occur  | Conditions to Avoid | None Known |

**SECTION 6 - HEALTH HAZARDS**

1. Acute Eye & upper respiratory irritant. Prolonged or repeated skin contact may cause dermatitis or sensitization. 2. Chronic May cause nausea, vomiting, headache, drowsiness, blurred vision, convulsions, coma or death if ingested or inhaled.

Signs and Symptoms of Exposure Inhalation-May cause irritation of the nose & throat w/ headache, particularly from mists. High vapor concentrations caused, for example, by heating material in an enclosed & poorly ventilated workplace, may produce nausea, vomiting, headache, dizziness & irregular eye movements. Skin-No evidence of adverse effects from available information. Eye-Liquid, vapors or mist may cause discomfort in the eye w/ persistent conjunctivitis, seen as slight excess redness or conjunctiva. Serious corneal injury is not anticipated. Ingestion-May cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, malaise, blurring of vision, irritability, back pain, decrease in urine output, kidney failure & central nervous system effects, including irregular eye movements, convulsions & coma. Cardiac failure & pulmonary edema may develop. Severe kidney damage which may be fatal may follow the swallowing of ethylene glycol. A few reports have been published describing the development of weakness of the facial muscles, diminishing hearing, & difficulty w/ swallowing, during the late stages of severe poisoning.

Medical Conditions Generally Aggravated by Exposure The available toxicological information & a knowledge of the physical & chemical properties of the material suggest that overexposure is unlikely to aggravate existing medical conditions.

|   |                             |  |                     |  |      |  |
|---|-----------------------------|--|---------------------|--|------|--|
| Chemical Listed as Carcinogen or Potential Carcinogen | National Toxicology Program | Yes <input type="checkbox"/><br>No <input checked="" type="checkbox"/> | I.A.R.C. Monographs | Yes <input type="checkbox"/><br>No <input checked="" type="checkbox"/> | OSHA | Yes <input type="checkbox"/><br>No <input checked="" type="checkbox"/> |
|---|-----------------------------|--|---------------------|--|------|--|

## Emergency and First Aid Procedures

## ROUTES OF ENTRY

- Inhalation If inhaled, immediately remove victim to fresh air and **call emergency medical care**. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
- Eyes Immediately flush eyes with large amounts of water for 15 minutes. Seek medical attention if irritation persists.
- Skin Flush skin immediately with large amounts of soap & water for 15 minutes and remove contaminated clothing. If irritation persists, seek medical attention.
- Ingestion Seek immediate medical attention. Immediately call local poison control center or go to an emergency department. Never give anything by mouth to or induce vomiting in an unconscious or drowsy person.

**SECTION 7 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES**

Precautions to be Taken in Handling and Storage **DANGER: Harmful or Fatal if Swallowed.** Do not drink antifreeze or solution. Avoid eye & prolonged or repeated skin contact. Avoid breathing vapors or mists. Wash exposed skin thoroughly with soap & water after use. Do not store in opened or unlabeled containers. Keep container away from open flames & excessive heat. Do not reuse empty containers unless properly cleaned. Empty containers retain product residue & may be dangerous. Do not cut, weld, drill, etc. containers, even empty. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature & pressure, or sudden ingress of air into vacuum equipment, may result in ignitions w/o any obvious ignition sources. Published "autoignition" or "ignition" temperatures cannot be treated as safe operating temperatures in chemical processes w/o analysis of the actual process conditions. Use of this product in elevated temperature applications should be thoroughly evaluated to assure safe operative conditions.

|  |  |
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| Steps to be Taken in Case Material is Released or Spilled              | Wear appropriate protective clothing and equipment. Collect w/ absorbent material and place in appropriate, labeled container for disposal or, if permitted flush spill area with water. |
| Waste Disposal Methods (Consult federal, state, and local regulations) | Dispose of product in accordance with all local, state/provincial and federal regulations.   |

**SECTION 8 - SPECIAL PROTECTION INFORMATION/CONTROL MEASURES**

|  |   |
|--|---|
| Respiratory Protection (Specify Type)  | For operations where the TLV is exceeded a NIOSH approved respirator w/ organic vapor cartridges & dust/mist prefilters or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration. For firefighting, use self-contained breathing apparatus. |
| Ventilation                            | Use general ventilation or local exhaust as required to maintain exposures below the occupational exposure limits.  |
| Protective Gloves                      | Chemical resistant gloves such as neoprene or PVC where contact is possible.  |
| Other Protective Clothing or Equipment | Splash-proof goggles. Appropriate protective clothing as needed to minimize skin contact.   |
| Work/Hygienic Practices                | Select & use in accordance w/ 29CFR 1910.134 & good industrial hygiene practice.  |