Section 1: Identification

GHS Product Identifier: 69590
Other Names:
Use of Product: Leak Detection
Description: Fluorescent Dye for Air Conditioning and Refrigeration Systems
Company Information:
Ritchie Engineering Company, Inc.
10950 Hampshire Avenue South
Bloomington, MN 55438-2623 U.S.A
Phone: 952-943-1333, Fax: 1-800-8684.
Emergency Contact:
US & Canada 800-424-9300 (24 HOURS) CHEMTREC; Call collect outside continental US & Canada: 703-527-3887.

Section 2: Hazardous Identification

Pictogram: No Pictogram required
Signal Word: None
Physical Hazards: Not Classified
Health Hazard: This product is not classified as hazardous according to OSHA 1910.1200.
Environmental Hazard: No known significant effects or critical hazards
HMIS Hazard Rating: Health: 1, Fire: 1, Reactivity: 0.

2.1 GHS Label Elements:
This product is not classified as hazardous according to the GHS.

2.2 CLP Label Elements:
This product is not classified as hazardous according to Regulation EC 1272/2008 (CLP)

Section 3: Composition/Information on Ingredients

Chemical Identity: 69590
Synonyms: See Section 1 Above

Common Name/ Chemical Name	CAS Number	ELINCS	% W
Polyalkylene Glycol	See Below	See Below	75-95
Fluorescent Dye	See Below	See Below	5-25

Polyalkylene Glycol: The specific identity and composition has been withheld as a trade secret. NJTSRN: 80100312-5004
Fluorescent Dye: The specific identity and composition has been withheld as a trade secret. NJTSRN: 80100312-5006

Section 4: First-Aid Measures

Primary Routes of Exposure:
Inhalation: Remove to fresh air. If symptoms develop, seek immediate medical attention. If not breathing, give artificial respiration.
Eye Contact: Flush eyes with water for 15 minutes. If irritation develops, consult a physician.
Skin Contact: Wash affected area with soap and water and rinse thoroughly. If irritation develops, consult a physician.
Ingestion: Give water. Call a physician immediately. Do not induce vomiting.
Aggravation of Existing Conditions: Exposure to this product is not expected to contribute to, worsen or aggravate any existing medical conditions.
Most Important Symptom: Treat symptomatically.

Section 5: Fire-Fighting Measures

Flash Point: > 200°F (93.3°C)
Test Method: Setaflash Closed Cup
Explosive Limit: LEL (%): No data available; UEL (%): No data available
Autoignition Temperature: Not self-igniting
Unusual Fire and Hazardous Combustion and Decomposition Products: Smoke, soot, and toxic/irritating fumes (i.e., carbon dioxide, carbon monoxide, etc.). Oxides of nitrogen and carbon.
Fire and Explosion Hazards: May liberate irritating or toxic vapors during combustion or decomposition.
Extinguishing Media: Based on the NFPA guide, use dry chemical, carbon dioxide, water mist, water jet sprays, halogen, or alcohol foam suitable for Class B fires. Use water to cool containers exposed to fire. For large fires, use water spray, fog or alcohol foam, thoroughly drenching the burning material.
Unsuitable Extinguishing Media: High volume water with full jet. Oxidizers and reducers.
Fire-Fighting Procedures/Equipment: Fire fighters and others who may be exposed to the products of combustion should be equipped with NIOSH-approved, positive-pressure, self-contained breathing apparatus (SCBA) and full protective clothing. Water can be used to cool and protect containers and surroundings.

Section 6: Accidental Release Measures

Non-Emergency Personnel:
General Advice: Avoid inhalation and contact with skin, eyes, or clothing. Wash hands and face before eating, drinking, or using tobacco products.
Personal Protective Equipment Needed: Wear impervious gloves, shoes, and protective clothing
Emergency Personnel:
Suitable Protective Gear: Wear impervious gloves, shoes and protective clothing.
Unsuitable Protective Gear: Not Applicable
Environmental Precautions: Prevent any contamination of local soils and water supply. Prevent ground water infiltration or any ground penetration. Avoid the spreading or entering into watercourses by using sand, soil, or other types of barriers. If contamination into water course or sewage system, alert appropriate authorities.
Containment/Clean-up Methods:
Containment & Recovery of Product: Contain with absorbent material, such as clay, soil, universal binding medium, or any commercially available absorbent. Shovel reclaimed dye and absorbent into a recovery or salvage drums for disposal. For larger spills, transfer to a salvage tank for recovery or safe disposal. Any residues should be treated like a small spill. This is not a RCRA hazardous waste per Title 40 CFR 261. Stop material from contaminating soil, or from entering sewers or bodies of water. For larger spills, transfer to a salvage tank for safe recovery/disposal. Residues are treated as small spills.
Disposal**:** Either incinerate or land fill in accordance with applicable local, state and federal regulations.

Section 7: Handling and Storage

Handling Precautions: Use product only in well ventilated areas. Avoid breathing in mists or vapors from a heated product. Avoid formation of mists. Avoid heating product near flash point. Avoid prolonged or repeated contact with skin. Handle in ambient temperature.
Storage Conditions: Store in a cool, dry, well-ventilated area away from heat, ignition sources, and direct sunlight. Always keep containers tightly closed. Store away from oxidizing and reducing agents.
Personal Hygiene: Wash hands before breaks and at the end of the work day. Do not carry cleaning clothes used to absorb product in clothing. General hygiene measures for chemicals apply.
Empty Container Precautions: Do not reuse empty container for any purpose.
Special Warnings: Hot organic chemical vapors or mists can suddenly and without warning combust when mixed with air.

Section 8: Exposure Controls/Personal Protection

Occupational Exposure Limits: No exposure limits have been established for this product.
Biological Exposure Limits: No data available

Engineering Controls/Ventilation: Maintain airborne concentrations below the established exposure limits by providing adequate ventilation. General (dilution) ventilation should be acceptable. Additional local exhaust ventilation is recommended where dusts, mists or vapors may be released.
Airborne Oil Mist Exposure Limits: Polyalkylene Glycol
ACGIH TLV: 5mg/m^3, 8 hr. ACGIH STEL: 10mg/m^3 OSHA PEL: 5mg/m^3, 8 hr.
Personal Protective Equipment:
Respiratory Protection: Avoid breathing vapor and/or mist. If occupational exposure limits are exceeded wear NIOSH/OSHA approved equipment. Use a respiratory protection fitted with a combination filter A-P3 for short term use. High airborne concentrations may necessitate the use of self-contained breathing apparatus (SCBA) or a supplied air respirator. Respiratory protection programs must be in compliance with 29 CFR 1910.134.
Skin Protection: Wear protective clothing and appropriate impervious gloves.
Eye Protection: Wear safety goggles with peripheral coverage approved to EU Standard EN 166, AS/NZS 1337. An eye wash facility should be readily available.
Hand Protection: When in contact with material, be sure to use proper gloves approved to standards (Europe: EN 374, U.S.: F739, & AS/NZS: 2161). Gloves made from neoprene, nitrile or butyl rubber may provide suitable chemical protection.
Hygiene Measures: Wash thoroughly after handling, especially before eating, drinking, smoking, or using restroom facilities.

Section 9: Physical and Chemical Properties

Physical State: Liquid
Appearance: Dark Red
Odor: Light Blend Petroleum
Odor Threshold: No data available
pH: No data available
Melting Point: No data available
Freezing Point: No data available
Initial Boiling Point: No data available
Boiling Range: > 540°F (282.2°C)
Flash Point (SetaFlash Closed Cup): > 200°F (93.3°C)
Evaporative Rate: No data available
Solid Flammability: No data available
Gas Flammability: No data available
Upper Explosive Limit: No data available
Lower Explosive Limit: No data available
Vapor Pressure 68° F (20° C): No data available
Vapor Density (Air=1): No data available
Relative Density: 0.8699
Solubility in Water: Insoluble
Partition Coefficient: n-octanol/water: No data available
Auto-ignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity at 40°C: 18.10
Viscosity at 100°C: TBD
Percent Volatile by Volume (%): 0
Evaporation Rate (Butyl Acetate=1): < 0.01
Volatile Organic Content (VOC) Component: None

Note: The physical data presented above are typical values and should not be construed as a specification.

Section 10: Stability and Reactivity

Reactivity: This product is non-reactive under ambient conditions

Stability: Stable under normal conditions of use. Can decompose slowly with localized heating over 300°C
Conditions to Avoid: High temperatures & a source of ignition. Toxic fumes may be released if product is heated above decomposition point.
Incompatible Materials: Strong Acids, Strong oxidizing agents, and Reducing agents
Hazardous Decomposition Products: In the event of combustion, CO and CO_2 will be formed.
Hazardous Polymerization: Will not occur

Section 11: Toxicological Information

		Polyalkylene Glycol	Fluorescent Dye*
Oral LD_{50}	Rat	>5,000 mg/kg	>5,000 mg/kg
Dermal LD_{50}	Rabbit	>2,000 mg/kg	>2,000 mg/kg
Inhalation LC_{50}	Rat	2.18 mg/l	2.18 mg/l
Eye Irritation	Rabbit	Not Irritating	Irritant
Skin Irritation	Rabbit	Mild Irritant	Mild Irritant

* Results based on tests on similar products

Carcinogenicity:

Carcinogenicity	ACGIH	IARC	NTP	OSHA
Polyalkylene Glycol	No	No	No	No
Fluorescent Dye	No	No	No	No

Summary Comments: According to ACGIH, IARC, NTP, and OSHA, the Polyalkylene glycol nor the fluorescent dye are not considered to be a hazardous carcinogen to humans.
Reproductive Toxicity: Not considered a reproductive toxin to humans
STOT-single exposure: No data available
STOT-repeated exposure:

		Fluorescent Dye	Polyalkylene Glycol
Oral mg/kg	Rat	No data available	>1,000
Dermal mg/kg	Rat	No data available	No data available
Inhalation mg/l/4h	Rat	No data available	No data available

Aspiration Hazard: No
Likely Routes of Exposure: Eyes, skin and respiratory tract
Symptoms:
Eye Contact: May cause mild irritation
Skin Contact: May cause mild irritation
Inhalation: May cause mild respiratory irritation
Ingestion: May cause gastrointestinal irritation

Section 12: Ecological Information

Toxicity:

	Fluorescent Dye	Polyalkylene Glycol
Fish LL_{50} 96hr mg/l	No data available	>100mg/l
Crustacean LL_{50} 96hr. mg/l	No data available	> 10,000mg/L
Algae **NOEL** 72hr. mg/l	No data available	>100mg/l

Persistence & Degradability: Readily biodegradable
Bioaccumulation Potential: No data available
Mobility in Soil: No data available

Behavior in Sewage Plants: No data available
PBT vPvB: This substance is not a PBT vPvB

Section 13: Disposal Considerations

General Statements: Federal regulations may apply to empty container. State and/or local regulations may be different.
Disposal: Recover or recycle if possible, otherwise, dispose of in accordance with all local, state, and federal regulations. Sewage disposal is discouraged
Special Instructions: Be sure to contact the appropriate government environmental agencies if further guidance is required. Do not remove labels from container until container is cleaned properly. Containers can be reused or disposed of by landfill or incineration if appropriate to local law. Water with cleaning agents is required
Hazardous Waste Number: Not a RCRA hazardous waste

Section 14: Transport Information

General Comments: This product is not classed as hazardous or regulated for transport under 49 CFR, IATA/ICAO, or IMDG
49 CFR:
DOT Shipping Name: Not Regulated
DOT Label: N/A
DOT Identification No.: Not Applicable; Nonregulated shipments by air under 49 CFR, IATA/ICAO AND IMO
Transport by Road/Rail (ADR/RID):
UN Proper Shipping Name: Not Applicable
Transport Hazard Class: Not Applicable
Packing Group: Not Applicable
Classification Code: Not Applicable
LQ (ADR 2013): Not Applicable
LQ (ADR 2009): Not Applicable
Environmental Hazard: Not Applicable
Tunnel Restriction Code: Not Applicable
Transport by Sea (IMDG):
UN Proper Shipping Name: Not Applicable
Transport Hazard Class: Not Applicable
Packing Group: Not Applicable
Marine Pollutant: Not Applicable
Environmental Hazard: Not Applicable
Transport by Air (IATA):
UN Shipping Name: Not Applicable
Transport Hazard Class: Not Applicable
Packing Group Number: Not Applicable
Environmental Hazards: Not Applicable
Special Precautions for User: Unless otherwise specified, general measures for safe transport must be followed
Transport in Bulk: Non-dangerous material according to transport regulations.

Section 15: Regulatory Information

Inventory Status:
Polyalkylene Glycol: is listed or are excluded from listing on TSCA, DSL, & AICS inventories
Fluorescent Dye: is listed or are excluded from listing on TSCA, DSL, AICS, IECSC, & ENCS inventories
SARA Title III Information: This product contains no chemicals subject to the reporting requirements of Section 313 of the emergency planning and community right to know act.
SARA - Section 302-Extremely Hazardous Substances: No regulated ingredients.
SARA - Section 302-Reportable Quantity: None.

SARA - Section 311/312-Hazard Categories:
Fire Hazard: No
Sudden Release of Pressure Hazard: No
Reactivity Hazard: No
Immediate (Acute) Health Hazard: No
Delayed (Chronic) Health Hazard: No
Section 313-Toxic Chemicals: No regulated ingredients.
State Right-To-Know:
Pennsylvania - New Jersey R-T-K:

NAME	CAS NO. or NJ TSRN	%W
Polyalkylene Glycol	NJ TSRN 80100312-5004	75-95
Fluorescent Dye	NJ TSRN 80100312-5006	5-25

Clean Air Act Amendments - Ozone-Depleting Chemicals: No regulated ingredients.
CONEG: This product is in compliance with CONEG (total cadmium, chromium, lead and mercury <100ppm
TSCA: The chemical components of this product are listed or excluded on the Section 8(B) Chemical Substance Inventory List (40 CFR 710).
CERCLA: No regulated ingredients.
California - California Proposition 65: This product contains no chemical(s) known to the state of California to cause cancer.
Canada – CEPA DSL/NDSL: Not regulated

Section 16: Other Information

USER'S RESPONSIBILITY: A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if, or where, precautions (in addition to those described herein) are required. Any health hazard and safety information contained herein should be passed on to your customers or employees, as the case may be.
DISCLAIMER OF LIABILITY: The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Final determination of suitability of the chemical is the sole responsibility of the user. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to the information contained herein or the chemical to which the information refers. It is the responsibility of the users to comply with all applicable federal, state and local laws and regulations.

END OF SAFETY DATA SHEET