



MATERIAL SAFETY DATA SHEET

Page 1 of 7
MSDS-E-CCS2000

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards | MSDS Revision: 1.0 | MSDS Revision Date: 03/01/2008

1. PRODUCT IDENTIFICATION

CHEMICAL RESPONSE CARD: **39**

| | | | | | | | |
|-----|-------------------------|---|----------------------|----------|--|--|--|
| 1.1 | Product Name: | DustALL™, 10.0 oz., 152a Part No. CCS-2000 | RESPONSE TEAM PPE: | | | | |
| 1.2 | Chemical Name: | See ingredients listed in section 3 | WHMIS: | | | | |
| 1.3 | Synonyms: | DustALL™ 152a Duster | HEALTH: | 2 | | | |
| 1.4 | Trade Names: | DIFLUOROETHANE | FLAMMABILITY: | 2 | | | |
| 1.5 | Product Use: | Dust Removing Spray | REACTIVITY: | 1 | | | |
| 1.6 | Manufacturer's Name: | CAIG Laboratories, Inc. | PERSONAL PROTECTION: | B | | | |
| 1.7 | Manufacturer's Address: | 12200 Thatcher Court, Poway, CA 92064-6876 | | | | | |
| 1.8 | Business Phone: | +1 (800)-224-4123 | | | | | |
| 1.9 | Emergency Phone: | CHEMTREC +1 (800) 424-9300/+1 (703) 527-3887 | | | | | |

2. HAZARD IDENTIFICATION

| | | | | | | | |
|-----|--|-------------|-----|-------------|-----|------------|----|
| 2.1 | Hazard Identification: This product is classified as a HAZARDOUS SUBSTANCE and as DANGEROUS GOODS according to the classification criteria of [NOHSC: 1088 (1999) and ADG Code (Australia)]. Not expected to be hazard for recommended handling. Keep out of reach of children. | | | | | | |
| 2.2 | Routes of Entry: | Inhalation: | YES | Absorption: | YES | Ingestion: | NO |
| 2.3 | Effects of Exposure: EYES: Possible irritation. SKIN: Possible irritation and dermatitis, frostbite like effect. INGESTION: Expected to be a low hazard for recommended handling. INHALATION: May be irritating to nose, throat and respiratory tract. Aspiration of small quantities of liquid into the lungs can cause tissue damage resulting in pulmonary edema and pneumonitis and Central Nervous System effects including dizziness, weakness, fatigue, nausea, headache and possible unconsciousness. | | | | | | |
| 2.4 | Symptoms of Exposure: EYES: Possible irritation. SKIN: Possible irritation and dermatitis. Frostbite like effect. INGESTION: Expected to be a low hazard for recommended handling. INHALATION: May be irritating to nose, throat and respiratory tract. Aspiration of small quantities of liquid into the lungs can cause tissue damage resulting in pulmonary edema and pneumonitis and Central Nervous System effects including dizziness, weakness, fatigue, nausea, headache and possible unconsciousness. | | | | | | |
| 2.5 | Acute Health Effects: EYES: May cause transient irritation. SKIN: May be slightly irritating to skin, causes frost bite like effect INGESTION: May be irritating to nose, throat and respiratory tract. Aspiration of small quantities of liquid into the lungs can cause tissue damage resulting in pulmonary edema and pneumonitis and Central Nervous System effects including dizziness, weakness, fatigue, nausea, headache and possible unconsciousness. | | | | | | |
| 2.6 | Chronic Health Effects: Prolonged or repeated Higher exposures may lead to irritation of nose, throat, and lungs with cough, difficulty breathing or shortness of breath, temporary alteration of the heart's electrical activity with irregular pulse, palpitations, or inadequate circulation. | | | | | | |
| 2.7 | Target Organs: Lungs | | | | | | |
| 2.8 | Toxicological Properties: See section 11. | | | | | | |

NA = Not Available; ND = Not Determined; NE = Not Established; NF = Not Found; C = Ceiling Limit; See Section 16 for Additional Definitions of Terms Used. Note: All WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-2004 format.



MATERIAL SAFETY DATA SHEET

Page 2 of 7
MSDS-E-CCS2000

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3. COMPOSITION & INGREDIENT INFORMATION

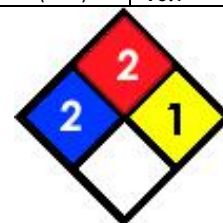
| CHEMICAL NAME(S) | CAS No. | RTECS No. | EINECS No. | % | EXPOSURE LIMITS IN AIR (mg/m ³) | | | | | | | | |
|--------------------------------|---------|-----------|------------|-----|---|------|--------|---------|---------|------|------|------|-------|
| | | | | | ACGIH | | NOHSC | | | OSHA | | | OTHER |
| | | | | | ppm | | ppm | | | ppm | | | |
| | | | | | TLV | STEL | ES-TWA | ES-STEL | ES-PEAK | PEL | STEL | IDLH | |
| ETHANE, 1,1-DIFLUORO- (R 152a) | 75-37-6 | K11410000 | 200-866-1 | 100 | NA | NA | NF | NF | NF | NA | NA | NA | |
| | | | | | | | | | | | | | |

4. FIRST AID MEASURES

| | | | | | | | | | | | |
|-----------------------------|---|---------------|----------|---------------------|----------|-------------------|----------|-----------------------------|----------|-------------|-------------|
| 4.1 | <p>First Aid:</p> <p>EYES: Immediately flush eyes with plenty of running water for at least 15 minutes, lifting upper and lower lids, occasionally. If irritation persists, repeat flushing. Get medical attention.</p> <p>SKIN: Wash thoroughly with soap and water. In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Treat for frostbite if necessary, by gently warming affected area.</p> <p>INGESTION: Ingestion is not considered a potential route of exposure. If ingested call physician or poison control center immediately. Do not induce vomiting. Rinse mouth with water. Aspiration of material into lungs due to vomiting may cause chemical pneumonitis which can be fatal.</p> <p>INHALATION: Remove affected person to fresh air. If breathing is difficult, administer oxygen. If breathing stops give artificial respiration. Keep person warm, quiet and get medical attention.</p> <p>Notes to Physicians: Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should be used with special caution only in situations of emergency life support.</p> | | | | | | | | | | |
| 4.2 | <p>Medical Conditions Aggravated by Exposure: None reported by the manufacturer.</p> <table border="1" style="float: right;"> <tr> <td style="background-color: #0000FF; color: white;">HEALTH</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="background-color: #FF0000; color: white;">FLAMMABILITY</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="background-color: #FFFF00;">REACTIVITY</td> <td style="text-align: center;">1</td> </tr> <tr> <td>PROTECTIVE EQUIPMENT</td> <td style="text-align: center;">B</td> </tr> <tr> <td>EYES</td> <td>SKIN</td> </tr> </table> | HEALTH | 2 | FLAMMABILITY | 2 | REACTIVITY | 1 | PROTECTIVE EQUIPMENT | B | EYES | SKIN |
| HEALTH | 2 | | | | | | | | | | |
| FLAMMABILITY | 2 | | | | | | | | | | |
| REACTIVITY | 1 | | | | | | | | | | |
| PROTECTIVE EQUIPMENT | B | | | | | | | | | | |
| EYES | SKIN | | | | | | | | | | |

5. FIREFIGHTING MEASURES

| | |
|-----|---|
| 5.1 | Flashpoint & Method: < -50 °C (-58 °F) |
| 5.2 | Autoignition Temperature: 454 °C (849 °F) |
| 5.3 | Flammability Limits: Lower Explosive Limit (LEL): 3.9 Upper Explosive Limit (UEL): 16.9 |
| 5.4 | <p>Fire & Explosion Hazards: Flammable. Level 1 Aerosol. Use water spray to cool cans. R-152a fire decomposition by-products will include hydrofluoric acid, and possibly carbonyl fluoride. Avoid contact with these materials, which are toxic and irritating. Evacuate personnel immediately in the event of a fire involving R-152a.</p> |
| 5.5 | <p>Extinguishing Methods: Dry chemical, foam, carbon dioxide, and water fog.</p> |
| 5.6 | <p>Firefighting Procedures: Keep containers cool until well after the fire is out. If gas exiting container ignites, stop flow of gas. Do not put out the fire unless leak can be stopped immediately. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. Firefighters should wear full-face, self-contained breathing apparatus (MSHA/NIOSH approved or the equivalent) and impervious clothing. HAZCHEM 2(Y)E, HIN 223</p> |





MATERIAL SAFETY DATA SHEET

Page 3 of 7
MSDS-E-CCS2000

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

MSDS Revision: 1.0

MSDS Revision Date: 03/01/2008

6. ACCIDENTAL RELEASE MEASURES

| | |
|-----|---|
| 6.1 | Spills: Secure spill area, remove or minimize all sources of ignition, and maximize ventilation. Stop spill or leak at source if safely possible. Deny entry to all unprotected individuals. Individuals involved in the cleanup must wear appropriate personal protective equipment. Recover free liquid or cover with inert absorbent material and place into appropriate container(s) for disposal. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers or any natural waterway or drinking supply. Contact appropriate local and/or provincial authorities for assistance and/or reporting requirements. |
|-----|---|

7. HANDLING & STORAGE INFORMATION

| | |
|-----|--|
| 7.1 | Work & Hygiene Practices: Use with sufficient ventilation. Avoid breathing high concentrations of vapors and avoid liquid contact with skin or eyes. Observe good industrial hygiene practices. Wash thoroughly with soap and water after handling and before eating, drinking or smoking. |
| 7.2 | Storage & Handling: Store in a cool, dry place. Keep away from excessive heat. Do not heat above 52 °C (125 °F). |
| 7.3 | Special Precautions: Keep out of reach of children. Do not take internally. Do not get in eyes. Readily available emergency first aid, and spill response equipment are highly recommended. Keep away from excessive heat. Do not heat above 52 °C (125 °F). |

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

| | |
|-----|---|
| 8.1 | Ventilation & Engineering Controls: General ventilation is required with this product. |
| 8.2 | Respiratory Protection: A respiratory protection program that meets ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirators use. |
| 8.3 | Eye Protection: Safety glasses with side shields should be used. If splashing is anticipated, splash goggles and face-shield are recommended. |
| 8.4 | Hand Protection: Where contact is likely, impervious gloves are recommended. Do not wear rings, watches, or jewelry that could entrap the material against the skin. |
| 8.5 | Body Protection: None required under normal conditions. |

9. PHYSICAL & CHEMICAL PROPERTIES

| | | |
|------|-------------------------------------|-----------------------------------|
| 9.1 | Density: | 0.90 g/cc at 22 °C (77 °F) Liquid |
| 9.2 | Boiling Point: | > 25 °C (> 13 °F) |
| 9.3 | Melting Point: | NA |
| 9.4 | Evaporation Rate: | ND |
| 9.5 | Vapor Pressure: | 87 psia at 25 °C (77 °F) |
| 9.6 | Molecular Weight: | NA |
| 9.7 | Appearance & Color: | Clear colorless gas |
| 9.8 | Odor Threshold: | Slight ethereal |
| 9.9 | Solubility: | .028 WT% @ 2 °C (77 °F) (87 psia) |
| 9.10 | pH | 13.0-14.0 |
| 9.11 | Viscosity: | NA |
| 9.12 | Coefficient Oil/Water Distribution: | NA |
| 9.13 | Additional Information: | NA |



MATERIAL SAFETY DATA SHEET

Page 4 of 7
MSDS-E-CCS2000

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10. STABILITY & REACTIVITY

| | |
|------|--|
| 10.1 | Stability: Stable, under normal conditions. |
| 10.2 | Hazardous Decomposition Products: Decomposition products are hazardous. This material can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrofluoric acid and possibly carbonyl fluoride. |
| 10.3 | Hazardous Polymerization: Will not occur. |
| 10.4 | Conditions to Avoid: Open flames, glowing metal surfaces, extremes of temperature and direct sunlight. |
| 10.5 | Incompatible Substances: Alkali or alkaline earth metals- powdered Al, Zn, Be, etc. |

11. TOXICOLOGICAL INFORMATION

| | | |
|------|--|---|
| 11.1 | Toxicity Data: No general or specific toxicity data has been reported by the manufacturer other than the information presented in Section 2. However, good personal hygiene practices, such as washing any skin contact areas and removing contaminated clothing, are recommended. R-152a has not been tested for skin and eye irritancy, or for animal sensitization. Ingestion of single high doses of R-152a caused weight loss and lethargy. | |
| 11.2 | Acute Toxicity: See section 2.5 | |
| 11.3 | Chronic Toxicity: See section 2.6 | |
| 11.4 | Suspected Carcinogen: No | |
| 11.5 | Reproductive Toxicity: | |
| | Mutagenicity: | This product is not expected to cause mutagenic effects in humans. |
| | Embryotoxicity: | This product is not expected to cause embryotoxic effects in humans. |
| | Teratogenicity: | This product is not expected to cause teratogenic effects in humans. |
| | Reproductive Toxicity: | This product is not expected to cause reproductive harm in humans. |
| 11.6 | Irritancy of Product: NA | |
| 11.7 | Biological Exposure Indices: NA | |
| 11.8 | Physician Recommendations: Treat symptomatically. | |

12. ECOLOGICAL INFORMATION

| | |
|------|--|
| 12.1 | Environmental Stability: The manufacturer has not reported any detailed studies on the environmental fate of the material. However, prudent practice would dictate the material not be allowed to enter the environment. |
| 12.2 | Effects on Plants & Animals: The manufacturer has not reported any animal or plant effects |
| 12.3 | Effects on Aquatic Life: The manufacturer has not reported any aquatic life effects. |

13. DISPOSAL CONSIDERATIONS

| | |
|------|---|
| 13.1 | Waste Disposal: Dispose of in accordance with local & state or provincial hazardous waste laws. |
| 13.2 | Special Considerations: If the material is unsuitable for recycling or reclamation, enclosed-controlled incineration is recommended unless otherwise prohibited by local ordinance. |



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14. TRANSPORTATION INFORMATION

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.

| | | |
|------|---|--|
| 14.1 | 49 CFR (GND): CONSUMER COMMODITY, ORM-D Additional markings(s) on packages: DOT-E 11516 | |
| 14.2 | IATA (AIR): UN1030, DIFLUORETHANE, 2.1 CARGO AIRCRAFT ONLY | |
| 14.3 | IMDG (OCN): UN1030, DIFLUORETHANE, 2.1 | |
| 14.4 | TDGR (Canadian GND): UN1030 DIFLUORETHANE, 2.1 | |
| 14.5 | ADR/RID (EU): UN1030 DIFLUORETHANE, 2.1, ADR | |
| 14.6 | MEXICO (SCT): UN1030, DIFLUORETHANE, 2.1 | |
| 14.7 | ADGR (AUS): UN1030, DIFLUORETHANE, 2.1 2(Y)E, 223 | |

15. REGULATORY INFORMATION

| | | |
|------|--|--|
| 15.1 | SARA Reporting Requirements: This product contains "DYMEL" 152a, which is subject to the SARA 311 and 312 reporting requirements. | |
| 15.2 | SARA Threshold Planning Quantity: NA | |
| 15.3 | TSCA Inventory Status: All chemical substances of this product are listed on the TSCA inventory or are otherwise exempt from inventory status. | |
| 15.4 | CERCLA Reportable Quantity (RQ): NA | |
| 15.5 | Other Federal Requirements: R-152a is a flammable gas as defined by OSHA in 29CFR 1910.1200(c). Use of this product may require compliance with 29CFR 1910.119, Process Safety Management of Highly Hazardous Chemicals. | |
| 15.6 | Other Canadian Regulations All chemical substances of this product are listed on the CEPA DSL/NDSL or are exempt from list requirements. This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR. | |
| 15.7 | State Regulatory Information: Difluoroethane can be found on the following state right to know list Pennsylvania and New Jersey. California no significant risk level; None of the chemicals in this product are listed. | |
| 15.8 | 67/548/EEC (European Union) Requirements: The primary components of this product are listed in Annex I of EU Directive 67/548/EEC: (Xi) Irritant (Xn) Harmful R: 22-36-38-41-43 Harmful if swallowed. Irritating to eyes. Irritating to skin. Risk of serious damage to eyes. May cause sensitization by skin contact. S: 2-24-26-45 Keep out of reach of children. Avoid Contact with skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). | |



MATERIAL SAFETY DATA SHEET

Page 6 of 7


MSDS-E-

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MSDS Revision Date: 03/01/2008

16. OTHER INFORMATION

| | |
|------|---|
| 16.1 | Other Information: NA |
| 16.2 | Terms & Definitions: See last page of this MSDS. |
| 16.3 | Disclaimer: This Material Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's & CAIG Laboratories, Inc.'s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition. |
| 16.4 | <div style="display: flex; align-items: flex-start;"> <div style="flex: 1;"> <p>Prepared for: CAIG Laboratories, Inc. 12200 Thatcher Court Poway, CA 92064-6876 +1 (800) CAIG-123 (244-4123) phone +1 (858) 486-8398 fax http://www.caig.com/</p> </div> <div style="flex: 1; text-align: center;">  </div> </div> |
| 16.5 | <div style="display: flex; align-items: flex-start;"> <div style="flex: 1;"> <p>Prepared by: ShipMate, Inc. PO Box 787 Sisters, OR 97759 Phone: +1 (310) 370-3600 Fax: +1 (310) 370-5700 e-mail: shipmate@shipmate.com</p> </div> <div style="flex: 1; text-align: center;">  </div> </div> |



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DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these that are commonly used include the following:

GENERAL INFORMATION:

| | |
|----------------|----------------------------------|
| CAS No. | Chemical Abstract Service Number |
|----------------|----------------------------------|

EXPOSURE LIMITS IN AIR:

| | |
|--------------|---|
| ACGIH | American Conference on Governmental Industrial Hygienists |
| TLV | Threshold Limit Value |
| OSHA | U.S. Occupational Safety and Health Administration |
| PEL | Permissible Exposure Limit |
| IDLH | Immediately Dangerous to Life and Health |

FIRST AID MEASURES:

| | |
|------------|--|
| CPR | Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body. |
|------------|--|

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

| | |
|----------|-----------------|
| 0 | Minimal Hazard |
| 1 | Slight Hazard |
| 2 | Moderate Hazard |
| 3 | Severe Hazard |
| 4 | Extreme Hazard |



PERSONAL PROTECTION RATINGS:

| | | | |
|----------|--|----------|--|
| A | | G | |
| B | | H | |
| C | | I | |
| D | | J | |
| E | | K | |
| F | | X | Consult your supervisor or S.O.P. for special handling directions. |

Note: the dotted circle indicates that this respiratory protective equipment is required for high concentrations or for large volume spills or releases of product.

OTHER STANDARD ABBREVIATIONS:

| | |
|-------------|------------------------------------|
| NA | Not Available |
| NR | No Results |
| NE | Not Established |
| ND | Not Determined |
| ML | Maximum Limit |
| SCBA | Self-Contained Breathing Apparatus |

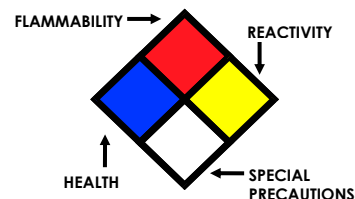
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:

| | |
|---------------------------------|---|
| Autoignition Temperature | Minimum temperature required to initiate combustion in air with no other source of ignition |
| LEL | Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source |
| UEL | Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source |

HAZARD RATINGS:

| | |
|------------|-----------------|
| 0 | Minimal Hazard |
| 1 | Slight Hazard |
| 2 | Moderate Hazard |
| 3 | Severe Hazard |
| 4 | Extreme Hazard |
| ACD | Acidic |
| ALK | Alkaline |
| COR | Corrosive |
| -W | Use No Water |
| OX | Oxidizer |



TOXICOLOGICAL INFORMATION:

| | |
|--|---|
| LD₅₀ | Lethal Dose (solids & liquids) which kills 50% of the exposed animals |
| LC₅₀ | Lethal concentration (gases) which kills 50% of the exposed animal |
| ppm | Concentration expressed in parts of material per million parts |
| TD₁₀ | Lowest dose to cause a symptom |
| TCLo | Lowest concentration to cause a symptom |
| TD₁₀, LD₁₀, & LD₀ or TC, TC₀, LC₁₀, & LC₀ | Lowest dose (or concentration) to cause lethal or toxic effects |
| IARC | International Agency for Research on Cancer |
| NTP | National Toxicology Program |
| RTECS | Registry of Toxic Effects of Chemical Substances |
| BCF | Bioconcentration Factor |
| TL_m | Median threshold limit |
| log K_{ow} or log K_{oc} | Coefficient of Oil/Water Distribution |

REGULATORY INFORMATION:

| | |
|--------------|--|
| WHMIS | Canadian Workplace Hazardous Material Information System |
| DOT | U.S. Department of Transportation |
| TC | Transport Canada |
| EPA | U.S. Environmental Protection Agency |
| DSL | Canadian Domestic Substance List |
| NDSL | Canadian Non-Domestic Substance List |
| PSL | Canadian Priority Substances List |
| TSCA | U.S. Toxic Substance Control Act |
| EU | European Union (European Union Directive 67/548/EEC) |

EC INFORMATION:

| | | | | | | | |
|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|
| | | | | | | | |
| C | E | F | N | O | T+ | Xi | Xn |
| Corrosive | Explosive | Flammable | Harmful | Oxidizing | Toxic | Irritant | Harmful |

October 28, 2008



U.S. Department
of Transportation

East Bldg, PHH-30
1200 New Jersey Ave, S.E.
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 11516
(TWELFTH REVISION)

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: (See individual authorization letter)
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the transportation in commerce of certain DOT Specification 2Q containers containing hazardous materials identified in paragraph 6. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein.
 - b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce.
 - c. Unless otherwise stated herein, this special permit consists of the special permit authorization letter issued to the grantee together with this document.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.304a(a) in that a DOT Specification 2Q container is not listed as authorized packaging; Part 172, subpart C unless transported by air; Part 172, subpart E unless transported by air; Part 172, subpart F; Part 174; and Part 177.
5. BASIS: This special permit is based on the application of Bridgeview Aerosol, LLC dated August 14, 2008, in accordance with § 107.105 and the public proceeding thereon.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

| Hazardous Materials Description | | | |
|---|-------------------------------|------------------------------|----------------------|
| Proper Shipping Name | Hazard Class/ Division | Identification Number | Packing Group |
| Compressed gas, flammable, n.o.s./Tetrafluoroethane and Dimethylether mixtures (each chemical must make up at least 30% but no more than 70% of the contents) | 2.1 | UN1954 | N/A |
| 1,1-Difluoroethane or Refrigerant gas R 152a | 2.1 | UN1030 | N/A |
| Compressed gas, n.o.s. (contains argon, carbon monoxide) | 2.2 | UN1956 | N/A |

7. SAFETY CONTROL MEASURES:

- a. PACKAGING - Prescribed packagings are DOT Specification 2Q containers not exceeding 667 ml capacity. Containers must be shipped as follows:

- (1) The maximum permitted filling density is 79 percent. In addition, the liquid portion of the gas must not completely fill the container at any temperature up to and including 130°F.
- (2) The pressure in the container must not exceed 65 psig at 70°F and 180 psig at 130°F.
- (3) The container must be capable of withstanding without bursting a pressure of one and one-half times the equilibrium pressure of the content at 130°F.
- (4) The containers must be packed in strong outside packagings.
- (5) Each package may not exceed 66 pounds gross weight.

- b. TESTING - Each completed container filled for shipment must have been heated until the pressure in the container is equivalent to the equilibrium pressure of the content at 130°F without evidence of leakage, distortion, or other defect.
 - c. OPERATIONAL CONTROLS - Shipments are not subject to the shipping paper requirements of subpart C of Part 172 unless offered for transportation by aircraft. Shipments are not subject to the labeling requirements of subpart E of Part 172 except when offered for transportation by air. The CARGO AIRCRAFT ONLY label must be printed or affixed to a surface (other than the bottom) of each package in proximity to the required marking and labeling on each package intended for transportation by air. Shipments are not subject to the placarding requirements of subpart F of Part 172, to Part 174 and to Part 177.
 - d. MARKING - All outer packages must be marked in accordance with the marking requirements of subpart D of Part 172 and "DOT-SP 11516".
8. SPECIAL PROVISIONS:
- a. A person who is not a holder of this special permit who receives a package covered by this special permit may reoffer it for transportation provided no modification or change is made to the package or its contents and it is reoffered for transportation in conformance with this special permit and the HMR.
 - b. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.
 - c. Transportation of Division 2.1 (flammable gases) are not authorized aboard cargo vessel or aircraft unless specifically authorized in the Hazardous Materials Table (§ 172.101).
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, and cargo aircraft only.

10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each aircraft used to transport packages covered by this special permit. The shipper must furnish a copy of this special permit to the air carrier before or at the time the shipment is tendered.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
- o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
 - o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
 - o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when this special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)- 'The Hazardous Materials Safety and Security Reauthorization Act of 2005' (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for Theodore L. Willke
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590.
Attention: PHH-31

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm
Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: BMoore