



SAFETY DATA SHEET

1. Product and Company Identification

PRODUCT NUMBER:	1091101	COMPANY PHONE:	1-800-241-8180
PRODUCT NAME:	AIR DUSTER	EMERGENCY TELEPHONE:	1-800-535-5053
PRODUCT DESCRIPTION:	All-Purpose, Non-Flammable, Sterilized Cleaner & Air Duster	INFOTRAC:	1-800-535-5053
COMPANY INFORMATION:	PRO CHEM, INC. 1475 Bluegrass Lakes Parkway Alpharetta, GA 30004		

2. Hazards Identification

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE Gases Under Pressure - Liquefied Gas, H280	SIGNAL WORD: WARNING	SYMBOL:	
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HAZARD STATEMENTS:

Contains gas under pressure; may explode if heated. Protect from sunlight. Store in a well-ventilated place.

OTHER HAZARDS WHICH DO NOT RESULT IN CLASSIFICATION:

Rapid evaporation of the liquid may cause frostbite. Vapors are heavier than air and can cause suffocation by reducing available oxygen. May cause cardiac arrhythmia. Misuse or intentional inhalation can be fatal as a result of effects on the heart, without alarming symptoms.

Note: This product is a consumer product and is labeled in accordance with the US Consumer Product Safety Commission regulations which take precedence over OSHA Hazard Communication labeling. The actual container label will not include the label elements above. The labeling above applies to industrial/professional products.

3. Composition / Information on Ingredients

Chemical Name	CAS	Concentration % by Weight
trans-1,3,3,3-Tetrafluoroprop-1-ene (Active ingredient)	29118-24-9	100

4. First Aid Measures

EMERGENCY OVERVIEW

EYES: For liquid contact, irrigate with running water for minimum of 15 minutes. Seek medical attention.

SKIN: For liquid contact, warm areas gradually and get medical attention if there is evidence of frost bite or tissue damage. Flush area with lukewarm water. Do not rub affected area. If blistering occurs, apply a sterile dressing. Seek medical attention.

INHALATION:

Remove to fresh air. Artificial respiration and/or oxygen may be necessary. Consult a physician.

INGESTION:

This material is a gas under normal atmospheric conditions and ingestion is unlikely.

MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED:

Acute: Anesthetic effects at high concentrations.

Delayed: None known or anticipated. See Section 11 for information on effects from chronic exposure, if any.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:

Notes to Physician: Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations (e.g., in enclosed spaces or with deliberate abuse). The use of other drugs with less arrhythmogenic potential should be considered. If sympathomimetic drugs are administered, observe for the development of cardiac arrhythmias.

5. Fire-Fighting Measures

SUITABLE FIRE EXTINGUISHING MEDIA:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water Mist, Dry Powder, Foam, Carbon Dioxide.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:

Unusual Fire and Explosion Hazards: If container is not properly cooled, it can rupture in the heat of a fire. Drains can be plugged and valves made inoperable by the formation of ice if rapid evaporation of large quantities of the liquefied gas occurs.

Hazardous Combustion Products: Hazardous decomposition products may include: Hydrogen Fluoride, Carbonyl fluoride. Carbon Oxides.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:

Self-contained breathing apparatus (SCBA) is required if containers rupture and contents are released under fire conditions. Cool containers/tanks with water spray. Product is not combustible under normal conditions. However, this Material can ignite when mixed with air under pressure and exposed to strong ignition sources. Do not allow run-off from fire fighting to enter drains or water courses. Vapors are heavier than air and can cause suffocation by reducing oxygen available for breathing. Some risk may be expected of corrosive and toxic decomposition products. Fire may cause evolution of: Hydrogen fluoride

6. Accidental Release Measures

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus. Keep upwind of leak -evacuate until gas has dispersed.

ENVIRONMENTAL PRECAUTIONS:

Stop spill/release if it can be done safely. Water spray may be useful in minimizing or dispersing vapors. If spill occurs on water notify appropriate authorities and advise shipping of any hazard.

METHODS & MATERIALS FOR CONTAINMENT & CLEANUP:

Ventilate area using forced ventilation, especially low or enclosed places where heavy vapors might collect. Notify relevant authorities in accordance with all applicable regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken.

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with cleanup. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

7. Handling and Storage**SAFE HANDLING:**

Comply with state and local regulations. Avoid contact with skin, eyes and clothing. Avoid breathing vapors. Wash hands thoroughly after handling. Wash clothing after use. Decomposition will occur when product comes in contact with open flame or electrical heating elements. Use good personal hygiene practices and wear appropriate personal protective equipment (see Section 8). Contents are under pressure. Gases can accumulate in confined spaces and limit oxygen available for breathing. Use only with adequate ventilation. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146.

SAFE STORAGE & INCOMPATIBILITIES:

Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well ventilated areas away from heat, direct sunlight. Store only in approved containers. Protect container(s) against physical damage. "Empty" containers retain residue and may be dangerous.

8. Exposure Controls / Personal Protection**CONTROL PARAMETERS:**

COMPONENT	ACIGH TLV (TWA)	ACIGH TLV (STEL)	OSHA PEL (TWA)	OTHER PEL
trans-1,3,3,3-Tetrafluoroprop-1-ene				800 ppm Honeywell AEL

PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face Protection: The use of eye protection (such as splash goggles) that meets or exceeds ANSI Z.87.1 is recommended when there is potential liquid contact to the eye. Depending on conditions of use, a face shield may be necessary.

Skin Protection: Impervious, insulated gloves recommended.

Respiratory Protection: Wear NIOSH approved respiratory protection as appropriate.

Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

APPROPRIATE ENGINEERING CONTROLS:

Use only with adequate ventilation. Keep container tightly closed.

9. Physical & Chemical Properties

Appearance & Odor:	Clear, colorless liquefied gas with a slight ethereal odor.	Explosive Limit-Lower (%):	None < 28°C
Odor Threshold:	No data.	Explosive Limit-Upper (%):	None < 28°C
pH:	Not applicable.	Vapor Density (air= 1.00):	3.9
Melting/Freezing Point:	No data.	Vapor Pressure @ 70°F:	61 PSIG
Initial Boiling Point/Range:	-19°C	Solubility in Water @ 70°F:	0.0373%
Viscosity:	No data.	Auto-Ignition Temp:	368°C
Flash Point (Method):	None per ASTM E681	Decomposition Temp:	No data.
Specific Gravity (H2O = 1.00):	1.19	Percent Volatile by Volume:	100%
Evaporation Rate:	> 1 (Ethyl Ether= 1.0)		

10. Stability & Reactivity Information**CHEMICAL STABILITY:**

Stable at normal temperatures and conditions.

POSSIBILITY OF HAZARDOUS REACTIONS:

Does not occur.

CONDITIONS TO AVOID:

When pressurized with air or oxygen, the mixture may become flammable. Certain mixtures of HCFCs or HFCs with chlorine may become flammable or reactive under certain conditions. To avoid thermal decomposition, do not overheat.

INCOMPATIBLE MATERIALS:

Alkali or Alkaline Earth Metals. Powdered Metal. Powdered Metal Salts.

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon oxides, Hydrogen fluoride, Carbonyl fluoride, Fluorocarbons.

11. Toxicological Information

TOXICOLOGICAL (HEALTH) EFFECTS:

EFFECTS OF OVER EXPOSURE:

Eyes: Liquid can cause severe irritation, redness, tearing, blurred vision, and possible freeze burns.

Skin: Contact with evaporating liquid can cause frostbite.

Inhalation: Inhalation of vapor may produce anesthetic effects and feeling of euphoria. Prolonged overexposure can cause rapid breathing, headache, dizziness, narcosis, unconsciousness, and death from asphyxiation, depending on concentration and time of exposure.

Ingestion: Aspiration hazard!

SPECIFIC TARGET ORGAN TOXICITY -single exposure:

Not expected to cause organ effects from single exposure.

SPECIFIC TARGET ORGAN TOXICITY -repeated exposure:

Not expected to cause organ effects from repeated exposure.

CARCINOGENICITY:

Not expected to cause cancer. This substance is not listed as a carcinogen by IARC, NTP or OSHA.

GERM CELL MUTAGENICITY:

Not expected to cause heritable genetic effects.

REPRODUCTIVE TOXICITY:

Not expected to cause reproductive toxicity.

OTHER COMMENTS:

High concentrations may reduce the amount of oxygen available for breathing, especially in confined spaces. Hypoxia (inadequate oxygen) during pregnancy may have adverse effects on the developing fetus.

INFORMATION ON TOXICOLOGICAL EFFECTS OF COMPONENTS:

trans-1,3,3,3-Tetrafluoropro-1-ene

Acute Inhalation Toxicity:

Species: mouse

Note: Acute (4-Hour) Inhalation Toxicity Screening Study (mouse): No lethality at >100,000 ppm.

LC50: > 207000 ppm

Exposure time: 4 h

Species: rat

Skin Irritation:

Species: rabbit

Result: No skin irritation

Method: OECD Test Guideline 404

Sensitisation:

Cardiac sensitization

Species: dogs

Result: Did not cause sensitisation on laboratory animals.

Repeated Dose Toxicity:

Species: rat

Application Route: Inhalation

Exposure time: 13 Weeks

Note: Causes mild effects on the heart. NOEL 5,000 ppm

Genotoxicity in vitro:

Test Method: Chromosome aberration test in vitro

Cell type: Human lymphocytes

Result: negative

Test Method: Ames test

Result: negative

Genotoxicity in vivo:

Test Method: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)

Species: mouse

Cell type: Micronucleus

Application Route: Inhalation

Result: negative

Teratogenicity:

Species: rabbit

Method: Prenatal Developmental Inhalation Toxicity Study

Note: Did not show teratogenic effects in animal experiments.

Species: rat

Method: Prenatal Developmental Inhalation Toxicity Study

Note: Did not show teratogenic effects in animal experiments.

Further Information:

Note: Excessive exposure may cause central nervous system effects including drowsiness and dizziness. Excessive exposure may also cause cardiac arrhythmia. Rapid evaporation of the liquid may cause frostbite.

12. Ecological Information

TOXICITY:

Ecotoxicity Effects:

Toxicity to Fish:

NOEC: > 117 mg/l

Exposure time: 96 h

Species: Cyprinus carpio (Carp)

Toxicity to daphnia and other aquatic invertebrates:

EC50: > 160 mg/l

Exposure time: 48 h

Species: Daphnia magna (Water flea)

Toxicity to Algae: Growth inhibition
NOEC: > 170 mg/l
Exposure time: 72 h
Species: Algae

PERSISTENCE AND DEGRADABILITY:
Aerobic Result: Not readily biodegradable. Further information on ecology
Additional Ecological Information: No data available

BIOACCUMULATIVE POTENTIAL:
Not expected as having the potential to bioaccumulate.

MOBILITY IN SOIL:
Due to the extreme volatility of liquefied gases, air is the only environmental compartment in which they will be found.

OTHER ADVERSE EFFECTS:
None anticipated.
trans-1,3,3,3-Tetrafluoropro-1-ene: GWP 6

13. Disposal Consideration

DISPOSAL METHODS:
Waste Disposal: Reclaim by distillation, incinerate, or remove to a permitted waste facility.

ENVIRONMENTAL HAZARDS:
Empty pressure vessels should be returned to the supplier.
**Comply With All State and Local Regulations **

14. Transportation Information

DOT: UN Number: UN3163
UN Proper Shipping Name: Liquefied Gas, N.O.S., 2.2 (trans-1,3,3,3-Tetrafluorop rop-1-ene)
Transport Hazard Class(es):
Class: 2.2

SPECIAL PROVISIONS:
DOT-SP 11516: In accordance with this special permit, this product is not subject to labeling requirements unless offered for transportation by air. This product is not subject to placarding requirements. Outside packaging must be marked with proper shipping description and 'DOT-SP 11516'

15. Regulatory Information

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

REGULATORY INFORMATION:
Chemical Inventories: USA TSCA: All components of this product are listed on the TSCA Inventory.
SARA Title III: CERCLA/SARA (Section 302) Extremely Hazardous Substances and TPQs (in pounds):
This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.
SARA (311, 312) Hazard Class:
Acute Health: Yes
Chronic Health: No
Fire Hazard: No
Pressure Hazard: Yes
SARA (313) Chemicals: Not listed
California Proposition 65: This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.

OTHER INFORMATION:
trans-1,3,3,3-Tetrafluoroprop-1-ene is excluded from the regulatory definition of volatile organic compounds or VOC.

16. Other Information

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 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.