



VAPCO PRODUCTS, INC.

Safety Data Sheet Purge Liquid

SECTION 1: Identification

Product identifier

Product name	Purge Liquid
Product number	PRG-16oz
Brand	Vapco

Recommended use of the chemical and restrictions on use
A/C & Refrigerator System Flush

Supplier's details

Name	Vapco Products, Inc.
Address	401 Marshall Road Valley Park, Missouri 63088 United States
Telephone	(636) 923-2121
Fax	(636) 923-3002
email	info@VapcoProducts.com

Emergency phone number(s)

(800) 255-3924

SECTION 2: Hazard identification

Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200)

- Acute toxicity, inhalation, Cat. 4
- Eye damage/irritation, Cat. 2A
- Specific target organ toxicity (single exposure), Cat. 3

GHS label elements, including precautionary statements

Pictogram



Signal word

Warning

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Hazard statement(s)

H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness

Precautionary statement(s)

P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear eye protection/face protection.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container to the specifications of local, regional, national, and international regulations.

Other hazards which do not result in classification

Exposure may aggravate pre-existing eye, skin, or respiratory conditions. Contact with liquid escaping the container can cause frostbite.

SECTION 3: Composition/information on ingredients

Mixtures

Hazardous components

1. TRANS-1,2-DICHLOROETHYLENE

Concentration	40 - 70 % (weight)
EC no.	205-860-2
CAS no.	156-60-5
Index no.	602-026-00-3

2. Acid and Moisture Removing Additive

Concentration	10 - 30 % (weight), Trade secret*
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3. Acetone

Concentration	1 - 10 % (weight)
EC no.	200-662-2
CAS no.	67-64-1
Index no.	606-001-00-8

4. Ethanol

Concentration	1 - 10 % (weight)
EC no.	200-578-6
CAS no.	64-17-5
Index no.	603-002-00-5

Trade secret statement (OSHA 1910.1200(i))

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*TRADE SECRET - Specific chemical identities are withheld as a trade secret under the provisions of OSHA hazard communication standard 29 CFR 1910.1200.

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
If inhaled	First, take proper precautions to ensure your own safety before attempting rescue (e.g. wear appropriate respiratory protective equipment, use the buddy system), then remove the exposed person to fresh air. Keep at rest in a position comfortable for breathing. Get medical advice/attention.
In case of skin contact	Immediately drench the affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists. If frostbite or freezing from exposure to liquid occurs: For brief contact with a small amount: Rewarm with body heat. Get immediate medical advice/attention. For extensive contact or a large amount: Immediately call a poison center/doctor and follow their advice. Specific treatment is urgent, incorrect first-aid practices will aggravate the injury. Protect affected area with a loose cover until proper medical treatment is received. Immediately remove contaminated clothing.
In case of eye contact	Immediately rinse with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.
If swallowed	Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

Most important symptoms/effects, acute and delayed

Symptoms/Injuries: Harmful if inhaled. Causes serious eye irritation. May cause drowsiness and dizziness. Asphyxia by lack of oxygen: risk of death. May cause frostbite on contact with the liquid.

Symptoms/Injuries After Inhalation: High concentrations may cause central nervous system depression such as dizziness, vomiting, numbness, drowsiness, headache, and similar narcotic symptoms. Inhalation is likely to cause adverse health effects including, but not limited to: irritation, difficulty breathing, and unconsciousness. In elevated concentrations, may cause asphyxiation, central nervous system effects, and increased breathing rate. Symptoms of asphyxiation include headache, dizziness, rapid breathing, increased pulse, mood changes, tremors, cyanosis, muscular weakness, narcosis, numbness of the extremities, unconsciousness and death. This product contains chlorinated solvent material, which is associated with cardiac sensitization following very high exposures or with concurrent exposure to high stress levels or heart-stimulating substances like epinephrine and catecholamines. Careful consideration should be applied preceding administration of epinephrine or similar heart-stimulated substances.

Symptoms/Injuries After Skin Contact: Contact with liquid escaping the container can cause frostbite and freeze burns.

Symptoms/Injuries After Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva. Contact with liquid escaping the container can cause frostbite, freeze burns, and permanent eye damage.

Symptoms/Injuries After Ingestion: Not considered a potential route of exposure, but contact with liquid escaping the container can cause freeze burns and frostbite.

Chronic Symptoms: None known.

Indication of immediate medical attention and special treatment needed, if necessary

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

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SECTION 5: Fire-fighting measures

Suitable extinguishing media

Water spray, fog, carbon dioxide (CO₂), alcohol-resistant foam, dry chemical, or sand.

Specific hazards arising from the chemical

Explosion Hazard: Container may explode in heat of fire. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors.

Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion. Certain mixtures of chlorinated solvents may be flammable or reactive under certain conditions.

Special protective actions for fire-fighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. Do not breathe fumes from fires or vapors from decomposition. DO NOT fight fire when fire reaches containers. Evacuate area. Fight fire remotely due to the risk of explosion.

Protection During Firefighting: Do not enter fire area without the proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Chlorine compounds. Hydrogen chloride.

Further information

Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

General Measures: Do not get in eyes, on skin, or on clothing. Do not breathe vapors, spray, mist, gas. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Stop leak if safe to do so.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Eliminate ignition sources first, then ventilate the area. Evacuate unnecessary personnel, isolate, and ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

Environmental precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

Methods and materials for containment and cleaning up

For Containment: Ventilate area. Contain any spills with dikes or absorbents to prevent further migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Eliminate all ignition sources. Ventilate area. Stop the ignition source of the release, if safe to do so. Consider the use of water spray to disperse vapors. Isolate the area until gas has dispersed. Ventilate and gas test area before entering. Take up liquid spill into absorbent material. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

Waste Disposal: Dispose of in accordance with local, regional, national, and international regulations. Containers may be hazardous when empty.

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Reference to other sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: Handling and storage

Precautions for safe handling

Additional Hazards When Processed: Do not pressurize, cut, or weld containers.

Precautions for Safe Handling: Do not handle until all safety precautions have been read and understood. Avoid contact with skin, eyes and clothing. Do not breathe gas, mist, spray, vapors. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not apply on an open flame or other ignition source. Use only outdoors or in a well-ventilated area.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

Conditions for safe storage, including any incompatibilities

Technical Measures: Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed.

Storage Conditions: Store in a dry, cool place. Keep only in the original container in a cool, well-ventilated place away from ignition sources. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up/in a secure area.

Incompatible Materials: Strong acids, strong bases, strong oxidizers. Chlorine. Finely divided metals. Magnesium. Alkaline earth metals.

Storage Temperature: < 50°C/122°F.

Specific end use(s)

A/C & Refrigeration System Flush

SECTION 8: Exposure controls/personal protection

Control parameters

CAS: 156-60-5 (EC: 205-860-2)

TRANS-1,2-DICHLOROETHYLENE

ACGIH: 200 ppm PEL-C inhalation

CAS: 64-17-5

Ethanol

ACGIH (USA): (ST) 1000 ppm TLV® inhalation; Cal/OSHA: 1000 ppm PEL inhalation; NIOSH: 1000 ppm REL inhalation; OSHA: 1000 ppm PEL inhalation; 1900 mg/m³ PEL inhalation

CAS: 67-64-1

Acetone

ACGIH (USA): 250 ppm, (ST) 500 ppm TLV® inhalation; Cal/OSHA: 500 ppm, (ST) 750 ppm, (C) 3000 ppm PEL inhalation; NIOSH: 250 ppm REL inhalation; OSHA: 1000 ppm PEL inhalation; 2400 mg/m³ PEL inhalation

Appropriate engineering controls

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Use explosion-proof equipment. Proper grounding procedures to avoid static electricity should be followed. Gas detectors should be used when flammable gases or vapors may be released. Gas detectors should be used when toxic gases may be released. Oxygen detectors should be used when asphyxiating gases may be released. Ensure all local, regional, national, and international regulations are observed.

Individual protection measures, such as personal protective equipment (PPE)

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Pictograms



Eye/face protection

Chemical safety goggles. Insufficient ventilation: wear respiratory protection. Respiratory protection of the dependent type.

Skin protection

Wear protective gloves and clothing. If material is cold, wear thermally resistant protective gloves.

Body protection

Wear suitable protective clothing. Wear protective gloves. If material is cold, wear thermally protective gloves. Chemically resistant materials and fabrics. Wear fire/flamm resistant/retardant clothing.

Respiratory protection

Use a NIOSH-approved self-containing breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Thermal hazards

Wear thermally resistant protective clothing.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	Clear liquid
Odor	Solvent odor.
Odor threshold	No data available.
pH	Not applicable.
Melting point/freezing point	No data available.
Initial boiling point and boiling range	41°C (106°F).
Flash point	No data available.
Evaporation rate	>3 Fast.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability limits	No data available.
Vapor pressure	261 mm Hg at 25°C (77°F).
Vapor density	3.7 (Air=1.0).
Relative density	1.17 at 25°C (77°F).
Solubility(ies)	Non-soluble in water.
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	No data available.
Explosive properties	No data available.
Oxidizing properties	Reacts violently with strong oxidizers.

SECTION 10: Stability and reactivity

Reactivity

Reacts violently with strong oxidizers. Increased risk of fire or explosion. Certain mixtures of chlorine may be flammable or reactive under certain conditions.

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Chemical stability

Certain mixtures of chlorine may be flammable or reactive under certain conditions.

Possibility of hazardous reactions

Hazardous polymerization will not occur.

Conditions to avoid

Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.

Incompatible materials

Strong acids, strong bases, strong oxidizers. Chlorine. Finely divided metals. Magnesium. Alkaline earth metals.

Hazardous decomposition products

Thermal decomposition may produce: Carbon oxides (CO, CO₂). Chlorine compounds. Hydrogen chloride.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Acute Toxicity (Oral): Not classified.

Acute Toxicity (Dermal): Not classified.

Acute Toxicity (Inhalation): Harmful if inhaled.

Acetone

LD50 Skin - Guinea pig - 7,429 mg/kg

LC50 Inhalation - Rat - 50,100 mg/m³ - 8 h - Remarks: Drowsiness Dizziness Unconsciousness

LD50 Oral - Rat - 5,800 mg/kg - Remarks: Behavioral: Altered sleep time (including change in righting reflex).

Behavioral: Tremor. Behavioral: Headache. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Remarks: RTECS: AL3150000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Kidney - Irregularities - Based on Human Evidence

Skin - Dermatitis - Based on Human Evidence

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Remarks: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

ACETONE

LC50 - Oncorhynchus mykiss (rainbow trout) - 5,540 mg/l - 96 h

LC50 - Daphnia magna (Water flea) - 8,800 mg/l - 48 hr

- Rabbit - 24 hr Result: Eye irritation

- Guinea pig - Result: Does not cause skin sensitization

Skin - Rabbit - 24 hr - Result: Mild skin irritation

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Remarks: May cause drowsiness or dizziness.

Acid and Moisture Removing Additive

LC50 - Danio rerio (zebra fish) - 13 mg/l - 96 hr

ETHANOL

LD50 Oral - Rat - 10,470 mg/kg

LD50 Skin - Rabbit - 15,800 mg/kg

LD50 Inhalation - Rat - 30,000 mg/l - 4 h

EC50 - Chlorella vulgaris (Fresh water algae) - 275 mg/l - 72 h

LC50 - Pimephales promelas (fathead minnow) - 14,200 mg/l - 96 h

LC50 - Ceriodaphnia dubia (water flea) - 5,012 mg/l - 48 h

OECD Test Guideline 405 Eyes - Rabbit - Result: Moderate eye irritation

OECD Test Guideline 404 Skin - Rabbit - 24 h - Result: No skin irritation

TRANS-1,2-DICHLOROETHYLENE

EC50 - Daphnia magna (water flea) - 220 mg/l

Skin corrosion/irritation

Causes irritation, redness, burning.

Serious eye damage/irritation

Causes irritation, redness, tearing.

Respiratory or skin sensitization

Causes dizziness, headaches, nausea, central nervous system depression, excessive or prolonged exposure may cause unconsciousness.

Germ cell mutagenicity

Not classified.

Carcinogenicity

Not classified.

Reproductive toxicity

Not classified.

STOT-single exposure

May cause drowsiness or dizziness.

STOT-repeated exposure

Not classified.

Aspiration hazard

Not classified.

Additional information

Symptoms/Injuries After Inhalation: High concentrations may cause central nervous system depression such as dizziness, vomiting, numbness, drowsiness, headache, and similar narcotic symptoms. Inhalation is likely to cause adverse health effects including, but not limited to: irritation, difficulty breathing, and unconsciousness. In elevated concentrations, may cause asphyxiation, central nervous system effects, and increased breathing rate. Symptoms of asphyxiation include headache, dizziness, rapid breathing, increased pulse, mood changes, tremors, cyanosis, muscular weakness, narcosis, numbness of the extremities, unconsciousness and death. This product contains chlorinated material, which is associated with cardiac sensitization following very high exposures or with concurrent

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exposures to high stress levels or heart-stimulating substances like epinephrine and catecholamines. Careful consideration should be applied preceding administration of epinephrine or similar heart-stimulated substances.

Symptoms/Injuries After Skin Contact: Contact with liquid escaping the container can cause frostbite and freeze burns.

Symptoms/Injuries After Eye Contact: Contact causes severe irritation with redness and swelling of conjunctiva. Contact with liquid escaping the container can cause frostbite, freeze burns, and permanent eye damage.

Symptoms/Injuries After Ingestion: Not considered a potential route of exposure, but contact with liquid escaping the container can cause freeze burns and frostbite.

Chronic Symptoms: None known.

SECTION 12: Ecological information

Toxicity

Acetone

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LC50 Inhalation - Rat - 50,100 mg/m³ - 8 h - Remarks: Drowsiness Dizziness Unconsciousness

LD50 Oral - Rat - 5,800 mg/kg - Remarks: Behavioral: Altered sleep time (including change in righting reflex).

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TRANS-1,2-DICHLOROETHYLENE
EC50 - Daphnia magna (water flea) - 220 mg/l

Persistence and degradability

Component or components of this product are not biodegradable. May cause long-term adverse effects in environment.

Bioaccumulative potential

Not established.

Ethene, 1,2-dichloro-, (1E)- (156-60-5): Partition coefficient n-octanol/water (Log Pow): 1.48

Ethyl alcohol (64-17-5): Partition coefficient n-octanol/water (Log Pow): -0.32

Mobility in soil

No additional information available.

Other adverse effects

Avoid release to the environment.

SECTION 13: Disposal considerations

Disposal of the product

Dispose of contents/container in accordance with local, regional, national, and international regulations. Do not pierce or burn, even after use.

Sewage disposal

Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

Other disposal recommendations

Container may remain hazardous when empty. Continue to observe all precautions. Do not puncture or incinerate container.

SECTION 14: Transport information

DOT (US)

Not regulated as dangerous goods.

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Massachusetts Right To Know Components

Chemical name: 1,2-Dichloroethylene

CAS number: 156-60-5

Chemical name: Acetone

CAS number: 67-64-1

Chemical name: Ethanol

CAS number: 64-17-5

New Jersey Right To Know Components

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Common name: ACETONE

CAS number: 67-64-1

Common name: ETHYL ALCOHOL

CAS number: 64-17-5

Pennsylvania Right To Know Components

Chemical name: Ethene, 1,2-dichloro-, (e)-

CAS number: 156-60-5

Chemical name: 2-Propanone

CAS number: 67-64-1

Chemical name: Ethanol

CAS number: 64-17-5

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Toxic Substances Control Act (TSCA) Inventory

All components are listed or exempt.

HMIS Rating

Purge Liquid	
HEALTH	1
FLAMMABILITY	2
PHYSICAL HAZARD	1
PERSONAL PROTECTION	B

NFPA Rating



SECTION 16: Other information

N/A = Not applicable; N/D = Not determined

Further information/disclaimer

DISCLAIMER: To the best of our knowledge, information contained herein is accurate. However there is no assumption of liability for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazard which exists. The information contained in this SDS was obtained from current and reliable sources; however, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or

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handling, storage and disposal of this product are beyond the control of the manufacturer, the manufacturer will not be responsible for loss, injury, or expense arising out of the products improper use. No warranty, expressed or inferred, regarding the product described in this SDS shall be created or inferred by any statement in this SDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this SDS. The user is responsible for full compliance.

Preparation information

Preparation by: Jessica Wilson

Date Prepared: 3-2-2021