PVF 3030

MATERIAL SAFETY DATA SHEET

he Valvoline Company

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PYROIL TRANS A/C 30LB CYLINDER

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity
Product Name: PYROIL TRANS A/C 30LB CYLINDER
General or Generic ID: HALOGENATED HYDROCARBON

Company
The Valvoline Company
P.O. Box 14000
Lexington, KY 40512

Telephone Numbers
Emergency: 1-800-274-5263
Information: 1-859-357-7206

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% (by weight)
ETHANE, 1,1,1,2-TETRAFLUORO	811-97-2	100.0

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3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye
Can cause eye irritation.

Skin
Causes burns and frostbite.

Swallowing
Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

Inhalation
Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful.

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Symptoms of Exposure

stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), and death.

Target Organ Effects

No data

Developmental Information

No data

Cancer Information

No data

Other Health Effects

No data

Primary Route(s) of Entry

Inhalation, Skin contact.

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4. FIRST AID MEASURES

Eyes

If material gets into the eyes, immediately flush eyes gently with water for at least 15 minutes while holding eyelids apart. If symptoms develop as a result of vapor exposure, immediately move individual away from exposure and into fresh air before flushing as recommended above. Seek immediate medical attention.

Skin

Treat burned or frostbitten skin by flushing the exposed area with lukewarm water. Seek immediate medical attention.

Swallowing

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

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Inhalation

If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

Note to Physicians

Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (See Section 3 - Swallowing) when deciding whether to induce vomiting.

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5. FIRE FIGHTING MEASURES

Flash Point

Not applicable

Explosive Limit

Not applicable

Autoignition Temperature

No data

Hazardous Products of Combustion

May form: carbonyl fluoride, hydrogen fluoride.

Fire and Explosion Hazards

HFC-134A is not flammable at ambient temperatures and atmospheric pressure. However, HFC-134A has been shown in tests to be combustible at pressures as low as 5.5 psig (at 177 C (350.6 F)) when mixed with air at concentrations of generally more than 60 volume % air. At lower temperatures, higher pressures are required for combustibility.

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Extinguishing Media
water fog.

Fire Fighting Instructions
Water may be used to keep fire-exposed containers cool until fire is out. Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

NFPA Rating
Health - 1, Flammability - 0, Reactivity - 1

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6. ACCIDENTAL RELEASE MEASURES

Small Spill
Allow to evaporate. Ventilate area.

Large Spill
Allow to evaporate. Persons not wearing protective equipment should be excluded from area until leak has been repaired.

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7. HANDLING AND STORAGE

Handling
Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. This is a high-pressure gas. Use piping and equipment adequately designed to withstand pressures to be encountered. Use with adequate ventilation. Close valve when not in use and when cylinder is empty. Always use a suitable hand truck or similar device for moving gas cylinders. Firmly secure cylinders during transport. Do not lift or move a cylinder by the cap. Do not roll or drag a cylinder to move it or allow cylinders to strike each other or any surface violently. Never tamper with or attempt to repair or alter cylinders, valves or any safety relief devices. Do not attempt to remove a stuck cap by using a lever in the cap ports. This may accidentally open the valve when the cap turns. Never work on a pressurized system. If there is a leak, close the cylinder valve, blow down the system by venting to a safe place,

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and then repair the leak. Be sure to read and understand all labels and other instructions supplied with all containers of this product. For safety information on general handling of compressed gas cylinders, it is recommended that a copy of Pamphlet P-1, Safe Handling of Compressed Gases in Containers, be obtained from the Compressed Gas Association, Inc.

Storage

Store cylinders upright and secured in a well-protected, well-ventilated, dry location away from heavy traffic and emergency exits. Do not allow the temperature where cylinders are stored to exceed 125 degrees F (52 degrees C). Store cylinders at least 20 feet away from highly combustible materials, and away from any sparks, flames, or any other source of heat or ignition. Protect cylinders from physical damage. Assigned storage places should be located where cylinders will not be knocked over or damaged by passing or falling objects. Segregate full and empty cylinders. Prevent full cylinders from being stored for excessive periods of time. If gas cylinders were designed to have valve caps, keep caps on and hand-tight at all times when cylinders are not in use or connected for use. Caps are for valve protection ONLY.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection

Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

Skin Protection

Wear resistant gloves such as: polyvinyl alcohol, Wear normal work clothing covering arms and legs..

Respiratory Protections

If workplace exposure limit(s) of product or any component is exceeded (See Exposure Guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (consult your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

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Engineering Controls
Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

Exposure Guidelines
Component

ETHANE, 1,1,1,2-TETRAFLUORO (811-97-2)
No exposure limits established

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9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point
(for product) -15.7 F (-26.5 C) @ 736.00 mmHg

Vapor Pressure
(for product) 4964.000 mmHg @ 77.00 F

Specific Vapor Density
3.180 @ AIR=1

Specific Gravity
1.210 @ 77.00 F

Liquid Density
10.000 lbs/gal @ 77.00 F
1.210 kg/l @ 25.00 C

Percent Volatiles (Including Water)
100.0 %

Evaporation Rate
FASTER THAN ETHYL ETHER

Appearance
No data

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State
LIQUID

Physical Form
No data

Color
CLEAR

Odor
No data

pH
Not applicable

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10. STABILITY AND REACTIVITY

azardous Polymerization
Product will not undergo hazardous polymerization.

Hazardous Decomposition
May form: carbonyl fluoride, hydrogen fluoride.

Chemical Stability
Stable.

Incompatibility
Avoid contact with: alkali metals, powdered metals.

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11. TOXICOLOGICAL INFORMATION

No data

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12. ECOLOGICAL INFORMATION

No data

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13. DISPOSAL CONSIDERATION

Waste Management Information
Return to supplier for reclamation.

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14. TRANSPORT INFORMATION

DOT Information - 49 CFR 172.101
DOT Description:
1,1,1,2-TETRAFLUOROETHANE,2.2,UN3159

Container/Mode:
CASES/SURFACE - NO EXCEPTIONS

NOS Component:
None

RQ (Reportable Quantity) - 49 CFR 172.101
Not applicable

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15. REGULATORY INFORMATION

US Federal Regulations
TSCA (Toxic Substances Control Act) Status
TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4
None

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SARA 302 Components - 40 CFR 355 Appendix A
None

Section 311/312 Hazard Class - 40 CFR 370.2
Immediate(X) Delayed(X) Fire( ) Reactive( ) Sudden Release of Pressure(X)

SARA 313 Components - 40 CFR 372.65
None

International Regulations
Inventory Status
Not determined

State and Local Regulations
California Proposition 65
None

ı6. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.