

Material Safety Data Sheet



PUROGEN

High Purity Limonene Solvent

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FOR CHEMICAL EMERGENCY
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Section I: Product Identification

Product name: PUROGEN
Synonym: Proprietary Organic Solvent
Molecular Formula: Proprietary Blend

The "Plain English" Section

Material Safety Data Sheets can be confusing. Federal law requires us to print a great deal of technical information, which probably won't help the non-scientist. ECOLINK includes this "PLAIN ENGLISH" section, written to address the questions and concerns of the average person. If you have additional health, safety or product questions, don't hesitate to call us at 800/886-8240.

Health Hazards: PUROGEN is an industrial chemical. We call it "environmentally preferred" because it is intended to replace products that are more hazardous, (1,1,1 trichloroethane, mineral spirits, MEK, etc.). This does not mean that Purogen is completely harmless. It is strong enough to remove tough industrial soils, so it can irritate your skin. We suggest you wear gloves, and avoid extended exposure to unprotected skin. Do not get it in your eyes, or breath large amounts of the vapor, (it will dry out your nasal passages). Used on a rag or from a spray bottle, the product will not produce fumes in any great quantity, (do not spray Purogen under high pressure without adequate ventilation). For more exposure and first aid information, refer to MSDS Sections II, VI.

Flashpoint: PUROGEN's flashpoint is 120° F. This represents the temperature that the liquid must reach before it emits fumes that will ignite. This is pretty hot, so combustion in ordinary use isn't a big concern. If Purogen is used on rags, the rags can ignite if exposed to an open flame because the solvent is "wicked" onto the cloth. Be sure to dispose of rags in an airtight container specifically designed to prevent spontaneous combustion. Don't use Purogen or any other combustible solvent around welding or any other hot work area.

Disposal: Because PUROGEN's flashpoint is below 140°F, PUROGEN is considered an ignitable hazardous waste product (D001). If you spill PUROGEN, notify the proper environmental people at your company ASAP. Once PUROGEN is contaminated with whatever you are cleaning, the resulting mixture may fall under an additional hazardous classification, depending on whether or not the material you are cleaning is hazardous. If you are not sure how to dispose of the used PUROGEN give us a call and we will help you make the right decision.

Section II: Chemical or Hazardous Components

Chemical Name	Citrus Terpene
CAS No.	68647-72-3
Approx. wt. %	>90%
Exposure	ACGIH-TLV – Not Established OSHA-PEL – Not Established MREL* - 100 ppm

* Exposure limits are based upon the ACGIH recommendation for components of the same chemical family.

ALL MATERIALS IN PRODUCT ARE TSCA LISTED

RCRA REGULATED: Yes (Refer to sec. VIII)

CERCLA (superfund): N/A

(containers less than 110 gallons)

DOT Regulated: No

DOT Haz. Class: N/A

DOT Shipping Name: N/A

DOT Number: Not Listed

(Questions concerning DOT information refer to DOT manual CFR 49, Chapter 1, 10/96 edition)

Section III: Physical Data

Appearance & Odor:	Clear, colorless liquid with very light citrus terpene odor.
Boiling Point:	320° F. @ 760 mm Hg
Evaporation Rate (nBuAc=1):	<1
Melting Point:	N/A
Solubility In Water:	Nil
Specific Gravity:	0.844
VOC Content	844 gm/liter
Vapor Pressure:	<1mm Hg @ 60°F
Vapor Density (AIR=1):	>1

Section IV: Fire and Explosion Hazard Data

Flash Point (Method):
Bulk Liquid (TCC) 120°F.

Flammable Limits:
LEL 0.7
UEL 6.1

Autoignition temperature (minimum temperature required to initiate self sustained combustion in the absence of a spark or flame.): 302°F

Extinguishing Media: Foam, water fog, carbon dioxide, dry chemical, Class B.

Special Fire Fighting Procedures:
Keep fire exposed containers cool with water. Fire fighters should wear self-contained breathing apparatus with a full-face piece operated in the positive pressure demand mode with appropriate gear and chemical resistant personal protective equipment.

Unusual Fire & Explosion Hazards:
Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by heat, pilot lights, other flames and ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near empty drum as product can ignite explosively.

Section V: Reactivity Data

Stability: Stable

Conditions to Avoid:
Sources of ignition such as sparks, hot spots, welding, flames and cigarettes. Ignition/flash may result if concentration of product is in the flammable range (See section IV for LEL and UEL values).

Incompatibility (materials to avoid) :
If mixed with strong oxidizers and or acids there is the possibility of a dangerous chemical reaction.

Hazardous Decomposition:
May form carbon dioxide and carbon monoxide.

Hazardous Polymerization:
Will not occur.

Section VI: Health Hazard Data

Primary routes of exposure:
Oral, inhalation, and skin.

Ingestion:
Swallowing large amounts may be harmful, by causing gastrointestinal irritation.

Inhalation:
Breathing large amounts may be harmful, by causing nose, throat, and respiratory tract irritation.

Eyes:
Irritant. Liquid contact will irritate eyes and may cause stinging, tearing and redness.

Skin or Contact:
May cause mild irritation of redness and burning.

First Aid:

Ingestion: Seek medical attention immediately. If individual is drowsy or unconscious, do not give anything by mouth; place individual on left side with head down. Contact medical facility or poison control center for advice about whether to induce vomiting.

Inhalation: Remove to fresh air, if breathing is difficult give oxygen. Keep person warm and quiet. Seek medical attention.

Eyes: Irrigate immediately with water for at least 15 minutes. Get medical attention if irritation persists.

Skin: Wash with soap and water. Thoroughly clean contaminated clothing and shoes before reuse. If symptoms persist, seek medical attention.

Carcinogen: NTP – Not Listed
IARC Monographs – None
OSHA REGS – Not Regulated

Section VII: Precautions for Safe Handling

HMIS Information:
Health – 1 / Reactivity – 1
Flammability – 2 Personal Protection – B

HMIS Definition:
0 – Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Extreme
“/” in the Health Category denotes material does not target any major organs.
“*” In the Health Category denotes material may target certain organs.

Eye Protection:
Safety glasses and splash protection required.

Protective Gloves:
Nitrile gloves.

Respiratory Protection:
Not required under conditions of normal use. If vapor mist is present use NIOSH certified organic vapor mask.

Ventilation: Local exhaust/hood or fan may be used.

Other Protective Clothing: None required under normal use.

Work Practices: Store rags used with this material in an air tight, metal container to prevent spontaneous combustion. Treat this chemical with respect and follow all MSDS instructions.

Section VIII: Control Measures

Small Spill: Absorb liquid on vermiculite, floor absorbent, or other absorbent material and transfer to hood.

Large Spill: Eliminate all ignition sources, (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams, etc. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Transfer contaminated absorbent, soil and other materials to containers for disposal.

Under RCRA, this material is considered a hazardous waste due to the flash point. The EPA hazardous waste number is D001.

Waste Disposal Method: Purogen liquid is to be disposed of according to local, state, and federal regulations. Please call us if you need additional disposal information.

Precautions To Be Taken In Handling & Storing: Since empty containers retain product residues, all hazard precautions given in the data sheet must be observed. All metal pails or drums should be grounded and/or bonded when material is transferred. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature may result in ignition.

Other Precautions: Keep this and all chemicals out of the reach of children.

Section IX: Part Number and Packaging

<u>Product Name</u>	<u>Part No.</u>	<u>Packaging</u>
PUROGEN	1083-55	55 Gal Drum
PUROGEN	1083-5	5 Gal Pail
PUROGEN	1083-1	4 x 1 Gal Case

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END OF MSDS