

MATERIAL SAFETY DATA SHEET

ANTI FREEZE 50/50

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER: Tarr, Incorporated
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PRODUCT NAME: ANTI FREEZE 50/50

PRODUCT NUMBER: PAF

UPC NUMBER:

PREPARED BY: Patricia Rodabaugh

DATE PREPARED: 4/28/2003

LAST REVISION: 11/27/2001

SYNONYMS: Premix Anti freeze 50/50 blend



Portland, Oregon
Phoenix, Arizona
Auburn, Washington
Vancouver, Washington

Print Date: 10/13/2004

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Weight %	OSHA PEL	ACGIH TLV	NOTE
Ethylene Glycol	107-21-1	90-95	50 ppm	C 50ppm(C 127 mg/M3) VAPOR AND MIST	
Diethylene Glycol	111-46-6	0-5	none	none	
Di Potassium phosphate	7758-11-4	1-2	none	none	
Water	7732-18-5	1	N/A	N/A	

3. HAZARDOUS IDENTIFICATION

EMERGENCY OVERVIEW: Material is moderately toxic when ingested. Take adequate precautions to keep people, especially children away from spill site. PVC-coated rubber gloves and monogoggles or face shield can be used during cleanup of spill site.

POTENTIAL HEALTH EFFECTS

EYE CONTACT: May cause slight transient (temporary) eye irritation. corneal injury is unlikely. Vapors or mists may cause eye irritation.

INHALATION: At room temperature, exposures to vapors are minimal due to physical properties; higher temperature may generate vapor levels sufficient to cause adverse effects.

INGESTION: Liquid is moderately toxic and may be harmful if swallowed. Excessive exposure may cause central nervous system (CNS) effects, cardiopulmonary effects (metabolic acidosis), and kidney failure. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing amounts larger than that may cause serious injury, even death.

SKIN CONTACT: Prolonged or repeated exposure not likely to cause significant skin irritation. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. Repeated skin exposure may result in absorption of harmful amounts. Massive contact with damaged skin or of material sufficiently hot to burn skin may result in absorption of potential lethal amounts.

SIGNS AND SYMPTOMS OF EXPOSURE:

Redness of the skin or eyes.

4. FIRST AID MEASURES

- EYE CONTACT:** Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention. Contact lenses should never be worn when working with this chemical.
- INHALATION:** Remove victim to fresh air and call emergency medical care. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel.
- INGESTION:** Do not give liquids if victim is unconscious or drowsy. Otherwise, give 2 glasses of water and immediately call physician. Induce vomiting of conscious patient by pressing finger to the back of victim's throat. Keep victim's head below hips while vomiting. Small amounts entering mouth should be rinsed out for 5 minutes.
- SKIN CONTACT:** Remove contaminated clothing/shoes. Flush skin with water for at least 15 minutes. If irritation persists after flushing, get medical attention. Do not reuse clothing until cleaned.

AGGRAVATED MEDICAL CONDITIONS:

Preexisting eye, skin and respiratory disorders may be aggravated by exposure to this product. Impaired function from preexisting disorders may be aggravated by exposure to this product.

SUPPLEMENTAL HEALTH INFORMATION:

Teratology (birth defects): Exposure to ethylene glycol has caused birth defects in laboratory animals only at doses toxic to the mother. Reproductive effects: Ethylene glycol has not interfered with reproduction in animal studies except at very high doses. Ethylene Glycol (CAS 107-21-1) lowest known LD50 (Oral) 5840 mg/kg (rats), lowest known LD50 (skin) 9530 mg/kg (rabbits)

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: 232F

FLASH POINT METHOD USED: Tag Closed Cup

AUTOIGNITION: 748F

LEL: 0.032 **UEL:** 0.153

EXTINGUISHING MEDIA:

Use water fog or fine spray. Alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively. Carbon dioxide. Dry chemical. Do not use direct water stream. May spread fire.

SPECIAL FIRE FIGHTING PROCEDURES:

Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece in positive pressure mode. Move containers from fire area if it can be done without risk. Use water to keep fire-exposed containers cool.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

No fire and explosion hazards expected under normal storage and handling conditions (i.e. ambient temperatures). However, ethylene glycol or solutions of ethylene glycol and water can form flammable vapors with air if heated sufficiently. Keep people away. Isolate fire area and deny unnecessary entry.

COMBUSTION PRODUCTS:

Carbon monoxide and unidentified organic compounds may be formed during combustion.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED:

Small spills: Soak up with absorbent material. Large spills: Dike and pump into suitable containers for disposal. Ensure compliance with all applicable statutes that require notification of appropriate government officials.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Product on surfaces can cause slippery conditions. Practice reasonable care and cleanliness. Avoid breathing spray mists if generated. Keep out of reach of children. Product may become a solid at temperatures below -8 degrees F. Do not store near food, foodstuffs, drugs or potable water supplies.

OTHER PRECAUTIONS:

KEEP OUT OF REACH OF CHILDREN. Empty containers retain product residue and can be dangerous. Do not pressurize, cut weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks static electricity, or other sources of ignition.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

If exposure may or does exceed occupational exposure limits (Sec. 2) use a NIOSH approved respirator to prevent overexposure. In accord with 29 CFR 1910.134 use either an atmosphere-supplying respir. or an air-purifying respir. for organic vapors.

VENTILATION:

Provide exhaust ventilation sufficient to keep the airborne concentration of this product below its TLV exposure limits. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination.

PROTECTIVE GLOVES:

Protective gloves recommended when prolonged skin contact can not be avoided. Polyethylene; Neoprene; Nitrile; Polyvinyl alcohol; Natural Rubber, Butyl Rubber. Safety shower should be available.

EYE PROTECTION:

Use chemical safety goggles and full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work areas.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

Where splashing is possible, full chemically resistant protective clothing (e.g., acid suit) and boots are required.

WORK / HYGENIC PRACTICES:

Use good personal hygiene when handling this product. Wash hands after use, before eating, drinking, smoking, or using the toilet.

ENGINEERING CONTROLS:

Facilities storing or utilizing this material should be equipped with and eyewash facility and a safety shower.

EXPOSURE GUIDELINES:

May be harmful or fatal if swallowed. May irritate body tissues. Use with adequate ventilation. Avoid breathing vapor. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

SOLUBILITY IN WATER: Soluble in water

APPEARANCE AND ODOR: Green liquid, mild odor.

BOILING POINT:	339 - 348 F	PERCENT VOLATILE:	97.0
VAPOR PRESSURE:	<0.1	PH:	N/A
EVAPORATION RATE:	Slower than ether	MOLECULAR WEIGHT:	
POUNDS PER GALLON:	9.3	VAPOR DENSITY:	Heavier than air
SPECIFIC GRAVITY:	1.12	OTHER PROPERTIES:	
MELTING POINT:			
FREEZING POINT:	-8F		

10. STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Avoid heat, sparks, flame and contact with strong oxidizing agents.

INCOMPATIBILITY:

Isolate from strong oxidizers such as permanganates, chromates and peroxides.

HAZARDOUS DECOMPOSITION OR BY PRODUCTS:

Carbon monoxide, carbon dioxide and trace amounts of aldehydes and organic acids.

HAZARDOUS POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID: Avoid heat, flame, and oxidizers or other sources of ignition.

11. TOXICOLOGY INFORMATION

Skin: The dermal LD50 has not been determined. Ingestion: The lethal dose in humans is estimated to be 100 ml (3 ounces). The oral LD50 for rats is in the 6000-13,000 mg/kg range. Mutagenicity (The effects on genetic material): In vitro mutagenicity studies were negative. Animal mutagenicity studies were negative.

12. ECOLOGICAL INFORMATION

Keep out of waterways. Do not dump used product or diluted material into sewers, on the ground, or into any body of water.

13. DISPOSAL CONSIDERATIONS

The preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

14. TRANSPORTATION INFORMATION

DOT Proper Shipping Name:	Environmentally hazardous substances, liquid, n.o.s. (ethylene glycol)	PACKING GROUP:	III
HAZARD CLASS:	9	GUIDE NUMBER:	171
UN NUMBER:	3082	DOT CLASS:	Miscellaneous

15. REGULATORY INFORMATION

Reportable Quantity (RQ): 5,000 pounds (532 gallons)

16. OTHER INFORMATION

HMIS INFORMATION: **HEALTH:** 2 **FLAMMABILITY:** 1 **REACTIVITY:** 0 **PROTECTIVE:** G

SARA Title III Information:

SARA 302:	Not listed as an extremely hazardous substance.
SARA 311/312:	Acute hazard; chronic hazard.
SARA 313:	Ethylene glycol is subject to Form R reporting.

N/A = Not Applicable

NDA = No Data Available

Disclaimer

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