1. Identification

Product identifier: VENTOLIN INHALATION AEROSOL

Other means of identification: Not available.

Synonym(s): VENTOLIN INHALATION AEROSOL * VENTOLIN INHALATION AEROSOL REFILL * VENTOLIN EASI-BREATHE 100MCG, 200 DOSE * VENTOLIN EASI-BREATHE INHALER * VENTOLIN AEROSOL * VENTOLIN AEROZOL * VENTOLIN AEROZOL BEZFREONOWY ZAWIESINA * VENTOLIN INHALACIOS AEROSZOL * VENTOLIN INHALADOR * VENTOLIN INHALATEUR * VENTOLIN INHALATORS * VENTOLIN INHALATSIOONIAEROSOOL * VENTOLIN INHALER * VENTOLIN INHALER N * SALBUTAMOL, FORMULATED PRODUCT

Recommended use: Medicinal Product

This safety data sheet is written to provide health, safety and environmental information for people handling this formulated product in the workplace. It is not intended to provide information relevant to medicinal use of the product. In this instance patients should consult prescribing information/package insert/product label or consult their pharmacist or physician. For health and safety information for individual ingredients used during manufacturing, refer to the appropriate safety data sheet for each ingredient.

Recommended restrictions: No other uses are advised.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer: GlaxoSmithKline US
5 Moore Drive
Research Triangle Park, NC  27709 USA
US General Information (normal business hours):  +1-888-825-5249
Email Address:      msds@gsk.com
Website:                www.gsk.com
EMERGENCY PHONE NUMBERS -
TRANSPORT EMERGENCIES::
US / International toll call                                         +1 703 527 3887
available 24 hrs/7 days; multi-language response

2. Hazard(s) identification

Classified hazards:
Exempt from requirements - product regulated as a medicinal product, cosmetic product or medical device.

Label elements:
Exempt from requirements - product regulated as a medicinal product, cosmetic product or medical device.

Hazard(s) not otherwise classified (HNOC):
Exempt from requirements - product regulated as a medicinal product, cosmetic product or medical device.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>DICHLORODIFLUOROMETHANE</td>
<td>CHLOROFLUOROCARBON 12</td>
<td>75-71-8</td>
<td>70 - &lt; 80</td>
</tr>
</tbody>
</table>
### Hazardous components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLUOROTRICHLOREMETHANE</td>
<td>TRICHLOROMONOFUOROMETHANE MONOFLUOROTRICHLOREMETHANE TRICHLOROFUOROMETHANE FLUOROCHLOROFORM FREON 11 F 11 FC 11 CFC 11 RCRA U121 CCI3F OHS09990 RTECS PB6125000 CFC-11 (TRICHLOROFUOROMETHANE) CFC11 FLUORITRIKLOORIMETAANI FLUOROTRICHLOREMETANO HFO-11 METHANE, TRICHLOROFLUORO TRICHLOROFUOROMETHANE TRICHLOROMONOFUORO-METHANE TRICHLOROFUOROMETANO TRIKLORFLUORMETAN (KFK-11)</td>
<td>75-69-4</td>
<td>20 - &lt; 30</td>
</tr>
</tbody>
</table>

| SALBUTAMOL | ALBUTEROL 1-(4-HYDROXY-3-HYDROXYMETHYLPHENYL)-2-(TERT-BUTYLAMINO) ETHANO SALBUTAMOL BASE AH 3365 388 (GW ACN) SALBUTAMOL- | 18559-94-9 | < 0.2 |

Other components below reportable levels: < 0.1

### 4. First-aid measures

**Inhalation**
Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact**
Rinse skin with water/shower. Get medical attention if irritation develops and persists.

**Eye contact**
Rinse with water. Get medical attention if irritation develops and persists.

**Ingestion**
Rinse mouth. Get medical attention if symptoms occur.

**Most important symptoms/effects, acute and delayed**
The following adverse effects have been noted with therapeutic use of this material: headache; changes in blood pressure; altered heart rate and pulse.

**Indication of immediate medical attention and special treatment needed**
Provide general supportive measures and treat symptomatically.

**General information**
If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance.

### 5. Fire-fighting measures

**Suitable extinguishing media**
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

**Unsuitable extinguishing media**
None known.

**Specific hazards arising from the chemical**
During fire, gases hazardous to health may be formed. Pressurized container may explode when exposed to heat or flame.

**Special protective equipment and precautions for firefighters**
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire-fighting equipment/instructions**
Move containers from fire area if you can do so without risk.

**Specific methods**
Move container from fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out.

### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Keep unnecessary personnel away. For personal protection, see section 8 of the MSDS.
Methods and materials for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Avoid prolonged exposure. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the MSDS). The recommended temperature for storage is 15 - 25 °C.

8. Exposure controls/personal protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>GSK Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SALBUTAMOL (CAS 18559-94-9)</td>
<td>8 HR TWA</td>
<td>10 mcg/m3</td>
</tr>
<tr>
<td></td>
<td>OHC</td>
<td>4</td>
</tr>
</tbody>
</table>

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DICHLORODIFLUOROMETHANE (CAS 75-71-8)</td>
<td>PEL</td>
<td>4950 mg/m3</td>
</tr>
<tr>
<td>FLUOROTRICHLOROMETHANE (CAS 75-69-4)</td>
<td>PEL</td>
<td>1000 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5600 mg/m3</td>
</tr>
</tbody>
</table>

US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DICHLORODIFLUOROMETHANE (CAS 75-71-8)</td>
<td>TWA</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>FLUOROTRICHLOROMETHANE (CAS 75-69-4)</td>
<td>Ceiling</td>
<td>1000 ppm</td>
</tr>
</tbody>
</table>

US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DICHLORODIFLUOROMETHANE (CAS 75-71-8)</td>
<td>TWA</td>
<td>4950 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 ppm</td>
</tr>
<tr>
<td>FLUOROTRICHLOROMETHANE (CAS 75-69-4)</td>
<td>Ceiling</td>
<td>5600 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 ppm</td>
</tr>
</tbody>
</table>

Biological limit values

No biological exposure limits noted for the ingredient(s).

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
If contact is likely, safety glasses with side shields are recommended.

Hand protection
For prolonged or repeated skin contact use suitable protective gloves. The selection of gloves for a specific activity must be based on the material's properties and on possible permeation and degradation that may occur under the circumstances of use. Glove selection must take into account any solvents and other hazards present. Care must be exercised if insufficient data are available and further guidance should be sought from your local EHS department. Potential allergic reactions can occur with certain glove materials (e.g. Latex) and therefore these should be avoided.

Other
Wear suitable protective clothing.

Respiratory protection
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.
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.

9. Physical and chemical properties

Appearance
- Physical state: Liquid.
- Form: Aerosol.
- Color: Not available.
- Odor: Not available.
- Odor threshold: Not available.
- pH: Not available.
- Melting point/freezing point: Not available.
- Initial boiling point and boiling range: -14.8 °F (-26 °C)
- Flash point: Not available.
- Evaporation rate: Not available.
- Flammability (solid, gas): Not available.

Upper/lower flammability or explosive limits
- Flammability limit - lower (%): Not available.
- Flammability limit - upper (%): Not available.
- Explosive limit - lower (%): Not available.
- Explosive limit - upper (%): Not available.

Vapor pressure: Not available.
Vapor density: Not available.
Relative density: Not available.
Solubility(ies): Not available.
Partition coefficient (n-octanol/water): Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: Not available.

Other information
- Percent volatile: 99.9 % estimated

10. Stability and reactivity

Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability
Material is stable under normal conditions.

Possibility of hazardous reactions
Hazardous polymerization does not occur.

Conditions to avoid
Contact with incompatible materials. Avoid direct sunlight, conditions that might generate heat and sources of ignition.

Incompatible materials
Strong oxidizing agents.

Hazardous decomposition products
Irritating and/or toxic fumes and gases may be emitted upon the products decomposition.

11. Toxicological information

Information on likely routes of exposure
- Ingestion: Health injuries are not known or expected under normal use.
- Inhalation: Health injuries are not known or expected under normal use.
- Skin contact: Health injuries are not known or expected under normal use.
- Eye contact: Health injuries are not known or expected under normal use.
Symptoms related to the physical, chemical and toxicological characteristics

The following adverse effects have been noted with therapeutic use of this material: headache; changes in blood pressure; altered heart rate and pulse.

Information on toxicological effects

Acute toxicity

Health injuries are not known or expected under normal use.

<table>
<thead>
<tr>
<th>Components</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DICHLORODIFLUOROMETHANE (CAS 75-71-8)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>&gt; 800000 mg/l, 30 Minutes</td>
</tr>
<tr>
<td>LOEL</td>
<td>27000 ppm, Effects on heart and respiratory parameters.</td>
</tr>
<tr>
<td></td>
<td>10000 ppm, Impaired psychomotor performance.</td>
</tr>
<tr>
<td>NOEL</td>
<td>1000 ppm</td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>&gt; 1 g/kg</td>
</tr>
<tr>
<td><strong>Chronic</strong></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td></td>
</tr>
<tr>
<td>NOAEL</td>
<td>15 mg/kg/day, dietary study - Decrease in bodyweight.</td>
</tr>
</tbody>
</table>

**FLUOROTRICHLOROMETHANE (CAS 75-69-4)**

**Acute**

* Oral
* LD50 > 15000 mg/day

**SALBUTAMOL (CAS 18559-94-9)**

**Acute**

* Oral
* LD50 660 mg/kg

**Chronic**

* Oral
* LOEL 2 mg/kg/day, 1 years

**Subacute**

* Oral
* LOEL 30 mg/kg/day, 30 Day

**Subchronic**

* Inhalation
* LOEL 600 mcg/kg/day, 26 weeks
* NOAEL 1710 mcg/kg/day, 13 weeks
* Rat 512 mcg/kg/day, 6 months
* 1.9 mg/kg/day, 13 weeks
* NOEL 220 mcg/kg/day, 26 weeks

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation

Health injuries are not known or expected under normal use.

**Corrosivity**

* FLUOROTRICHLOROMETHANE
  * OECD 404
  * Result: Non-irritant
  * Species: Rabbit

**Irritation Corrosion - Skin**

* DICHLORODIFLUOROMETHANE
  * Result: Slightly irritating
  * Species: Rabbit
  * Test Duration: 1 months

Serious eye damage/eye irritation

**Eye**

* FLUOROTRICHLOROMETHANE
  * Acute ocular irritation; OECD 405
  * Result: Non-Irritating
  * Species: Rabbit
Eye
DICHLORODIFLUOROMETHANE  Result: Slight irritant
Species: Rabbit
Test Duration: 1 months

Respiratory sensitization  Due to lack of data the classification is not possible.
Skin sensitization  None known.

Sensitization
DICHLORODIFLUOROMETHANE  Epidemiology
Result: Low incidence of contact hypersensitivity.

Germ cell mutagenicity  No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

FLUOROTRICHLOROMETHANE  1000 - 45000 ppm Dominant lethal assay, Inhalation study.
Result: Negative
Species: Mouse
1000 - 50000 ppm In vivo cytogenetics, Inhalation study.
Result: Negative
Species: Rat

DICHLORODIFLUOROMETHANE  15 - 150 mg/kg Dominant lethal assay
Result: Negative
Species: Rat
Ames
Result: Negative

FLUOROTRICHLOROMETHANE  Ames
Result: Negative

SALBUTAMOL  Ames
Result: Negative
Notes: Data from albuterol sulfate

FLUOROTRICHLOROMETHANE  Cell transformation (BHK21 cells)
Result: Negative

SALBUTAMOL  Chromosomal Aberration Assay In Vitro
Result: Negative
Notes: Data from albuterol sulfate

DICHLORODIFLUOROMETHANE  In vitro cell transformation assay.
Result: Negative

SALBUTAMOL  Mouse micronucleus test
Result: Negative
Notes: Data from albuterol sulfate

DICHLORODIFLUOROMETHANE  mammalian cell mutation assay (CHO/HGPRT forward mutation assay)
Result: Negative

FLUOROTRICHLOROMETHANE  mammalian cell mutation assay (CHO/HGPRT forward mutation assay)
Result: Negative

Carcinogenicity  This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. Not classifiable as to carcinogenicity to humans.

DICHLORODIFLUOROMETHANE  1000 - 5000 ppm
Result: No tumourigenic effect.
Species: Rat

FLUOROTRICHLOROMETHANE  1000 - 5000 ppm Inhalation
Result: Negative
Species: Mouse
Test Duration: 78 weeks
1000 - 5000 ppm Inhalation
Result: Negative
Species: Rat
Test Duration: 78 weeks

DICHLORODIFLUOROMETHANE  1000 - 50000 ppm
Result: No tumourigenic effect.
Species: Mouse
15 - 150 mg/kg/day
Result: No tumourigenic effect.
Species: Rat

FLUOROTRICHLOROMETHANE  1962 - 3925 mg/kg/day oral
Result: Negative
Species: Mouse
Test Duration: 78 weeks
488 - 1077 mg/kg/day oral
Result: Negative
Species: Rat
Test Duration: 78 weeks
Carcinogenicity

DICHLORODIFLUOROMETHANE 8 - 80 mg/kg/day
Result: No tumourigenic effect.
Species: Dog

SALBUTAMOL
Result: Negative
Species: Mouse
Notes: Data from albuterol sulfate
Result: Negative
Species: Rat
Notes: Data from albuterol sulfate

Species: Dog
SALBUTAMOL Result: Negative
Species: Mouse
Notes: Data from albuterol sulfate
Result: Negative
Species: Rat
Notes: Data from albuterol sulfate

Reproductive toxicity

Components in this product have been shown to cause birth defects and reproductive disorders in laboratory animals.

DICHLORODIFLUOROMETHANE 15 - 150 mg/kg/day 3-generation study
Result: No adverse effects on fertility, or development.
Species: Rat

SALBUTAMOL 2.5 mg/kg/day Embryofetal Development, Species-specific
Result: Developmental effects including cleft palate
Species: Mouse
Notes: Data from albuterol sulfate

FLUOROTRICHLOROMETHANE 200000 ppm Foetal development - inhalation
Result: NOAEL
Species: Rabbit

200000 ppm Foetal development - inhalation
Result: NOAEL
Species: Rat

DICHLORODIFLUOROMETHANE
200000 ppm, Inhalation
Result: No adverse foetal effects observed
Species: Rabbit

200000 ppm, Inhalation
Result: No adverse foetal effects observed
Species: Rat

SALBUTAMOL 50 mg/kg/day Embryofetal Development
Result: Cranial malformations
Species: Rabbit
Notes: Data from albuterol sulfate

50 mg/kg/day Fertility
Result: Negative
Species: Rat
Notes: Data from albuterol sulfate

Embryofetal Development
Result: Negative
Species: Rat
Notes: Data from albuterol sulfate

Specific target organ toxicity - single exposure
FLUOROTRICHLOROMETHANE
Organ: Heart

Specific target organ toxicity - repeated exposure
Heart.

Aspiration hazard
Due to lack of data the classification is not possible.

Further information
Caution - Pharmaceutical agent.

Asphyxiant

12. Ecological information

Ecotoxicity

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>DICHLORODIFLUOROMETHANE (CAS 75-71-8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish EC50</td>
<td></td>
<td>Orange-red killfish (Adult Oryzias latipes)</td>
</tr>
<tr>
<td>SALBUTAMOL (CAS 18559-94-9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activated Sludge IC50</td>
<td></td>
<td>Residential sludge</td>
</tr>
<tr>
<td>Respiration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea EC50</td>
<td></td>
<td>Water flea (Daphnia magna)</td>
</tr>
<tr>
<td>Components</td>
<td>Species</td>
<td>Test Results</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>Chronic</td>
<td>NOEC</td>
<td>Water flea (Daphnia magna) 83.2 mg/l, 48 hours, Static test</td>
</tr>
<tr>
<td></td>
<td>EC50</td>
<td>Water flea (Ceriodaphnia dubia) ECO 1002</td>
</tr>
<tr>
<td></td>
<td>LOEC</td>
<td>Water flea (Ceriodaphnia dubia) &gt; 100 mg/l, 8 days, Static renewal test</td>
</tr>
<tr>
<td></td>
<td>NOEC</td>
<td>Water flea (Ceriodaphnia dubia) 100 mg/l, 8 days, 7 day static renewal</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

### Persistence and degradability

#### Photolysis

- **Half-life (Photolysis-atmospheric)**
  - DICHLORODIFLUOROMETHANE: > 300 Years Measured
- **UV/visible spectrum wavelength**
  - SALBUTAMOL: 225 nm

#### Hydrolysis

- **Half-life (Hydrolysis-neutral)**
  - SALBUTAMOL: > 1 Years Measured

#### Biodegradability

- **Percent degradation (Aerobic biodegradation-soil)**
  - SALBUTAMOL: 1.3 - 38.7 %, 64 days

### Bioaccumulative potential

Not available.

#### Partition coefficient n-octanol / water (log Kow)

- SALBUTAMOL: 0.061 (Calculated).
- DICHLORODIFLUOROMETHANE: 2.16
- FLUOROTRICHLOROMETHANE: 2.53

#### Bioconcentration factor (BCF)

- DICHLORODIFLUOROMETHANE: 2.3 - 10 Measured, Cyprinus carpio, carp

### Mobility in soil

No data available.

#### Adsorption

- **Soil/sediment sorption - log Koc**
  - DICHLORODIFLUOROMETHANE: 2.3 Estimated
  - SALBUTAMOL: -1.6 - -1.15 Measured

### Mobility in general

#### Volatility

- **Henry's law**
  - DICHLORODIFLUOROMETHANE: 0.343 atm m3/mol Measured, 25 °C
  - SALBUTAMOL: 0 atm m^3/mol Calculated, 20 C

### Other adverse effects

Not available.

### 13. Disposal considerations

#### Disposal instructions

Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

#### Hazardous waste code

The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**US RCRA Hazardous Waste U List: Reference**

- DICHLORODIFLUOROMETHANE (CAS 75-71-8): U075
- FLUOROTRICHLOROMETHANE (CAS 75-69-4): U121

#### 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

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

#### DOT

- **UN number**: UN1950
- **UN proper shipping name**: Aerosols, non-flammable
- **Transport hazard class(es)**: 2.2
### DOT

Material name: VENTOLIN INHALATION AEROSOL

![Non-Flammable Gas](NON-FLAMMABLE_GAS.png)

Material name: VENTOLIN INHALATION AEROSOL

**Subsidiary class(es)**: Not available.
**Packing group**: Not available.
**Special precautions for use**: May be able to ship as an Excepted or Limited Quantity. Review all HazMat Table packaging exceptions and instructions to identify options.

Consumer Commodity, ORM-D may apply. or May be exempt from DOT regulations. See 173.307.

**Labels required**: 2.2
**Packaging exceptions**: 306
**Packaging non bulk**: None
**Packaging bulk**: None
**Qty limits cargo**: 150 kg
**Qty limits passenger**: 75 kg

**IATA**

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN1950</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Aerosols, non-flammable</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>2.2</td>
</tr>
<tr>
<td>Subsidiary class(es)</td>
<td>-</td>
</tr>
<tr>
<td>Packaging group</td>
<td>Not available.</td>
</tr>
<tr>
<td>Labels required</td>
<td>2.2</td>
</tr>
<tr>
<td>ERG Code</td>
<td>2L</td>
</tr>
<tr>
<td>Passenger &amp; cargo</td>
<td>Allowed.</td>
</tr>
</tbody>
</table>

**Additional Information:**

- **Packaging Instruction**: 203
- **Pkg Inst cargo only**: 203
- **Pkg Inst passenger & cargo**: Y203
- **SP see 44**: A98,A145,A167
- **Max net qty pkg**: 75 kg
- **Max net qty pkg cargo only**: 150 kg
- **Max net qty pkg LQ**: 30 kg G

May be able to ship as an Excepted or Limited Quantity. Review all HazMat Table packaging exceptions and instructions to identify options.

ID 8000, Consumer Commodity, may apply. See Packing Instruction Y963.

May not be subject to IATA regulations, see SP A98.

**IMDG**

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN1950</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>AEROSOLS, asphyxiant</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>2</td>
</tr>
<tr>
<td>Subsidiary class(es)</td>
<td>5A</td>
</tr>
<tr>
<td>Packaging group</td>
<td>Not available.</td>
</tr>
<tr>
<td>Marine pollutant</td>
<td>No</td>
</tr>
<tr>
<td>Labels required</td>
<td>2.2</td>
</tr>
<tr>
<td>EmS</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Special precautions for user**: May be able to ship as an Excepted or Limited Quantity. Review all HazMat Table packaging exceptions and instructions to identify options.

May be exempt from IMDG regulations. See IMDG Special Provision 190.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

MARPOL Annex II applies to liquids used in a ship's operation that pose a threat to the marine environment. These materials may not be transported in bulk.
15. Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)
DICHLORODIFLUOROMETHANE (CAS 75-71-8) LISTED
FLUOROTRICHLOROMETHANE (CAS 75-69-4) LISTED

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

SARA 304 Emergency release notification
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
No

SARA 311/312 Hazardous chemical
No

NFPA ratings
Health: 1
Flammability: 0
Instability: 0

HMIS® ratings
Health: 1*
Flammability: 0
Physical hazard: 3

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

Food and Drug Administration (FDA)
Not regulated.

US state regulations

US. Massachusetts RTK - Substance List
DICHLORODIFLUOROMETHANE (CAS 75-71-8)
FLUOROTRICHLOROMETHANE (CAS 75-69-4)

US. New Jersey Worker and Community Right-to-Know Act
DICHLORODIFLUOROMETHANE (CAS 75-71-8) 500 lbs
FLUOROTRICHLOROMETHANE (CAS 75-69-4) 500 lbs

US. Pennsylvania RTK - Hazardous Substances
DICHLORODIFLUOROMETHANE (CAS 75-71-8)
FLUOROTRICHLOROMETHANE (CAS 75-69-4)

US. Rhode Island RTK
DICHLORODIFLUOROMETHANE (CAS 75-71-8)
FLUOROTRICHLOROMETHANE (CAS 75-69-4)
US. California Proposition 65
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>No</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

* A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date: 01-20-2014
Revision date: 01-20-2014
Version #: 13

Further information: HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings
- Health: 1*
- Flammability: 0
- Physical hazard: 3

NFPA ratings
- Health: 1
- Flammability: 0
- Instability: 0

References: GSK Hazard Determination

Disclaimer: The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create any warranty, express or implied. It is the responsibility of the user to determine the applicability of this information and the suitability of the material or product for any particular purpose.

Revision Information: Product and Company Identification: Material Processes
Composition / Information on Ingredients: Ingredients
Transport Information: Proper Shipping Name/Packing Group
Regulatory Information: United States
Other information, including date of preparation or last revision: Further information