



VAPCO PRODUCTS, INC.

Safety Data Sheet Purge Aerosol

SECTION 1: Identification

1.1 GHS Product identifier

Product name	Purge Aerosol
Product number	PRG-1, PRG-2, PRG-1K
Brand	Vapco

1.3 Recommended use of the chemical and restrictions on use

A/C & Refrigerator System Flush

1.4 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

1.5 Emergency phone number

(800) 255-3924

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200, 2012)

- Acute toxicity, inhalation, Cat. 4
- Eye damage/irritation, Cat. 2A
- Gases under pressure, liquefied gas
- Skin corrosion/irritation, Cat. 2
- Specific target organ toxicity (single exposure), Cat. 3

2.2 GHS label elements, including precautionary statements

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Pictograms



Signal word

Warning

Hazard statement(s)

H280	Contains gas under pressure; may explode if heated
H315	Causes skin irritation
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/protective gloves.
P302+P352	IF ON SKIN: Wash with plenty of water.
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.
P321	Specific treatment (see First Aid on this label).
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P501	Dispose of contents/container to the specifications of local, regional, national, and international regulations.

2.3 Other hazards which do not result in classification

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

1. Trans-1,2-dichloroethylene

Concentration	30 - 60 % (weight)
EC no.	205-860-2
CAS no.	156-60-5
Index no.	602-026-00-3

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2. 1,1,1,2-Tetrafluoroethane

Concentration 15 - 40 % (weight)
CAS no. 811-97-2

3. Acid and Moisture Removing Additive

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

4. Acetone

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

5. 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))

*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

4.1 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 affected area with water for at least 15 minutes. Remove contaminated clothing immediately. Obtain medical attention if irritation develops or persists.
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.

4.2 Most important symptoms/effects, acute and delayed

Symptoms/Injuries: Harmful if inhaled. Causes serious eye irritation. May cause drowsiness or 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

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light hydrocarbon 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-stimulating substances.

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

4.3 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.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Carbon dioxide (CO₂), alcohol-resistant foam, dry chemical, or sand.

5.2 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 HFC's and chlorine may be flammable or reactive under certain conditions.

5.3 Special protective actions for fire-fighters

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

Firefighting Instructions: Use dry chemical, foam, or carbon dioxide (CO₂). Do not breathe fumes from fire or vapors from decomposition. Do NOT fight fire when fire reaches containers. Evacuate area. Fight fire remotely due to the risk of explosion. Shut off all sources of ignition. Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Wear NIOSH-approved Self-Contained Breathing Apparatus with a full face piece operated in a positive pressure demand mode with full body protective clothing when fighting fires.

Hazardous Combustion Products: Carbon oxide(s), chlorine compounds, fluorine compounds, hydrogen chloride, hydrogen fluoride, carbonyl fluoride, fluorinated hydrocarbons.

Further information

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

SECTION 6: Accidental release measures

6.1 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 Procedure: 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

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dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2 Environmental precautions

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

6.3 Methods and materials for containment and cleaning up

For Containment: Ventilate the 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. Do not flame cut, braze, or weld. Product should be fully characterized prior to disposal (40 CFR 261).

Reference to other sections

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

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Additional Hazards When Processed: Do not pressurize, cut, or weld containers. Ruptured cylinders may rocket. Pressurized container: May burst if heated. Do not pierce or burn, even after use.

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 spray on open flame or other ignition source.

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

Other Precautions: Keep out of reach of children. Follow label instructions. Vapors may collect in low lying areas.

7.2 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

8.1 Control parameters

1. 1,1,1,2-Tetrafluoroethane (CAS: 811-97-2)

TWA (Inhalation): 1000 ppm; 4240 mg/m³; AU (AU/SWA)

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2. Acetone (CAS: 67-64-1)

TWA (Inhalation): 500 ppm; 1185 mg/m³; AU (AU/SWA)

STEL (Inhalation): 1000 ppm; 2375 mg/m³; AU (AU/SWA)

IOELV-LTEL (Inhalation): 1210 mg/m³; EU (EU/OSHA)

List no. 1 under Council Directive 98/24/EC as amended. List last updated on 8/29/2023.

IOELV-LTEL (Inhalation): 500 ppm; EU (EU/OSHA)

List no. 1 under Council Directive 98/24/EC as amended. List last updated on 8/29/2023.

PEL (Inhalation): 1000 ppm; US (US/OSHA)

OSHA Annotated Table Z-1, www.osha.gov

PEL (Inhalation): 2400 mg/m³; US (US/OSHA)

OSHA Annotated Table Z-1, www.osha.gov

PEL (Inhalation): 500 ppm, (ST) 750 ppm, (C) 3000 ppm; US (Cal/OSHA)

OSHA Annotated Table Z-1, www.osha.gov

REL (Inhalation): 250 ppm; US (NIOSH)

OSHA Annotated Table Z-1, www.osha.gov

3. Ethanol (CAS: 64-17-5)

TWA [Ethyl alcohol] (Inhalation): 1000 ppm; 1880 mg/m³; AU (AU/SWA)

PEL [Ethyl alcohol (Ethanol)] (Inhalation): 1000 ppm; US (US/OSHA)

OSHA Annotated Table Z-1, www.osha.gov

PEL [Ethyl alcohol (Ethanol)] (Inhalation): 1900 mg/m³; US (US/OSHA)

OSHA Annotated Table Z-1, www.osha.gov

PEL [Ethyl alcohol (Ethanol)] (Inhalation): 1000 ppm; US (Cal/OSHA)

OSHA Annotated Table Z-1, www.osha.gov

REL [Ethyl alcohol (Ethanol)] (Inhalation): 1000 ppm; US (NIOSH)

OSHA Annotated Table Z-1, www.osha.gov

8.2 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. Use only outdoors or in well-ventilated area. Ensure all local, regional, national, and international regulations are being observed. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

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

Eye/face protection

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

Skin protection

Wear protective gloves and clothing.

Body protection

Wear suitable protective clothing. Wear protective gloves. Chemical resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

Respiratory protection

Use a NIOSH-approved Self-Containing Breathing Apparatus whenever exposure may exceed established Occupational Exposure Limits.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Aerosol spray
Color	Colorless
Odor	Solvent odor
Odor threshold	N/D
Melting point/freezing point	N/D
Boiling point or initial boiling point and boiling range	41°C (106°F)
Flammability	Not considered a flammable aerosol or an extremely flammable aerosol by OSHA (29 CFR 1910.1200)
Lower and upper explosion limit/flammability limit	N/D
Flash point	N/D
Explosive properties	Contains gas under pressure; may explode if heated
Auto-ignition temperature	N/D
Decomposition temperature	N/D
Oxidizing properties	Reacts violently with strong oxidizers
pH	N/A
Kinematic viscosity	N/D
Solubility	Insoluble in water
Partition coefficient n-octanol/water (log value)	N/D
Vapor pressure	261 mmHg at 25°C (77°F)
Evaporation rate	>3 Fast
Density and/or relative density	1.17 at 25°C (77°)
Relative vapor density	3.7 (Air=1)

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

Contains gas under pressure; may explode if heated. Pressurized container: may burst if heated.

10.3 Possibility of hazardous reactions

None known.

10.4 Conditions to avoid

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

10.5 Incompatible materials

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

10.6 Hazardous decomposition products

Thermal decomposition may produce: Carbon oxide(s), chlorine compounds, hydrogen chloride, fluorine compounds, hydrogen fluoride, carbonyl fluoride, fluorocarbons.

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SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Trans-1,2-Dichloroethylene
LD50 Oral - Mouse - 2122 mg/kg
LD50 Oral - Rat - 7902 mg/kg
LD0 Dermal - Rabbit - 5000 mg/kg
LC50 Inhalation - Rat - 96 mg/l - 4 hrs

Ethanol

LD50 Dermal - Rabbit - 2000 mg/kg
LC50 Inhalation - Mouse - >20 mg/l - 4 hrs
LD50 Oral - Rat - 2000 mg/kg

Acetone

LD50 Dermal - Rabbit - 20000 mg/kg
LC50 Inhalation - Rat - 50.1 mg/l - 8 hrs

1,1,1,2-Tetrafluoroethane

LC50 Inhalation - Rat - 1500 g/m3 - 4 hrs

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.

Specific target organ toxicity (STOT) - single exposure

May cause drowsiness or dizziness.

Specific target organ toxicity (STOT) - repeated exposure

Not classified.

Aspiration hazard

The ATE (gas inhalation) of the mixture is: 7500 ppmV.

Additional information

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

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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 light hydrocarbon 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-stimulating substances.

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

SECTION 12: Ecological information

Toxicity

Trans-1,2-dichloroethylene

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

Ethanol

LC50 - *Pimephales promelas* (fathead minnow) - 96 hrs >100 mg/l

EC50 - *Ceriodaphnia dubia* (water flea) - 48 hrs >100 mg/l

EC50 - *Chlorella vulgaris* - 72 hrs > 100 mg/l

NOEC - *Ceriodaphnia dubia* (water flea) - 10 days - 9.6 mg/l

Acetone

EC50 - *Daphnia magna* (water flea) - 10294-17704 mg/l - 48 hrs

LC50 - *Oncorhynchus mykiss* - 4740-6330 mg/l - 96 hrs

Persistence and degradability

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

Bioaccumulative potential

Not established.

Mobility in soil

No information available.

Other adverse effects

Avoid release to the environment.

SECTION 13: Disposal considerations

Disposal methods

Product disposal

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

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Sewage disposal

Avoid release into 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. Product should be fully characterized prior to disposal.

SECTION 14: Transport information

DOT (US)

UN Number: UN1950

Class: 2.2

Packing Group: N/A

Proper Shipping Name: Aerosols, non-flammable, (each not exceeding 1 L capacity)

IMDG

UN Number: UN1950

Class: 2.2

Packing Group: N/A

Proper Shipping Name: Aerosols, non-flammable, (each not exceeding 1 L capacity)

IATA

UN Number: UN1950

Class: 2.2

Packing Group: N/A

Proper Shipping Name: Aerosols, non-flammable, (each not exceeding 1 L capacity)

SECTION 15: Regulatory information

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

Massachusetts Right To Know Components (105 CMR 670)

Chemical name: DICHLOROETHYLENE TRANS

CAS number: 156-60-5

Chemical name: ACETONE

CAS number: 67-64-1

Chemical name: DENATURED ALCOHOL

CAS number: 64-17-5

Chemical name: NITROGEN

CAS number: 7727-37-9

Massachusetts Toxic Use Reduction Act (TURA) list

Chemical name: 1,2-Dichloroethylene (trans)

CAS number: 156-60-5

Chemical name: Acetone

CAS number: 67-64-1

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

Common name: NITROGEN
CAS number: 7727-37-9

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

Chemical name: NITROGEN
CAS number: 7727-37-9

US EPA PFAS master list (PFASMASTER)

Chemical name: 1,1,1,2-Tetrafluoroethane
CAS number: 811-97-2

US EPA PFAS structured chemicals list

Chemical name: 1,1,1,2-Tetrafluoroethane
CAS number: 811-97-2

US EPA TSCA public inventory

Chemical name: Trans-1,2-dichloroethylene
CAS number: 156-60-5

Chemical name: 1,1,1,2-Tetrafluoroethane
CAS number: 811-97-2

Chemical name: Acetone
CAS number: 67-64-1

Chemical name: Ethanol
CAS number: 64-17-5

Chemical name: Nitrogen
CAS number: 7727-37-9

SECTION 16: Other information

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

16.1 Further information/disclaimer

Safety Data Sheet

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 warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions of 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.

16.2 Preparation information

Prepared by: Jessica Wilson

Date prepared: 2/12/2025