



SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT: PROPYLENE GLYCOL (Inhibited Solution)

PRODUCT CODES: 55PG30, 5PG96, 5PG40, 55PG40, 55PG45, 275PG35D, 55PG35D, 55PG35, 1PG70, 5PG70, 55PG70

CHEMICAL NAME/FAMILY: Glycols

OTHER NAME: Coolant

MANUFACTURER: NATIONAL REFRIGERANTS, INC.

ADDRESS: 11401 Roosevelt Boulevard Phila., Pa. 19154

INFORMATION: 800-262-0012

EMERGENCY: 800-424-9300

DATE: 5/2018

PREPARER: Matt Callahan

2. HAZARD IDENTIFICATION

CLASSIFICATION: Not classified as hazardous according to 29 CFR 1910.1200 (2012)

OTHER HAZARDS: SKIN AND EYE CONTACT: Prolonged contact may cause minor skin irritation.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

| | | |
|--------------------------------|-----------------|---------|
| Propylene Glycol | (CAS#57-55-6) | 35-96 % |
| Demineralized Water | (CAS#7732-18-5) | < 65 % |
| Dipotassium Hydrogen Phosphate | (CAS#7758-11-4) | < 5 % |

COMMON NAME and SYNONYM:

Coolant

There are no stabilizers or impurities that contribute to the classification of the material identified in section 2

4. FIRST AID MEASURES

| | |
|----------------------|---|
| INHALATION: | Move person to fresh air; if effects occur, consult a physician. |
| EYE CONTACT: | Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist. |
| SKIN CONTACT: | Wash skin with plenty of water. |
| INGESTION: | No emergency medical treatment necessary. |



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ADVICE TO PHYSICIANS: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Water fog of fine spray. Dry chemical & carbon dioxide fire extinguishers. Foam. Do not use direct water stream, may spread fire. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Liquid mist of the product can burn. Flammable concentrations of vapor can accumulate at temperatures above flash point.

FIRE FIGHTING PROCEDURES: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of re-ignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream, may spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.

SPECIAL PROTECTIVE

EQUIPMENT FOR FIREFIGHTERS: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

HAZARDOUS COMBUSTION PRODUCTS: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide, Carbon dioxide.



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6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE:

Small spills: Absorb with materials such as—cat litter, sawdust, vermiculite. Collect in suitable and properly labeled container.

Large spills: Dike area to contain spill. Recover spilled material if possible. See Disposal Considerations section for additional information.

PERSONAL PRECAUTIONS: Use appropriate safety equipment. For additional information, refer to Exposure Controls and Personal Protection section.

ENVIRONMENTAL PRECAUTIONS: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Ecological Information section.

7. HANDLING AND STORAGE

HANDLING: (Always wear recommended personal protective equipment)

Ventilation: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

Other Precautions: Spills of these organic materials on hot fibrous insulations may lead to lowering of the auto- ignition temperatures possibly resulting in spontaneous combustion.

STORAGE: Store below: 121 deg. C (250 deg. F). Do not store in: galvanized steel.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES

| <u>INGREDIENT NAME</u> | <u>ACGIH TLV</u> | <u>OSHA PEL</u> | <u>OTHER LIMIT</u> |
|------------------------|------------------|-----------------|--------------------------|
| Propylene glycol | NA | NA | 10 mg/m3 TWA 8 AIHA WEEL |

PERSONAL PROTECTION

Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. In dusty or misty atmospheres, use and approved particulate respirator.

Ventilation: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

Eye Protection: Use safety glasses.



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Other Protective Equipment: No precautions other than clean body-covering clothing should be needed. Use gloves chemically resistant to this material.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|--|
| APPEARANCE: | Light Blue Liquid |
| ODOR: | Mild |
| ODOR THRESHOLD: | Not Determined |
| PH: | 9-11 |
| FREEZING POINT: | ≤ -51 deg. C / ≤ -60 deg. F |
| BOILING POINT: | (760 mmHg) 162 deg. C / 323 deg. F |
| FLASH POINT: | 102 deg. C / 216 deg. F Closed Cup |
| EVAPORATION RATE: | 0.07 (Butyl Acetate = 1) |
| FLAMMABILITY LEL/UEL: | LEL=2.6%(V)100 deg.C UEL=12.5%(V)130 deg.C |
| VAPOR PRESSURE: | 0.7 mmHg 20 deg. C |
| VAPOR DENSITY: | 2.6 (Air=1) |
| RELATIVE DENSITY: | 1.05 (Water=1) 20 deg. C |
| SOLUBILITY: | 100% by weight 20 deg. C |
| PARTITION COEFFICIENT n-Octanol/water: | Not Determined |
| AUTO IGNITION TEMPERATURE: | 416 deg. C / 780 deg. F |
| DECOMPOSITION TEMPERATURE: | Not Determined |
| VISCOSITY: | Low |
| PERCENT VOLATILES: | 98 wt.% |

NOTE: Physical and Chemical Properties are based on a 96% solution of Propylene Glycol. Diluted concentrations of Propylene Glycol may have slightly different Properties.

10. STABILITY AND REACTIVITY

STABILITY/INSTABILITY: Thermally stable at recommended temperatures and pressures.

CONDITIONS TO AVOID: Product can oxidize at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

MATERIALS TO AVOID: Avoid contact with: Strong acids, strong bases and strong oxidizers.

THERMAL DECOMPOSITION: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aldehydes, Alcohols, and Ethers.

HAZARDOUS POLYMERIZATION: Will not occur.



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11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

PERORAL

Rat; female; LD50 = 20300 mg/kg

PERCUTANEOUS

Based on information for a similar material:

Rabbit; LD50=> 10000 mg/kg

DEVELOPMENTAL TOXICITY: Contains component(s) which did not cause birth defects or any other fetal effects in lab animals. The component(s) is/are: Propylene glycol.

REPRODUCTIVE TOXICITY: Contains component(s) which did not interfere with reproduction in animal studies. Contains component(s) which did not interfere with fertility in animal studies. The component(s) is/are: Propylene glycol.

CHRONIC TOXICITY AND CARCINOGENICITY: Similar formulations did not cause cancer in laboratory animals.

GENETIC TOXICOLOGY:

In Vitro: In vitro genetic toxicity studies were negative.

In Vitro: Genetic toxicity studies in animals were negative for component(s) tested.

SIGNIFICANT DATA WITH POSSIBLE RELEVANCE TO HUMANS: In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

POTENTIAL HEALTH EFFECTS:

EFFECTS OF SINGLE ACUTE OVEREXPOSURE

INHALATION: At room temperature, exposure to vapor is minimal due to low volatility. Mist may cause irritation of upper respiratory tract (nose and throat).

EYE CONTACT: May cause slight temporary eye irritation. Corneal injury is unlikely.

SKIN CONTACT: Prolonged contact is essentially nonirritating to the skin. Repeated contact may cause flaking and softening of skin.

SKIN ABSORPTION: Prolonged skin contact is unlikely to result in absorption of harmful amounts.

INGESTION: Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.



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CHRONIC, PROLONGED OR REPEATED OVEREXPOSURE

EFFECTS OF REPEATED OVEREXPOSURE: In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

OTHER EFFECTS OF OVEREXPOSURE: No information currently available.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE: Based largely or completely on information for: Propylene glycol. Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Degradation is expected in the atmospheric environment within minutes to hours.

ECOTOXICITY: Based largely or completely on information for: Propylene glycol. Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 > 100 mg/L in the most sensitive species tested).

FURTHER INFORMATION: Based largely or completely on information for: Propylene glycol. Bio-concentration potential is low (BCF < 100 or Log Pow < 3). Potential for mobility in soil is very high (Koc between 0 and 50).

13. DISPOSAL CONSIDERATIONS

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OR WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. NATIONAL REFRIGERANTS HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN THIS SDS'S COMPOSITION INFORMATION SECTION. FOR UNUSED & UNCONTAMINATED PRODUCT, THE PREFERRED OPTIONS INCLUDED SENDING TO A LICENSED, PERMITTED: RECYCLER. RECLAIMER. INCINERATOR OR OTHER THERMAL DESTRUCTION DEVICE.

14. TRANSPORTATION INFORMATION

PROPER SHIPPING NAME:

NON-BULK-----Not Regulated by DOT

BULK-----Not Regulated by DOT



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15.REGULATORY INFORMATION

FEDERAL/NATIONAL:

OSHA Hazard communication standard

This product is not a “hazardous chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-To Know Act of 1986) Section 313

To the best of our knowledge this product does not contain chemicals at levels which require reporting under this statute.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-To Know Act of 1986) Section 302

To the best of our knowledge this product does not contain chemicals at levels which require reporting under this statute.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-To Know Act of 1986) Section 311 & 312

Delayed (Chronic) Health Hazard: No
Fire Hazard: No
Immediate (Acute) Health Hazard: No
Reactive Hazard: No
Sudden Release of Pressure Hazard: No

Toxic Substances Control Act (TSCA)

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30.

CEPA – Domestic substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

European Inventory of Existing Commercial Chemical Substances (EINECS)

All components of this product are on the EINECS inventory or are exempt from EINECS inventory requirements.

STATE/LOCAL:

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or

Pennsylvania Environmental Hazardous Substance List:



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The following product components are cited in the Pennsylvania Hazardous Substance List and/or the

Pennsylvania Environmental Substance List, and are present at levels which require reporting.

| Component | CAS# |
|------------------|---------|
| Propylene glycol | 57-55-6 |

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

To the best of our knowledge this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

California SCAQMD Rule 443.1 (South Coast Air Quality Management District Rule 443.1, Labeling of Materials Containing Organic Solvents)

VOC: Vapor pressure 0.66 mmHg @ 20 deg. C
1002 g/l VOC
1030 g/l less water and less exempted solvents

This section provides selected regulatory information on this product including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used.

16. OTHER INFORMATION

(NFPA RATINGS)

| | |
|-------------|---|
| HEALTH: | 0 |
| FIRE: | 1 |
| REACTIVITY: | 0 |

DISCLAIMER:

INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BELIEVED TO BE ACCURATE AT THE TIME OF PREPARATION. NO WARRANTY IS MADE CONCERNING THE ACCURACY AND NO LIABILITY SHALL BE MADE FOR CLAIMS FOR USE OR RELIANCE OF THE RECOMMENDATIONS CONTAINED HEREIN