

SAFETY DATA SHEET

| | 1. Product and Company Ident | ification | |
|---|--|---|--|
| Product identifier | Rx11-Flush Cylinders (4300-15, 4300-26) | | |
| Other means of identification | Not available | | |
| Recommended use | For flushing AC and refrigeration systems | | |
| Recommended restrictions | None known. | | |
| Manufacturer information | Nu-Calgon 2611 Schuetz Road St. Louis, MO 63043 US Phone: 314-469-7000 / 800-554-5499 Emergency Phone: 1-800-424-9300 (CHEMTREC) | | |
| Supplier | See above. | | |
| | 2. Hazards Identification | n | |
| Physical hazards | Gases under pressure | Liquefied gas | |
| Health hazards | Acute toxicity, inhalation | Category 4 | |
| | Serious eye damage/eye irritation | Category 2 | |
| | Specific target organ toxicity, single exposure | Category 3 narcotic effects | |
| Environmental hazards | Not classified. | | |
| WHMIS 2015 defined hazards | Not classified | | |
| Label elements | | | |
| Signal word | Warning | | |
| Hazard statement | Contains gas under pressure; may explode if h irritation. May cause drowsiness or dizziness. | neated. Harmful if inhaled. Causes serious eye | |
| Precautionary statement | | | |
| Prevention | Avoid breathing mist or vapor. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Wear eye protection. | | |
| Response | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. | | |
| Storage | Protect from sunlight. Store in a well-ventilated place. Keep container tightly closed. Store locked up. | | |
| Disposal | Dispose of container in accordance with local, | regional, national and international regulations. | |
| WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC) | None known | | |
| WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC) | None known | | |
| Hazard(s) not otherwise classified (HNOC) | None known. | | |
| Supplemental information | None. | | |
| | 3. Composition/Information on Ir | ngredients | |

Mixture

| Chemical name | Common name and synonyms | CAS number | % |
|--------------------------------|--------------------------|------------|--------|
| (E)-1,2-Dichloroethene | | 156-60-5 | 40-70* |
| Butane, 1,1,1,3,3-pentafluoro- | | 406-58-6 | 5-10* |
| Dimethyl carbonate | | 616-38-6 | 1-5* |

| Chemical name | Common name and synonyms | CAS number | % |
|--|---|--|---|
| Ethane, 1,1,1,2-tetrafluoro- | | 811-97-2 | 10-30* |
| Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro- | | 138495-42-8 | 5-10* |
| All concentrations are in percent by Composition comments | / weight unless ingredient is a gas. Gas conce US GHS: The exact percentage (concentration secret in accordance with paragraph (i) of §1 *CANADA GHS: The exact percentage (concentrate secret.) | on) of composition has been v 910.1200. | vithheld as a trade |
| | 4. First Aid Measures | 3 | |
| Inhalation | IF INHALED: Remove person to fresh air and CENTER or doctor if you feel unwell. | d keep comfortable for breathi | ng. Call a POISON |
| Skin contact | Flush with cool water. Wash with soap and w | vater. Obtain medical attentior | n if irritation persists. |
| Eye contact | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if preser and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. | | |
| Ingestion | Rinse mouth. Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious or is convulsin Obtain medical attention. | | |
| Most important symptoms/effects, acute and delayed | Symptoms may include stinging, tearing, red and pain. | ness, swelling, and blurred vis | sion. May cause redness |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and tre give oxygen. Symptoms may be delayed. | eat symptomatically. In case o | f shortness of breath, |
| General information | Ensure that medical personnel are aware of a protect themselves. In the case of accident o (show the label where possible). Use of an in data sheet to the doctor in attendance. Avoid children. | or if you feel unwell, seek med npervious apron is recommen | ical advice immediately ded. Show this safety |
| | 5. Fire Fighting Measur | es | |
| Suitable extinguishing media | Alcohol foam. Carbon dioxide. Dry chemical. | Fog. | |
| Unsuitable extinguishing media | Do not use water jet as an extinguisher, as the | nis will spread the fire. | |
| Specific hazards arising from the chemical | During fire, gases hazardous to health may b | be formed. | |
| Special protective equipment and precautions for firefighters | Firefighters should wear full protective clothin | ng including self-contained bre | eathing apparatus. |
| Fire-fighting equipment/instructions | In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so risk. Cool containers with flooding quantities of water until well after fire is out. For massi cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw a burn out. | | out. For massive fire in |
| Specific methods | Use standard firefighting procedures and cor | nsider the hazards of other inv | olved materials. |
| General fire hazards | Contents under pressure. Pressurized contai | , , , , , | ed to heat or flame. |
| Hazardous combustion products | May include and are not limited to: Oxides of | carbon. | |
| | 6. Accidental Release Mea | sures | |
| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. Keep out of low areas. Wear appropriate protective equipme and clothing during clean-up. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors and spray mists. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Local authorities should be advised it significant spillages cannot be contained. For personal protection, see section 8 of the SDS. | | g should be worn for aterial unless wearing . Keep people away es should be advised if |
| Methods and materials for containment and cleaning up | Large Spills: Stop the flow of material, if this possible. Cover with plastic sheet to prevent and place into containers. Following product | spreading. Absorb in vermicu | lite, dry sand or earth |
| | Small Spills: Wipe up with absorbent materia remove residual contamination. | I (e.g. cloth, fleece). Clean su | rface thoroughly to |
| | Never return spills to original containers for re | e-use. For waste disposal, se | e section 13 of the SDS. |

| | Avoid discharge into drains, water courses or onto the ground. Do not discharge into lakes, streams, ponds or public waters. | | |
|--|--|--|--|
| | 7. Handling and S | Storage | |
| ecautions for safe handling | Do not taste or swallow. Avoid breathing vapor. Avoid contact with eyes, skin and clothing. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Use good industrial hygiene practices in handling this material. When using, do not eat, drink or smoke Wash thoroughly after handling. Keep container tightly closed. | | |
| nditions for safe storage, Iuding any incompatibilities | Store locked up. Store in a closed container away from incompatible materials. Store in a well-ventilated place. Refrigeration recommended. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children. | | |
| | 8. Exposure Controls/Pers | sonal Protection | |
| cupational exposure limits | | | |
| | upational Health & Safety Code, Sche | | |
| Components | Туре | Value | |
| (E)-1,2-Dichloroethene (CAS 156-60-5) | TWA | 793 mg/m3 | |
| | | 200 ppm | |
| Canada. British Columbia O Safety Regulation 296/97, as | | for Chemical Substances, Occupational Health and | |
| Components | Туре | Value | |
| (E)-1,2-Dichloroethene (CAS 156-60-5) | TWA | 200 ppm | |
| • | eg. 217/2006, The Workplace Safety A | • | |
| Components | Туре | Value | |
| (E)-1,2-Dichloroethene (CAS 156-60-5) | TWA | 200 ppm | |
| , | ntrol of Exposure to Biological or Che | emical Agents) | |
| Components | Туре | Value | |
| (E)-1,2-Dichloroethene (CAS 156-60-5) | TWA | 200 ppm | |
| Canada, Quebec OELs, (Min | | a the Quelity of the Werk Environment) | |
| Components | nistry of Labor - Regulation Respectin Type | Value | |
| Components (E)-1,2-Dichloroethene | | | |
| Components | Туре | Value 793 mg/m3 | |
| Components (E)-1,2-Dichloroethene (CAS 156-60-5) | Type TWA | Value 793 mg/m3 200 ppm | |
| Components (E)-1,2-Dichloroethene (CAS 156-60-5) | Туре | Value 793 mg/m3 200 ppm | |
| Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. OSHA Table Z-1 Limits f Components (E)-1,2-Dichloroethene | Type TWA for Air Contaminants (29 CFR 1910.10 | Value 793 mg/m3 200 ppm 200) | |
| Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. OSHA Table Z-1 Limits f Components | Type TWA for Air Contaminants (29 CFR 1910.10 Type | Value 793 mg/m3 200 ppm Value Value | |
| Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. OSHA Table Z-1 Limits f Components (E)-1,2-Dichloroethene | Type TWA for Air Contaminants (29 CFR 1910.10 Type PEL | Value 793 mg/m3 200 ppm Value 790 mg/m3 | |
| Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. OSHA Table Z-1 Limits f Components (E)-1,2-Dichloroethene (CAS 156-60-5) | Type TWA for Air Contaminants (29 CFR 1910.10 Type PEL | Value 793 mg/m3 200 ppm Value 790 mg/m3 | |
| Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. OSHA Table Z-1 Limits f Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. ACGIH Threshold Limit | Type TWA for Air Contaminants (29 CFR 1910.10 Type PEL Values | Value 793 mg/m3 200 ppm Value Value 790 mg/m3 200 ppm | |
| Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. OSHA Table Z-1 Limits f Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. ACGIH Threshold Limit Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. NIOSH: Pocket Guide to | Type TWA for Air Contaminants (29 CFR 1910.10 Type PEL Values Type TWA | Value 793 mg/m3 200 ppm Value 790 mg/m3 200 ppm Value 200 ppm 200 ppm | |
| Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. OSHA Table Z-1 Limits f Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. ACGIH Threshold Limit Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. ACGIH Threshold Limit Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. NIOSH: Pocket Guide to Components | Type TWA for Air Contaminants (29 CFR 1910.10 Type PEL Values Type TWA O Chemical Hazards Type | Value 793 mg/m3 200 ppm Value 790 mg/m3 200 ppm Value 200 ppm Value 200 ppm Value Value Value Value Value Value Value Value Value | |
| Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. OSHA Table Z-1 Limits f Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. ACGIH Threshold Limit Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. NIOSH: Pocket Guide to | Type TWA for Air Contaminants (29 CFR 1910.10 Type PEL Values Type TWA | Value 793 mg/m3 200 ppm Value 790 mg/m3 200 ppm Value Value Value Value Value Value Value Value Value You ppm Value You ppm You ppm </td | |
| Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. OSHA Table Z-1 Limits f Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. ACGIH Threshold Limit Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. NIOSH: Pocket Guide to Components (E)-1,2-Dichloroethene (CAS 156-60-5) | Type TWA for Air Contaminants (29 CFR 1910.10 Type PEL Values Type TWA O Chemical Hazards Type TWA | Value 793 mg/m3 200 ppm Value 790 mg/m3 200 ppm Value 200 ppm Value Value Value Value Value Value 200 ppm Value 200 ppm Value 200 ppm Value 200 ppm | |
| Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. OSHA Table Z-1 Limits f Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. ACGIH Threshold Limit Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. NIOSH: Pocket Guide to Components (E)-1,2-Dichloroethene (CAS 156-60-5) | Type TWA for Air Contaminants (29 CFR 1910.10 Type PEL Values Type TWA O Chemical Hazards Type | Value 793 mg/m3 200 ppm Value 790 mg/m3 200 ppm Value 200 ppm Value Value Value Value Value Value 200 ppm Value 200 ppm Value 200 ppm Value 200 ppm | |
| Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. OSHA Table Z-1 Limits f Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. ACGIH Threshold Limit Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. NIOSH: Pocket Guide to Components (E)-1,2-Dichloroethene (CAS 156-60-5) US. AIHA Workplace Environ | Type TWA for Air Contaminants (29 CFR 1910.10 Type PEL Values Type TWA O Chemical Hazards Type TWA | Value 793 mg/m3 200 ppm Value 790 mg/m3 200 ppm Value Value Value Value Value Value Value 200 ppm Value Value Value Z00 ppm Value Z00 ppm | |

| Appropriate engineering controls | Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. | |
|-----------------------------------|---|--|
| Individual protection measures, | such as personal protective equipment | |
| Eye/face protection | Tightly fitting safety goggles. | |
| Skin protection | | |
| Hand protection | Impervious gloves. Confirm with reputable supplier first. Avoid contact with the skin. | |
| Other | Wear suitable protective clothing. As required by employer code. | |
| Respiratory protection | Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2). | |
| Thermal hazards | Not applicable. | |
| General hygiene considerations | Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. When using do not eat or drink. | |

9. Physical and Chemical Properties

| Appearance | Clear |
|--|-----------------------|
| Physical state | Gas. |
| Form | Liquefied gas. |
| Color | Colorless |
| Odor | Slight ethereal. |
| Odor threshold | Not available. |
| pH | Not available. |
| Welting point/freezing point | Not available. |
| nitial boiling point and boiling range | 105.8 °F (41 °C) |
| Pour point | Not available. |
| Specific gravity | Not available. |
| Partition coefficient (n-octanol/water) | Not available. |
| Flash point | Not available. |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not applicable. |
| Jpper/lower flammability or exp | losive limits |
| Flammability limit - lower (%) | > 5 |
| Flammability limit - upper (%) | < 14.4 |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |
| /apor pressure | 284 mm Hg |
| /apor density | 3.4 (air = 1) |
| Relative density | Not available. |
| Solubility(ies) | 0.4 g/100g H2O @ 20°C |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| /iscosity | Not available. |
| Other information | |
| Explosive properties | Not explosive. |
| Oxidizing properties | Not oxidizing. |
| Percent volatile | 100 % |
| VOC (Weight %) | 697 g/l |
| | |

10. Stability and Reactivity

| Reactivity | May react with strong bases or oxidizing agents. Alkali metals. Powdered metal. |
|---------------------------------------|---|
| Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use. |
| Chemical stability | Material is stable under normal conditions. |
| Conditions to avoid | Do not mix with other chemicals. |
| Incompatible materials | Strong oxidizing agents. |
| Hazardous decomposition products | May include and are not limited to: Oxides of carbon. Hydrogen fluoride. |
| | |

11. Toxicological Information

| | V | | | |
|--|---|---|--|--|
| Routes of exposure | Eye, Skin contact, Inhalation, Ingestion. | | | |
| Information on likely routes of | exposure | | | |
| Ingestion | May cause stomach distress, nausea | or vomiting. | | |
| Inhalation | Harmful if inhaled. May cause drowsi | Harmful if inhaled. May cause drowsiness and dizziness. Headache. Nausea, vomiting. | | |
| Skin contact | No adverse effects due to skin contac | No adverse effects due to skin contact are expected. | | |
| Eye contact | Causes serious eye irritation. | Causes serious eye irritation. | | |
| Symptoms related to the physical, chemical and toxicological characteristics | May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. | | | |
| Information on toxicological ef | ifects | | | |
| Acute toxicity | Harmful if inhaled. Narcotic effects. | | | |
| Components | Species | Test Results | | |
| (E)-1,2-Dichloroethene (CAS 15 | 6-60-5) | | | |
| Acute Dermal | | | | |
| LD50 | Rabbit | > 5000 mg/kg, ECHA | | |
| Inhalation LC50 | Mouse | 21723 ppm, 6 Hours | | |
| | Rat | > 95552 mg/m3, 4 Hours, ECHA | | |
| | | > 24100 ppm, 4 Hours, ECHA | | |
| Oral | | | | |
| LD50 | Rat | 9939 mg/kg, ECHA, female | | |
| | | 7902 mg/kg, ECHA, male | | |
| | | 1235 mg/kg | | |
| Butane, 1,1,1,3,3-pentafluoro- (C | CAS 406-58-6) | | | |
| Acute | , | | | |
| Inhalation | | | | |
| LC50 | Rat | 100000 ppm, 4 hours, Harp International Limited | | |
| Oral | | | | |
| LD50 | Rat | > 2000 mg/kg, Harp International Limited | | |
| Dimethyl carbonate (CAS 616-38 | 8-6) | | | |
| Acute Dermal | | | | |
| LD50 | Rabbit | > 2000 mg/kg, 24 Hours, ECHA | | |
| Inhalation | | | | |
| LC50 | Rat | > 5.4 mg/L | | |
| | | > 5.4 mg/L, 4 hours, ECHA | | |
| Oral | | · · · · · · · · · · · · · · · · · · · | | |
| LD50 | - | > 5000 mg/kg | | |
| | Rat | > 5000 mg/kg, ECHA | | |
| | | | | |

| Components | Species | Test Results | |
|---|--|-----------------------------|--|
| Ethane, 1,1,1,2-tetrafluoro- (CAS 8 | 11-97-2) | | |
| Acute | | | |
| Dermal LD50 | Not available | | |
| Inhalation | | | |
| LC50 | Rat 1500000 mg/m³, 4 hours, Sigma | | |
| Oral | | | |
| LD50 | Not available | | |
| Pentane, 1,1,1,2,2,3,4,5,5,5-decafl | | | |
| Acute | | | |
| Dermal | | | |
| LD50 | Rabbit | > 5000 mg/kg, ECHA | |
| Inhalation | | | |
| LC50 | Rat | 15463 mg/m³, 4 hours, ECHA | |
| | | 11100 ppm, 4 hours, ECHA | |
| Oral | | | |
| LD50 | Rat | > 5000 mg/kg, ECHA | |
| Skin corrosion/irritation | Prolonged skin contact may cause temporary irrit | tation. | |
| Exposure minutes | Not available. | | |
| Erythema value | Not available. | | |
| Oedema value | Not available. | | |
| Serious eye damage/eye rritation | Causes serious eye irritation. | | |
| Corneal opacity value | Not available. | | |
| Iris lesion value | Not available. | | |
| Conjunctival reddening value | Not available. | | |
| Conjunctival oedema value | Not available. | | |
| Recover days | Not available. | | |
| Respiratory or skin sensitization | | | |
| Respiratory sensitization | Not a respiratory sensitizer. | | |
| Skin sensitization | This product is not expected to cause skin sensitization. | | |
| Mutagenicity | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. | | |
| Carcinogenicity | No ingredients listed by IARC, ACGIH, NTP or OSHA. | | |
| | lated Substances (29 CFR 1910.1001-1050) | | |
| Not listed. | | | |
| Reproductive toxicity | This product is not expected to cause reproductiv | e or developmental effects. | |
| Teratogenicity | Not available. | | |
| Specific target organ toxicity - single exposure | May cause drowsiness and dizziness. | | |
| Specific target organ toxicity - repeated exposure | Not classified. | | |
| Aspiration hazard | Not an aspiration hazard. | | |
| Chronic effects | Prolonged inhalation may be harmful. | | |
| | 12. Ecological Information | | |
| Ecotoxicity | See below | | |
| Ecotoxicological data | | | |
| Components | Species | Test Results | |
| (E)-1,2-Dichloroethene (CAS 156-6 | 60-5) | | |
| Aquatic | | | |
| Fish | LC50 Bluegill (Lepomis macrochirus) | 120 - 160 mg/L, 96 hours | |
| Persistence and degradability | No data is available on the degradability of this p | roduct. | |

| Bioaccumulative potential Mobility in soil | No data available. | | |
|---|--|--|--|
| Mobility in general | Not available. | | |
| Other adverse effects | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation | | |
| | potential, endocrine disruption, global warming potential) are expected from this component. | | |
| | 13. Disposal Considerations | | |
| Disposal instructions | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations. | | |
| Local disposal regulations | Dispose in accordance with all applicable regulations. | | |
| Hazardous waste code | The waste code should be assigned in discussion between the user, the producer and the waste disposal company. | | |
| Waste from residues / unused products | Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). | | |
| Contaminated packaging | Since emptied containers may retain product residue, follow label warnings even after container emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. | | |
| | 14. Transport Information | | |
| Transport of Dangerous Goods (TDG) Proof of Classification | Classification Method: Classified as per Part 2, Sections 2.1 – 2.8 of the Transportation of Dangerous Goods Regulations. If applicable, the technical name and the classification of the product will appear below. | | |
| U.S. Department of Transportation | on (DOT) | | |
| Basic shipping requirements | S: | | |
| UN number | UN1956 | | |
| Proper shipping name | Compressed gas, n.o.s | | |
| Technical name | Ethane, 1,1,1,2-tetrafluoro- | | |
| Hazard class Packaging exceptions | 2.2 306, 307 | | |
| Transportation of Dangerous Go | • | | |
| Basic shipping requirements | | | |
| UN number | UN1956 | | |
| Proper shipping name | COMPRESSED GAS, N.O.S. | | |
| Hazard class | 2.2 | | |
| Special provisions | 16, 148 | | |
| IATA/ICAO (Air) | | | |
| Basic shipping requirements | S: | | |
| UN number | UN1956 | | |
| Proper shipping name | Compressed gas, n.o.s. | | |
| Technical name | Ethane, 1,1,1,2-tetrafluoro- | | |
| Hazard class ERG code | 2.2 2L | | |
| IMDG (Marine Transport) | 22 | | |
| Basic shipping requirements | | | |
| UN number | UN1956 | | |
| Proper shipping name | COMPRESSED GAS, N.O.S. | | |
| Technical name | Ethane, 1,1,1,2-tetrafluoro- | | |
| Hazard class | 2.2 | | |
| DOT | | | |
| DOT | | | |



| | 15. Regula | atory Information | 1 |
|--|---|-------------------------------|---|
| Canadian federal regulations | This product has been clas contains all the information | | with the hazard criteria of the HPR and the SDS |
| | Prior to importation, please consult with the Ozone-depleting Substances and Halocarbon Alternatives Regulations, SOR/2016-137. | | ne-depleting Substances and Halocarbon |
| Canada CEPA Schedule I: L | isted substance | | |
| Butane, 1,1,1,3,3-pentafl Ethane, 1,1,1,2-tetrafluor Pentane, 1,1,1,2,2,3,4,5, 138495-42-8) | o- (CAS 811-97-2) | Listed. Listed. Listed. | |
| Export Control List (CEPA 1 | 999, Schedule 3) | | |
| Not listed. | | | |
| Greenhouse Gases | | | |
| Ethane, 1,1,1,2-tetrafluor Pentane, 1,1,1,2,2,3,4,5, Precursor Control Regulation | 5,5-decafluoro- (CAS 138495 | -42-8) | |
| Not regulated. | | | |
| WHMIS 2015 Exemptions | Not applicable | | |
| JS federal regulations | This product is a "Hazardou Standard, 29 CFR 1910.12 | | ed by the OSHA Hazard Communication |
| | 138495-42-8: SNUR: 40 CF | FR 721.5645 | |
| | | shart D) | |
| TSCA Section 12(b) Export | | | Export Notification only |
| Pentane, 1,1,1,2,2,3,4,5, 138495-42-8) | | 1.0 % One-Time | Export Notification only. |
| CERCLA Hazardous Substa | | Lists d | |
| (E)-1,2-Dichloroethene (C Dimethyl carbonate (CAS | S 616-38-6) | Listed. Listed. | |
| US. OSHA Specifically Regu | ulated Substances (29 CFR | 1910.1001-1050) | |
| Not listed. | | | |
| Superfund Amendments and Re | | SARA) | |
| Hazard categories | Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - Yes Reactivity Hazard - No | | |
| SARA 302 Extremely hazardous substance | No | | |
| SARA 311/312 Hazardous chemical | No | | |
| SARA 313 (TRI reporting) Chemical name | | CAS number | % by wt. |
| (E)-1,2-Dichloroethene | | 156-60-5 | 40-70* |
| Other federal regulations | | | |
| Clean Air Act (CAA) Section | 112 Hazardous Air Polluta | nts (HAPs) List | |
| Not regulated. | | | |
| Clean Air Act (CAA) Sectior | n 112(r) Accidental Release | Prevention (40 CFR | 68.130) |
| Clean Air Act (CAA) Section Not regulated. | n 112(r) Accidental Release | Prevention (40 CFR | 68.130) |

| US - California Hazardou | us Substances (Director's): Lis | sted substance |
|---|---|--|
| (E)-1,2-Dichloroethen | · / | Listed. |
| (E)-1,2-Dichloroethen Dimethyl carbonate ((US - Louisiana Spill Rep | | |
| (E)-1,2-Dichloroethen Dimethyl carbonate (US - Minnesota Haz Sub | ne (CAS 156-60-5) CAS 616-38-6) | Listed. Listed. |
| (E)-1,2-Dichloroethen Ethane, 1,1,1,2-tetraf | | Listed. Listed. |
| (E)-1,2-Dichloroethen Dimethyl carbonate (| ne (CAS 156-60-5) CAS 616-38-6) | e |
| US - Texas Effects Screening Levels: Listed substanc (E)-1,2-Dichloroethene (CAS 156-60-5) Butane, 1,1,1,3,3-pentafluoro- (CAS 406-58-6) Dimethyl carbonate (CAS 616-38-6) Ethane, 1,1,1,2-tetrafluoro- (CAS 811-97-2) Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro- (CAS 138495-42-8) | | Listed. Listed. Listed. Listed. Listed. |
| US. Massachusetts RTK | - Substance List | |
| (E)-1,2-Dichloroethen Dimethyl carbonate (| CAS 616-38-6) | |
| US. New Jersey Worker | and Community Right-to-Know | w Act |
| (E)-1,2-Dichloroethen | . , | ou l ou |
| (E)-1,2-Dichloroethen Dimethyl carbonate (US. Rhode Island RTK | | UW Law |
| (E)-1,2-Dichloroethen | ne (CAS 156-60-5) | |
| US. California Proposition 6 | | |
| | Vater and Toxic Enforcement Ac sted as carcinogens or reproduc | t of 1986 (Proposition 65): This material is not known to contain tive toxins. |
| Inventory status | | |
| Country(s) or region | Inventory name | On inventory (yes/no)* |
| Canada | Domestic Substances List (DS | |
| Canada | Non-Domestic Substances List | |
| United States & Puerto Rico | Toxic Substances Control Act | |
| *A "Yes" indicates that all compon- | ents of this product comply with the | inventory requirements administered by the governing country(s) |
| | 16. Other I | nformation |
| LEGEND | HEALTH / 1 | |
| Severe 4 | FLAMMABILITY 1 | |
| Serious 3 | | |
| Moderate 2 | PHYSICAL HAZARD 0 | |
| Slight 1 Minimal 0 | PERSONAL X | |

Disclaimer

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| The information in the sheet was written based on the best knowledge and experience currently available. Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document. |
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| 16-August-2022 |
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| 16-August-2022 |
| Nu-Calgon Technical Service Phone: (314) 469-7000 |