



# MATERIAL SAFETY DATA SHEET

## HDIS-1 Heavy-Duty Industrial Heat Transfer Fluid Add Pak

**Additives Inc.**  
5915 N. Broadway  
Denver, CO 80216  
Tel: 303-292-0595 Fax: 303-292-0429  
msds@additivesinc.com  
MSDS on-line: www.additivesinc.com

MSDS No: 5020  
Ver. No: 3  
Ver. Date: 2/12/02

**EMERGENCY NUMBERS:**  
PERS 800-633-8253  
**CUSTOMER SERVICE:**  
303-292-0595

### SECTION 1 - IDENTIFICATION

**Product Name:** HDIS-1  
**Product Description:** Heavy-Duty Industrial Heat Transfer Fluid Additive Package  
**Chemical Name:** Mixture  
**Chemical Family:** Alkaline aqueous solution of inorganic and organic corrosion inhibitors.  
**Formula:** Mixture  
**Synonyms:** Inhibitor package for automotive antifreeze or additive package for automotive antifreeze/coolant.  
**CAS Registry:** Mixture  
**DOT Identification No.:** Mixture  
**DOT Hazardous Class:** Corrosive Liquid, Toxic, Class 8, Packing Group II  
**DOT Shipping Name:** Corrosive Liquid, Toxic, n.o.s. (Contains: Potassium hydroxide, Sodium nitrite)  
**UN Number:** 3093

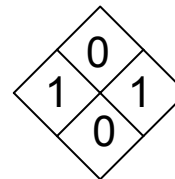
### SECTION 2 - TYPICAL COMPOSITION

<u>MATERIAL</u>	<u>CAS No</u>	<u>% WT</u>	<u>OSHA PEL</u>
Tetrapotassium pyrophosphate	7320-34-5	45-55%	1mg/m <sup>3</sup>
Sodium nitrite	7632-00-0	15-20%	None established
Sodium tetraborate pentahydrate	1330-43-3	3-5%	1mg/m <sup>3</sup>
Sodium tolytriazole	64665-57-2	1-3%	None established
Potassium hydroxide	1310-58-3	0-5%	2mg/m <sup>3</sup>
Proprietary inhibitors	Not applicable	2-4%	Not applicable
Deionized water	7732-18-5	balance	Not applicable

### SECTION 3 - HMIS RATINGS

**Health:** 1  
**Flammability:** 0  
**Reactivity:** 1  
**Special:** 0

NFPA



0 = minimal 1= slight 2=moderate 3= serious 4= severe

## SECTION 4 – PHYSICAL DATA

<b>Appearance and odor:</b>	Somewhat cloudy straw-colored liquid, slightly bitter, caustic odor.
<b>Boiling Point (760 mm Hg):</b>	255°F
<b>Specific Gravity (water =1):</b>	1.28-1.45
<b>Vapor Density (air =1):</b>	>1.0
<b>Percent Volatile by Volume:</b>	NIL
<b>Evaporation Rate (butyl acetate =1):</b>	<1
<b>Solubility in Water (% by wt):</b>	100%
<b>Vapor Pressure (at 20°C):</b>	10mm Hg
<b>pH:</b>	11.5-12.5

## SECTION 5 – HEALTH HAZARD DATA

<b>TLV and source:</b>	Not applicable
<b>Effects of overexposure:</b>	This solution of antifreeze inhibitors is an alkaline irritant and corrosive with a pH of 10-12. Prolonged contact can be destructive to tissue. Contact with the eyes may damage delicate eye tissue. Ingestion will cause mouth, throat and gastrointestinal irritation. Sodium nitrite can cause cyanosis, headache, dizziness, nausea and methemoglobinemia. Inhalation of harmful levels of vapors is unlikely due to the relatively low vapor pressure and the relatively low concentrations of ingredients.
<b>Emergency and First Aid Procedures:</b>	<b>Eye contact:</b> Flush eyes with large amounts of water for 15 minutes. If irritation persists, get medical attention. <b>Skin contact:</b> Wash affected area thoroughly with soap and water. Remove contaminated clothing, rings, etc. <b>Ingestion:</b> Toxic if swallowed. Induce vomiting immediately and seek medical attention. <b>Inhalation:</b> Remove to fresh air. If breathing has stopped, start artificial respiration. Seek medical attention.

## SECTION 6 – FIRE AND EXPLOSION HAZARD DATA

<b>Flash Point:</b>	Not applicable
<b>Autoignition Temperature:</b>	Not applicable
<b>Flammable limits in air (% by volume):</b>	Not applicable
<b>Extinguishing media:</b>	Water, fog, foam, CO <sub>2</sub> , dry chemical
<b>Special Fire Fighting procedures:</b>	Full protective equipment including self-contained breathing apparatus should be used when Additive Inc. Antifreeze Additive Solution is present during a fire. During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Seek medical attention.
<b>Unusual Fire and Explosion Hazards:</b>	Closed containers may rupture or explode due to steam pressure build-up when exposed to extreme heat. Water may be used to cool closed containers.

## SECTION 7 – REACTIVITY DATA

<b>Stability:</b>	Stable
<b>Incompatibility:</b>	Strong oxidizing agents, strong acids.
<b>Hazardous decomposition products:</b>	If involved in a fire the following decomposition products may be generated: Carbon dioxide, carbon monoxide, nitrogen oxides, hydrogen cyanide (possible in reducing atmospheres).
<b>Hazardous polymerization:</b>	Will not occur.

## SECTION 8 – SPILL OR LEAK PROCEDURES

<b>Steps to be taken if material is released or spilled:</b>	For small spills, soak up with suitable absorbent material. For large spills, dike and pump into suitable containers. Clean up residual water.
<b>Waste disposal method:</b>	Sanitary landfill or incinerate in approved facilities in accordance with local, state and federal regulations.

## SECTION 9 – PERSONAL PROTECTION INFORMATION

<b>Respiratory protection:</b>	If personal exposure cannot be controlled below applicable exposure limits by ventilation, wear respiratory devices approved by NIOSH/MSHA, for protection against organic vapors, dust, fumes and mists.
<b>Ventilation:</b>	Local exhaust is recommended.
<b>Protective gloves:</b>	Where skin contact may occur, chemical-impervious gloves should be worn.
<b>Eye protection:</b>	Use chemical goggles or full face shield when the danger of splashing exists
<b>Other protective equipment:</b>	Rubber apron or similar protective clothing to prevent contact with skin or clothes.

## SECTION 10 – ADDITIONAL PRECAUTIONS

<b>Alkaline irritant:</b>	Avoid contact with skin, eyes and clothing. Do not take internally. Clean up spills immediately.
<b>Precautions to be taken in handling and storage:</b>	Keep containers tightly closed when not in use. Store only in containers that are resistant to alkaline solutions with a pH of 12-14.

## SECTION 11 – GENERAL COMMENTS

**THE INFORMATION GIVEN HEREIN IS GIVEN IN GOOD FAITH AND FROM SOURCES WE BELIEVE RELIABLE. BUT NO WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS CORRECTNESS IS MADE.**

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**CONSULT ADDITIVES INC. FOR FURTHER INFORMATION.**