SAFETY DATA SHEET
Halocarbon R-123 (1,1-Dichloro-2,2,2,-Trifluoroethane)

Section 1. Identification

GHS product identifier : Halocarbon R-123 (1,1-Dichloro-2,2,2,-Trifluoroethane)
Chemical name : 2,2-dichloro-1,1,1-trifluoroethane
Other means of identification : Ethane, 2,2-dichloro-1,1,1-trifluoro-; Ethane, 2,2-dichloro-1,1,1-trifluoro; 1,1,1-Trifluoro-2,2-dichloroethane; HCFC-123; dichloro-1,1,1-trifluoroethane; CFC-123; Trifluoro-2,2-Dichloroethane, 1,1,1-; 1,1,1-trifluoro-2,2-dichloroethane; HCFC 123; FC-123; R 123
Product type : Liquid.
Product use : Synthetic/Analytical chemistry.
Synonym : Ethane, 2,2-dichloro-1,1,1-trifluoro-; Ethane, 2,2-dichloro-1,1,1-trifluoro; 1,1,1-Trifluoro-2,2-dichloroethane; HCFC-123; dichloro-1,1,1-trifluoroethane; CFC-123; Trifluoro-2,2-Dichloroethane, 1,1,1-; 1,1,1-trifluoro-2,2-dichloroethane; HCFC 123; FC-123; R 123
SDS # : 001084
Supplier's details : Airgas USA, LLC and its affiliates
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253
24-hour telephone : 1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture : SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
HAZARDOUS TO THE OZONE LAYER - Category 1
GHS label elements
Hazard pictograms :

Signal word : Warning
Hazard statements :
May cause damage to organs. (central nervous system (CNS), heart, liver)
May cause damage to organs through prolonged or repeated exposure. (liver)
Harms public health and the environment by destroying ozone in the upper atmosphere.
Precautionary statements
General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention : Wear eye or face protection. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Use and store only outdoors or in a well ventilated place.
Response : IF exposed or concerned: Call a POISON CENTER or doctor.
Storage : Store locked up.
Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations. Refer to manufacturer or supplier for information on recovery or recycling.
Hazard not otherwise classified : None known.

Date of issue/Date of revision : 9/30/2020
Date of previous issue : 1/29/2018
Version : 1.01
Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical name</td>
<td>2,2-dichloro-1,1,1-trifluoroethane</td>
</tr>
<tr>
<td>Other means of identification</td>
<td>Ethane, 2,2-dichloro-1,1,1-trifluoro-; Ethane, 2,2-dichloro-1,1,1-trifluoro-; 1,1,1-Trifluoro-2,2-dichloroethane; HCFC-123; dichloro-1,1,1-trifluoroethane; CFC-123; Trifluoro-2,2-Dichloroethane, 1,1,1-; 1,1,1-trifluoro-2,2-dichloroethane; HCFC 123; FC-123; R 123</td>
</tr>
<tr>
<td>Product code</td>
<td>001084</td>
</tr>
</tbody>
</table>

CAS number/other identifiers

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethane, 2,2-dichloro-1,1,1-trifluoro-</td>
<td>306-83-2</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 4. First aid measures

Description of necessary first aid measures

**Eye contact**

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. If necessary, call a poison center or physician.

**Inhalation**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention following exposure or if feeling unwell. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Skin contact**

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion**

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention following exposure or if feeling unwell. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

**Potential acute health effects**

**Eye contact**

No known significant effects or critical hazards.

**Inhalation**

May cause damage to organs following a single exposure if inhaled.

**Skin contact**

May cause damage to organs following a single exposure in contact with skin.

**Frostbite**

Try to warm up the frozen tissues and seek medical attention.

**Ingestion**

May cause damage to organs following a single exposure if swallowed.

Date of issue/Date of revision : 9/30/2020  Date of previous issue : 1/29/2018  Version : 1.01  2/11
Section 4. First aid measures

**Protection of first-aiders**:
No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

**Notes to physician**:
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments**:
No specific treatment.

**Skin contact**:
No specific data.

**Ingestion**:
No specific data.

**Inhalation**:
No specific data.

**Eye contact**:
No specific data.

**Indication of immediate medical attention and special treatment needed, if necessary**

**Protection of first-aiders**: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

**Notes to physician**: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments**: No specific treatment.

**Section 5. Fire-fighting measures**

**Extinguishing media**

**Suitable extinguishing media**: Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media**: None known.

**Specific hazards arising from the chemical**

**Decomposition products**: Carbon dioxide, carbon monoxide, halogenated compounds.

**Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.**

**Special protective actions for fire-fighters**: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters**: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

**Section 6. Accidental release measures**

**Environmental precautions**: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). May be harmful to the environment if released in large quantities.

**Methods and materials for containment and cleaning up**

**Small spill**: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Section 6. Accidental release measures

**Large spill:**
Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

**Precautions for safe handling**

**Protective measures:**
Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Avoid release to the environment. Refer to special instructions/safety data sheet. Do not ingest. Empty containers retain product residue and can be hazardous. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container. Do not breathe vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator.

**Advice on general occupational hygiene:**
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities:**
Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

**Control parameters**

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethane, 2,2-dichloro-1,1,1-trifluoro-</td>
<td>TWA: 50 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>AIHA WEEL (United States, 7/2018)</td>
</tr>
</tbody>
</table>

**Appropriate engineering controls:**
If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Environmental exposure controls:**
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**

**Hygiene measures:**
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Section 8. Exposure controls/personal protection

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state: Liquid. [Liquid.]
Color: Colorless.
Odor: Characteristic. Ether-like.
Odor threshold: Not available.
pH: Neutral.
Melting point: -107°C (-160.6°F)
Boiling point: 28.7°C (83.7°F)
Critical temperature: Not available.
Flash point: [Product does not sustain combustion.]
Evaporation rate: Not available.
Flammability (solid, gas): Not available.
Lower and upper explosive (flammable) limits: Not available.

Vapor pressure: @ 77°F (25°C) = 13 psia (89.6 kPa)
Vapor density: 5.3 @ 77°F (25°C)
1.46 g/cm³ at 25 °C (77 °F) (as liquid)

Specific Volume (ft³/lb): 2.5316
Gas Density (lb/ft³): 0.395
Relative density: 1.5
Solubility: Not available.
Solubility in water: 2.1 g/l
Partition coefficient: n-octanol/water: 2.17
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: Not available.
Flow time (ISO 2431): Not available.
Section 9. Physical and chemical properties

Molecular weight: 152.93 g/mole

Section 10. Stability and reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability: The product is stable.

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid: No specific data.

Incompatible materials: No specific data.

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization: Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethane, 2,2-dichloro-1,1,1-trifluoro-</td>
<td>LC50 Inhalation Gas.</td>
<td>Rat</td>
<td>32000 ppm</td>
<td>4 hours</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethane, 2,2-dichloro-1,1,1-trifluoro-</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>100 Ul</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>0.1 mL</td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitization
Not available.

Mutagenicity
Not available.

Carcinogenicity
Not available.

Reproductive toxicity
Not available.

Teratogenicity
Not available.

Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethane, 2,2-dichloro-1,1,1-trifluoro-</td>
<td>Category 2</td>
<td>-</td>
<td>central nervous system (CNS), heart, liver</td>
</tr>
</tbody>
</table>

Specific target organ toxicity (repeated exposure)

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Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethane, 2,2-dichloro-1,1,1-trifluoro-</td>
<td>Category 2</td>
<td>-</td>
<td>liver</td>
</tr>
</tbody>
</table>

**Aspiration hazard**
Not available.

**Information on the likely routes of exposure**

**Potential acute health effects**

<table>
<thead>
<tr>
<th>Route</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye contact</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>May cause damage to organs following a single exposure if inhaled.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>May cause damage to organs following a single exposure in contact with skin.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May cause damage to organs following a single exposure if swallowed.</td>
</tr>
</tbody>
</table>

**Symptoms related to the physical, chemical and toxicological characteristics**

<table>
<thead>
<tr>
<th>Route</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye contact</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

<table>
<thead>
<tr>
<th></th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential immediate effects</td>
<td>Not available.</td>
</tr>
<tr>
<td>Potential delayed effects</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Long term exposure**

<table>
<thead>
<tr>
<th></th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential immediate effects</td>
<td>Not available.</td>
</tr>
<tr>
<td>Potential delayed effects</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Potential chronic health effects**
Not available.

<table>
<thead>
<tr>
<th>Category</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>May cause damage to organs through prolonged or repeated exposure.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Teratogenicity</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Developmental effects</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Fertility effects</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

**Numerical measures of toxicity**

**Acute toxicity estimates**

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation (gases)</td>
<td>32000 ppm</td>
</tr>
</tbody>
</table>
Section 12. Ecological information

Toxicity
Not available.

Persistence and degradability
Not available.

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP_{ow}</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethane, 2,2-dichloro-1,1,1-trifluoro-</td>
<td>2.17</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

Mobility in soil

| Soil/water partition coefficient (K_{oc}) | Not available. |

Other adverse effects

| Other adverse effects | No known significant effects or critical hazards. |

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

<table>
<thead>
<tr>
<th>DOT</th>
<th>TDG</th>
<th>Mexico</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Packing group</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Additional information
Section 14. Transport information

**DOT Classification**
- Remarks: Shipping Containers
  - Tank Cars.
  - Tank Trucks.
  - Pails.
  - Drums.

**TDG Classification**
- Remarks: Shipping Containers
  - Tank Cars.
  - Tank Trucks.
  - Pails.
  - Drums.

**Mexico Classification**
- Remarks: Shipping Containers
  - Tank Cars.
  - Tank Trucks.
  - Pails.
  - Drums.

**Special precautions for user**
- Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
- Transport in bulk according to IMO instruments: Not available.

Section 15. Regulatory information

**U.S. Federal regulations**
- TSCA 8(a) CDR Exempt/Partial exemption: Not determined

- Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)
  - Not listed

- Clean Air Act Section 602 Class I Substances
  - Not listed

- Clean Air Act Section 602 Class II Substances
  - Listed

- DEA List I Chemicals (Precursor Chemicals)
  - Not listed

- DEA List II Chemicals (Essential Chemicals)
  - Not listed

**SARA 302/304**
- Composition/information on ingredients: No products were found.
- SARA 304 RQ
  - Not applicable.

**SARA 311/312 Classification**
- Refer to Section 2: Hazards Identification of this SDS for classification of substance.

**SARA 313**

<table>
<thead>
<tr>
<th>Product name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form R - Reporting requirements 2,2-dichloro-1,1-trifluoroethane</td>
<td>306-83-2</td>
<td>100</td>
</tr>
<tr>
<td>Supplier notification 2,2-dichloro-1,1-trifluoroethane</td>
<td>306-83-2</td>
<td>100</td>
</tr>
</tbody>
</table>

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

**State regulations**
- Massachusetts: This material is not listed.

**Date of issue/Date of revision**: 9/30/2020
**Date of previous issue**: 1/29/2018
**Version**: 1.01
Section 15. Regulatory information

**New York** : This material is not listed.
**New Jersey** : This material is listed.
**Pennsylvania** : This material is not listed.

**California Prop. 65**

This product does not require a Safe Harbor warning under California Prop. 65.

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**
Not listed.

**Montreal Protocol**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCFC 123</td>
<td>Annex C, Group I</td>
</tr>
</tbody>
</table>

**Stockholm Convention on Persistent Organic Pollutants**
Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**
Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**
Not listed.

**Inventory list**

<table>
<thead>
<tr>
<th>Country</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>This material is listed or exempted.</td>
</tr>
<tr>
<td>Canada</td>
<td>This material is listed or exempted.</td>
</tr>
<tr>
<td>China</td>
<td>This material is listed or exempted.</td>
</tr>
<tr>
<td>Europe</td>
<td>This material is listed or exempted.</td>
</tr>
<tr>
<td>Japan</td>
<td>Japan inventory (ENCS): This material is listed or exempted. Japan inventory (ISHL): This material is listed or exempted.</td>
</tr>
<tr>
<td>New Zealand</td>
<td>This material is listed or exempted.</td>
</tr>
<tr>
<td>Philippines</td>
<td>This material is listed or exempted.</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>This material is listed or exempted.</td>
</tr>
<tr>
<td>Taiwan</td>
<td>This material is listed or exempted.</td>
</tr>
<tr>
<td>Thailand</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Turkey</td>
<td>This material is listed or exempted.</td>
</tr>
<tr>
<td>United States</td>
<td>This material is active or exempted.</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>Not determined.</td>
</tr>
</tbody>
</table>

Section 16. Other information

**Hazardous Material Information System (U.S.A.)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>1</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
</tr>
<tr>
<td>Physical hazards</td>
<td>1</td>
</tr>
</tbody>
</table>

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.
Section 16. Other information

National Fire Protection Association (U.S.A.)

Flammability
Health
Instability/Reactivity
Special

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2</td>
<td>Expert judgment</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2</td>
<td>Expert judgment</td>
</tr>
<tr>
<td>HAZARDOUS TO THE OZONE LAYER - Category 1</td>
<td>On basis of test data</td>
</tr>
</tbody>
</table>

History

Date of printing : 9/30/2020
Date of issue/Date of revision : 9/30/2020
Date of previous issue : 1/29/2018
Version : 1.01

Key to abbreviations

ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
UN = United Nations

References : Not available.

Other special considerations : WARNING: Contains (1,1-Dichloro-2,2,2-Trifluoroethane), a substance which harms the public health and environment by destroying ozone in the upper atmosphere.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever 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 hazards that exist.

Date of issue/Date of revision : 9/30/2020 Date of previous issue : 1/29/2018 Version : 1.01