SECTION 1: Identification of the Substance/Mixture and Company Identification

1.1. Product Identifier

Product Form: Substance
Trade Name: Vacuum-Duster
CAS No: 011-97-2
Formula: C2H2F4

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture: Follow Label Directions
Use of the substance/mixture: Air Blower

1.3. Details of the supplier of the safety data sheet

Peça Products Inc.
Rowel WI 53511
USA

1.4. Emergency telephone number

Emergency number: 800-424-5506

SECTION 2: Hazard Identification

2.1. Classification of the substance or mixture

Classification (GHS-US):
Compressed gas: H340

2.2. Label elements

GHS-US Labeling:
Hazard pictograms: (GHS-US)

Signal word (GHS-US): Warning
Hazard statements (GHS-US):
H340 - Contains gas under pressure; may explode if heated
P401+P403 - Protect from sunlight. Store in a well-ventilated place
P251 - Protected container. Do not shake or tam, even after use
P413 - Do not place in temperatures exceeding 40°C (104°F)

2.3. Other hazards

Other hazards not contributing to the classification: Contents gas under pressure, may explode if heated, ventilation required in areas of possible exposure

2.4. Unknown stability (GHS-US)

NO data available
SECTION 3: Composition/Information on Ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
<th>Classification (GN0-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,1,1,2-tetrafluoroethane</td>
<td>845-18-2</td>
<td>&gt;92</td>
<td>Connected to 1,2-HC-183</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16.

3.2. Mixtures

Not applicable.

SECTION 4: First Aid Measures

4.1. Description of first aid measures

First-aid measures general
- Check airway, maintain breathing and circulation. If breathing is depressed or stopped, perform mouth-to-mouth and/or mouth-to-nose resuscitation. Provide artificial respiration. Do not attempt mouth-to-mouth resuscitation if the victim is suspected to have ingested a corrosive substance.

First-aid measures after inhalation
- Remove to fresh air. If breathing is difficult, give oxygen.

First-aid measures after skin contact
- Remove contaminated clothing. Wash affected skin immediately with large amounts of water.

First-aid measures after eye contact
- Flush immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Take victim to hospital.

First-aid measures after ingestion
- Do not induce vomiting. Give at least 1-2 glasses of water. Take victim to hospital.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects
- Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/effects after inhalation

Symptoms/effects after skin contact
- Reddening, Discoloration, Feasibility.

Symptoms/effects after eye contact
- Not applicable.

Symptoms/effects after ingestion
- Not applicable.

Chronic symptoms
- Not affected known.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available.

SECTION 5: Fire Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media
- EXTINGUISHING MEDIA FOR SURROUNDING FIRES: Adopt extinguishing media in the environment.

Unsuitable extinguishing media
- No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

Fire hazard
- DIRECT FIRE HAZARD. Non-combustible.

Explosion hazard
- INDIRECT EXPLOSION HAZARD. Heavily sealed pressure vessel.

Reactivity
- On burning, releases of toxic and corrosive gases/vapours (hydrofluoric acid, carbon monoxide, carbon dioxide, hydrogen fluoride). Reacts with strong acids.

04/10/2015
8.3. Advice for firefighters

Emergency measures:
- Exposure to fire heat: consider evacuation.
- Firefighting:
  - Use water spray to cool containers. Keep the container cool. Do not allow a fire to break out. Do not allow the liquid to run into sewers.
  - Cool the container with spraying water if necessary. Keep the container cool. Do not allow a fire to break out. Do not allow the liquid to run into sewers.

Protection during firefighting:
- Firefighting equipment must be handled with the appropriate protective equipment.

Protection information:

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment, and emergency procedures

6.1.1. For non-emergency personnel
- Protection equipment:

6.1.2. For emergency personnel
- Protection equipment:
  - Use protective clothing and a self-contained breathing apparatus.

6.2. Environmental precautions

- Prevent entry to sewers and waterways. Notify authorities if liquid enters sensitive or protected areas.

6.3. Methods and material for containment and cleaning up

- Containment:
  - Use chemical or physical barriers to contain the spill. Keep the area cool. Keep the area cool.

- Methods for cleaning up:
  - Use chemical or physical barriers to contain the spill. Keep the area cool. Keep the area cool.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling

- Additional hazards when handled:
  - Do not mix with other chemicals.

- Precautions for safe handling:
  - Do not mix with other chemicals.

7.2. Conditions for safe storage; including any incompatibilities

- Storage conditions:
  - Store only in the original container in a cool, well-ventilated place away from heat sources.

- Incompatible products:
  - Strong bases, strong acids.

- Incompatible materials:
  - Sulfuric acid, strong bases.

- Storage temperature:
  - Store at room temperature.

- Hazardous decomposition:
  - Do not use in closed systems.

- Prohibitions on mixed storage:
  - Keep away from other chemicals.

- Storage area:
  - Store in a cool, dry area away from direct sunlight. Keep the area well-ventilated.

- Special information on packaging:
  - Special requirements: Use a compatible container and packaging to meet the regulatory requirements.

- Special information on waste:
  - Suitable packaging. No data available. Material to avoid: No data available.

SECTION 8: Exposure Controls/Personal Protection

Follow label directions.
6.1. Control parameters

6.2. Exposure controls

Personal protective equipment: Gloves, Safety glasses. Avoid all unnecessary exposure.

- Materials for protective clothing
  - GIVE GOOD RESISTANCE: neoprene, nitrile rubber, butyl rubber, neoprene
  - Breathable gloves

- Other information
  - Do not eat, drink or smoke during use.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

**Physical state:** Gas

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Colorless</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>0.03204 gram/mol</td>
</tr>
<tr>
<td>Color</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odour</td>
<td>Ether-like odor</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate =1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>-161 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>-26 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>Non applicable</td>
</tr>
<tr>
<td>Critical Temperature</td>
<td>101 °C</td>
</tr>
<tr>
<td>Saturation Temperature</td>
<td>&gt; 743 °C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>350 °C</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>5720 hPa</td>
</tr>
<tr>
<td>Critical pressure</td>
<td>40500 kPa</td>
</tr>
<tr>
<td>Relative vapor pressure at 21 °C</td>
<td>7.54 (23 °C)</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.2 (27 °C)</td>
</tr>
<tr>
<td>Density</td>
<td>1206 kg/m³ (27 °C)</td>
</tr>
</tbody>
</table>
Log Pow: 1.48 (OECD 107: Partition Coefficient (water/octanol), Shake Flask Method)
Log Kow: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosive properties: No data available
Oxidizing properties: No data available
Explosive limits: No data available

### SECTION 10: Stability and Reactivity

#### 10.1. Reactivity
On burning: release of toxic and corrosive gases/vapours (hydrofluoric acid, carbon monoxide - carbon dioxide, carbonyl fluoride). Reacts with (some) acids.

#### 10.2. Chemical stability
Stable under normal conditions

#### 10.3. Possibility of hazardous reactions
Not established.

#### 10.4. Conditions to avoid
Direct sunlight. Extremely high or low temperatures.

#### 10.5. Incompatible materials
Strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

### SECTION 11: Toxicological Information

#### 11.1. Information on toxicological effects
Acute toxicity: Not classified

**134a (811-97-2)**
- LC50 inhalation rat (mg/l): > 2000 mg/l (4h)
- LC50 inhalation rat (ppm): > 358000 ppm/4h (4h)

Skin corrosion/irritation: Not classified
Sensitizing eye damage/irritation: Not classified
Respiratory or skin sensitization: Not classified
Genotoxicity: Not classified based on available data, the classification criteria are not met.
Carcinogenicity: Not classified
Reproductive toxicity: Not classified based on available data. The classification criteria are not met. Specific target organ toxicity (single exposure): Not classified based on available data. The classification criteria are not met.

Specific target organ toxicity (repeated): Not classified based on available data. The classification criteria are not met.

Adaptation hazard: Not classified based on available data. The classification criteria are not met.

Potential adverse human health effects and symptoms:
- Symptom/symptoms after inhalation: Exposure to high concentrations - accelerated heart action, Disturbances of heart rate, Coordination disorders, Feeling of weaknees, Respiratory difficulties, Vomiting, Nausea, Disorientation of consciousness, Risk of lung edema, Respiratory collapse.
- Symptom/symptoms after skin contact: Red skin, Blister, Foul smell.
- Symptom/symptoms after eye contact: Not applicable.
- Symptom/symptoms after ingestion: Not applicable.
- Chronic symptoms: No gasses known.

SECTION 12: Ecological Information

12.1. Toxicity

Ecotoxicity - general: No environmental hazard.
Ecotoxicity - air: T4-UNCLASS 52.5.
Ecotoxicity - water: Minimally toxic (surface water). Maximum concentration in drinking water: 1.5 mg/l (freshwater) (Danzov, IAAM/EC). Slightly harmful to fish (LC50 (96h) 100-1000 mg/l). Slightly harmful to invertebrates (Gephyro) (LC50 (96h) 100-1000 mg/l).

LC50 fish 1: 450 mg/l 96h Salmo gairdneri (Oncorhynchus mykiss)
LC50 Daphnia 1: 980 mg/l 96h; Copepoda magna

12.2. Persistence and degradability

Persistence and degradability: Not readily biodegradable in water.

12.3. Bioaccumulative potential

Bioconcentration factor (BSA): 814-972.
Bioconcentration factor (BSA) other aquatic organisms: 39 (Estimated value).
Bioconcentration factor (BSA) Daphnia: 1.25 (OECD 107; Partition Coefficient (octanol/water); Shake Flask Method).

12.4. Mobility in soil

No additional information available.

12.5. Other adverse effects

Other information: Avoid release to the environment.

SECTION 13: Disposal Considerations

13.1. Waste treatment methodologies

Waste disposal recommendations: Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or toxic problems but are further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Refer to manufacturer's supper for information on necessary recycling.
Additional information: LWGA (the Netherlands), KCA category II. Hazardous waste according to Directive 2008/98/EC.

Ecology - waste materials: Avoid release in the environment.

SECTION 14: Transport information

In accordance with ADH-1/RID, ADR/1/ADN/R/MC3G/NIKC0/011.

US DOT (ground):
ICAO/IATA (air):
IMO/MDG (water):

Special Provisions:
DOT-Sp 10232: In accordance with this special permit, the product container is marked with DOT-Sp 10232 instead of 20. This packaging is approved for shipping as a Consumer Commodity.

DOT-Sp 15148: In accordance with this special permit, the product container is marked with DRT-Sp 15148 instead of 20. This packaging is approved for shipping as a Consumer Commodity.

14.2. UN proper shipping name:
DOT Proper Shipping Name: TCS05JX

Department of Transportation (DOT) / Hazard Class:

Hazard Class: 2.2 - Non-Inflammable compressed gas 49 CFR 173.115

DOT Special Provisions (49 CFR 172.104):

DOT Special Provisions (49 CFR 172.102):

Transportation Canada:
DOT Packaging Exception (49 CFR 173.100):
DOT Packaging Non-Bulk (49 CFR 173.100a):
DOT Packaging Bulk (49 CFR 173.100):

14.2. Additional Information:

Other Information: No supplementary information available.

State during transport (ADR/RID):
as liquid, gas, under pressure.

Overland transport:
Class (ADR):
Hazard Identification number (Mark No.):
Classification code (ADR):

Danger labels (ADR):
Orange plate:

Tunnel radiation code:
CE

Transport by sea:
DOT Visual Stowage Location: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and/or a passenger vessel.

EmSNo. (1):
EmSNo. (2):
Air transport:

REV.001/05
SECTION 15: Regulatory Information

15.1 US Federal regulations

1910.121(q-97-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
SARA Section 311/312 Hazard Classes

Sudden release of pressure hazard

15.2 International regulations

CANADA

Class A - Compressed Gas

EU Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 (CLP)

Full text of chlorines-see section 18

Classification according to Directive 96/61/EC or (99/45/EC) n.d.

classified

15.2.1 National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other Information

Indications of changes
Revision - 04-19-2016

Other information
None

Hazard of H-phenylenepropyne section 16:

Compressed gas
H800

Gases under pressure Compressed gas
Contains gas under pressure, may explode if heated

NFPA Health Hazard
1 - Exposure could cause irritation but only minor residual

04/19/2016
NFPA Fire Hazard
0 - Material that will not burn

NFPA Reactivity
1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.

Hazardous Materials Rating

Health

Flammability

Physical

Personal Protection

Slight Hazard - Irritation or minor reversible injury possible

(Slight Hazard)