

**NETTOGAZ GC+**
**100015300**
**SECTION 1 Identification of the substance/mixture and of the company/undertaking**
**1.1. Product identifier**
**Trade name** : NETTOGAZ GC+

**1.2. Relevant identified uses of the substance or mixture and uses advised against**
**1.2.1 Relevant identified uses** : Internal cleaning of refrigeration and air-conditioning systems

**1.3. Details of the supplier of the safety data sheet**

 : DEHON SERVICE  
 26 Avenue du Petit Parc  
 94683 VINCENNES Cedex France  
 Tel : +33 (0) 1 43 98 75 00  
 Fax : +33 (0) 1 43 98 21 51

**e-mail** : ContactFDS@climalife.dehon.com

**1.4 Emergency telephone number** : EMERGENCY TELEPHONE NUMBER (24h/24) : + 33 (0) 1 72 11 00 03  
 Anti-poison Center : INRS/ORFILA (France) : +33 (0) 1 45 42 59 59

**SECTION 2 Hazards identification**
**2.1. Classification of the substance or mixture**
**2.1.1. Regulation (EC) No 1272/2008 (CLP)**
**Physical hazards**

: Gases under pressure - Liquefied gas (Press. Gas) - H280

**Health hazards**

: Acute toxicity, Inhalation - Category 4 - (Acute Tox. 4) - H332

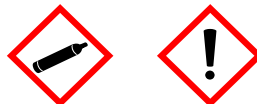
**Environmental hazards**

: Hazardous to the aquatic environment - Chronic hazard - Category 3 (Aquatic Chronic 3) - H412

**2.1.2 Directive EEC/67/548 or 1999/45/CE** : Xn; R20  
 R52-53

**2.2. Label elements**
**2.2.1 Labelling EC 1272/2008 (CLP)**
**Contains**

: Trans-dichloroethylene

**Hazard pictograms**

**Signal words**

: Warning

**Hazard statements**

 : H280 : Contains gas under pressure; may explode if heated  
 H332 : Harmful if inhaled  
 H412 : Harmful to aquatic life with long lasting effects

**Precautionary statements :**
**• Prevention**

 : P261 : Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P273 : Avoid release to the environment

**• Response**

: P312 : Call a POISON CENTER/doctor/physician if you feel unwell

**• Storage**

: P410 + P403 : Protect from sunlight. Store in a well-ventilated place

**• Disposal considerations**

: P501 : Dispose of contents / container to an authorized center in accordance with national regulation

**2.3. Other hazards**
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## SECTION 3 Composition/information on ingredients

**3.1/3.2. Substance / Preparation** : Preparation  
**Chemical nature** : Solvent mixture pressurized with nitrogen  
**Components contributing to the hazard :**

Substance name	Contents	CAS No	EC No	Index No	Ref REACH	Classification
<b>Trans-1-chloro-3,3,3-trifluoropropene</b> :	> 50 %	102687-65-0	700-486-0	----	01-2119855084-38	R52-53 ----- Liquefied gas;H280 Aquatic Chronic 3;H412
<b>Trans-dichloroethylene</b> :	< 50 %	156-60-5	205-860-2	602-026-00-3	----	F; R11 Xn; R20 R52-53 ----- Flam. Liq. 2;H225 Acute Tox. 4 (Inhalation);H332 Aquatic Chronic 3;H412

## SECTION 4 First aid measures

### 4.1. Description of first aid measures

**Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
Call a POISON CENTER/doctor/physician if you feel unwell

**Skin contact** : After contact with skin, wash immediately with plenty of water.  
Immediately remove contaminated clothing or footwear  
If case of redness or irritation, call a doctor

**Eye contact** : Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum)  
Consult an eye specialist immediately

**Ingestion** : Do NOT induce vomiting  
Call a doctor immediately

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

**Inhalation** : Headaches  
Loss of consciousness  
Drowsiness  
Cardiac disorders  
Dizziness

**Skin contact** : No information available

**Eye contact** : No information available

**Ingestion** : No information available

**4.3. Indication of any immediate medical attention and special treatment needed** : No information available

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**SECTION 5 Fire-fighting measures**
**5.1. Extinguishing media**

**Suitable extinguishing media** : Water spray  
Carbon dioxide (CO<sub>2</sub>)  
Foam  
Powders

**Unsuitable extinguishing media** : None to our knowledge. If there is a fire close by, use suitable extinguishing agents

**5.2. Special hazards arising from the substance or mixture**

**Specific hazards** : Contains gas under pressure; may explode if heated  
On heating :  
Toxic and corrosive vapours are released  
For further information, refer to section 10 : "Stability and Reactivity"

**5.3. Advice for firefighters**

**Specific fire fighting methods** : Cool down the containers exposed to heat with a water spray  
**Protection of fire-fighters** : Complete protective clothing  
Self-contained breathing apparatus

**SECTION 6 Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures** : Avoid contact with skin and eyes  
Do not breathe vapours  
Do not attempt to take action without suitable protective equipment  
Evacuate the danger area.  
Stop the leak.  
Remove all sources of ignition  
Ventilate spillage area

**6.2. Environmental precautions** : Do not allow product to spread into the environment

**6.3. Methods and material for containment and cleaning up** : Contain the spilled material by bunding  
Absorb with :  
- sand or inert absorbent.  
Dispose of contaminated materials in accordance with current regulations

**SECTION 7 Handling and storage**
**7.1. Precautions for safe handling**

**Technical measures** : Ventilation

**Precautions** : Work in a well-ventilated area  
Avoid the build-up of electrostatic charge  
Receptacle under pressure.  
Handle and open the container with care.  
Smoking is forbidden

**Industrial hygiene** : Do not drink, eat or smoke in the workplace

**7.2. Conditions for safe storage, including any incompatibilities**
**Storage conditions**

**- Recommended** : Store :  
- in a cool, well-ventilated area  
- the container tightly closed  
- away from any source of ignition

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**SECTION 7 Handling and storage (continued)**

<b>Incompatible products</b>	: Strong acids Strong bases Strong oxidizing agents
<b>Packaging materials</b>	
- Recommended	: Ordinary steel
- Not suitable	: Aluminium Magnesium.
<b>7.3. Specific end use(s)</b>	: No data

**SECTION 8 Exposure controls/personal protection**

<b>8.1. Control parameters</b>	
<b>Engineering measures</b>	: Ensure good ventilation of the work station
<b>8.1.1. Occupational Exposure Limits</b>	: Trans-1-chloro-3,3,3-trifluoropropene : TWA [8h; ppm] : 300 (recommended) Trans-dichloroethylene : USA (OSHA) : PEL - TWA (8h; mg/m <sup>3</sup> ) : 790 Trans-dichloroethylene : USA (OSHA) : PEL - TWA (8h; ppm) : 200 Trans-dichloroethylene : Germany : MAK - TWA (8h; mg/m <sup>3</sup> ) : 800 Trans-dichloroethylene : Belgium : GWBB - TWA (8h; mg/m <sup>3</sup> ) : 805 Trans-dichloroethylene : Germany : MAK - STEL (15min; ppm) : 400 Trans-dichloroethylene : Germany : MAK - STEL (15min; mg/m <sup>3</sup> ) : 1600 Trans-dichloroethylene : Germany : MAK - TWA (8h; ppm) : 200 Trans-dichloroethylene : Belgium : GWBB - TWA (8h; ppm) : 200
<b>Personal protection :</b>	
- Respiratory protection	: In the event of insufficient ventilation: Mask with AX canister
- Hand protection	: Protective gloves made of Viton
- Eye protection	: Safety spectacles with side shields
- Skin protection	: Majority cotton clothing

**SECTION 9 Physical and chemical properties**

<b>9.1. Information on basic physical and chemical properties</b>	
<b>9.1.a. Appearance</b>	
<b>Physical state</b>	: Liquid under pressure
<b>Colour</b>	: Colourless
<b>9.1.b. Odour</b>	: slightly ethereal.
<b>9.1.c. Odour threshold</b>	: No information available
<b>9.1.d. pH</b>	: Not applicable
<b>9.1.e. Melting point / Freezing point</b>	: No information available
<b>9.1.f. Initial boiling point - boiling range</b>	: 20°C
<b>9.1.g. Flash point</b>	: None
<b>9.1.h. Evaporation rate</b>	: No information available
<b>9.1.i. Flammability</b>	: Not classified as flammable by EC criteria but may present a hazard in the event of a fire
<b>9.1.j. Explosion limits (lower - upper)</b>	: No information available
<b>9.1.k. Vapour pressure</b>	: 10 bar at 20°C

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**SECTION 9 Physical and chemical properties (continued)**

<b>9.1.l. Vapour density</b>	: No information available
<b>9.1.m. Density</b>	: Liquid : 1.27 g/cm <sup>3</sup> at 20 °C
<b>9.1.n. Solubility</b>	
-in water	: No information available
<b>9.1.o. Partition coefficient : n-octanol / water</b>	: HCFC-1233zd : 2.2 Trans-dichloroethylene : 2.09
<b>9.1.p. Auto-ignition temperature</b>	: No information available
<b>9.1.q. Thermal decomposition</b>	: No information available
<b>9.1.r. Viscosity</b>	: No information available
<b>9.1.s. Explosive Properties</b>	: Not explosive material according to EC criteria
<b>9.1.t. Oxidising properties</b>	: Non oxidizing material according to EC criteria
<b>9.2. Other information</b>	

**SECTION 10 Stability and reactivity**

<b>10.1. Reactivity</b>	
<b>10.2. Chemical stability</b>	: Stable at ambient temperature and under normal conditions of use
<b>10.3. Possibility of hazardous reactions</b>	: No information available
<b>10.4. Conditions to avoid</b>	: Contains gas under pressure; may explode if heated
<b>10.5. Incompatible materials</b>	: - strong acids - strong bases - strong oxidizing agents - aluminium - magnesium
<b>10.6. Hazardous decomposition products</b>	: On thermal decomposition (pyrolysis), releases : Carbon oxides (CO, CO <sub>2</sub> ) Carbonyl halogenides Hydrogen fluoride Hydrogen chloride Phosgene

**SECTION 11 Toxicological information**

<b>11.1. Information on toxicological effects</b>	
• <b>Acute toxicity</b>	: Harmful if inhaled
<b>On ingredients</b>	
<b>Trans-1-chloro-3,3,3-trifluoropropene</b>	: Rat inhalation LC50 [ppm/4h] : 120000
<b>Trans-dichloroethylene</b>	: Rat inhalation LC50 [mg/l/4h] : 95.6 - vapours : Rat inhalation LC50 [ppm/4h] : 24100 - Gas : Rat oral LD50 [mg/kg] : 770
• <b>Skin corrosion/irritation</b>	: Slightly irritating to skin
• <b>Serious eye damage/irritation</b>	: No information available
• <b>Respiratory or skin sensitisation</b>	: No information available
• <b>Germ cell mutagenicity</b>	: No mutagenic effect

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## SECTION 11 Toxicological information (continued)

- **Carcinogenicity** : No information available
- **Reproductive toxicity** : No information available
- **STOT-single exposure** : No information available
- **STOT-repeated exposure** : No information available
- **Aspiration hazard** : No information available

## SECTION 12 Ecological information

### 12.1. Toxicity

**Effects on the aquatic environment** : Harmful to aquatic life with long lasting effects

#### On ingredients

- Trans-1-chloro-3,3,3-trifluoropropene** : 48 Hour - EC50 - Daphnia magna [mg/l] : 82  
: 72 Hours - EC50 - Algae [mg/l] : 106.7  
: 96 Hours - LC50 - Fish (Oncorhynchus mykiss) [mg/l] : 38  
: NOEC - Algae [mg/l] : / 72 h : 115
- Trans-dichloroethylene** : 48 Hour - EC50 - Daphnia magna [mg/l] : 220  
: 48 Hours - LC50 - Crustaceans [mg/l] : 220  
: 96 Hours - LC50 - Fish (Lepomis macrochirus) [mg/l] : 140

### 12.2. Persistence and degradability

#### Biodegradability

- : No easy biodegradable  
HCFC-1233zd : 0 % biodegradation after 28 days  
Trans-dichloroethylene : 8 % biodegradation after 28 days

### 12.3. Bioaccumulative potential

- : Weak.

### 12.4. Mobility in soil

- : No information available

### 12.5. Results of PBT and vPvB assessment

- : No information available

### 12.6. Other adverse effects

## SECTION 13 Disposal considerations

### 13.1. Waste treatment methods

#### WASTE FROM PRODUCT :

- Destruction/Disposal** : Consult the manufacturer or supplier for information regarding recovery and recycling of the product

#### CONTAMINATED PACKAGING :

- Destruction/Disposal** : Reuse or recycle following decontamination.  
Destroy at an authorised site

#### NOTE

- : The user's attention is drawn to the possible existence of specific european, national or local regulations regarding disposal

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**SECTION 14 Transport information**

- 14.1. UN number** : UN 3163  
**14.2. UN proper shipping name** : LIQUEFIED GAS, N.O.S.  
 (HCFC-1233zd, azote)  
**14.3. Transport hazard class(es)**  
**Rail/road (RID/ADR)** : Class : 2  
**Sea transport** : Class : 2.2  
**Air transport (OACI/IATA)** : Class : 2.2  
**Hazard Label(s)** : 2.2



- 14.4. Packing group** : -  
**14.5. Environmental hazards** : Not classified as dangerous to the aquatic environment  
 Marine pollutant : NO  
**14.6. Special precautions for user**  
**Rail/road (RID/ADR)** : Tunnel restriction code : (C/E)  
 Hazard identification number : 20  
 Classification code : 2A  
**Sea transport** : EmS Nr : F-C, S-V  
 Segregation group : -  
**Air transport (OACI/IATA)** : Cargo aircraft:  
 Packing instruction: 200  
 Quantity: 150 kg  
 Passenger aircraft:  
 Packing instruction: 200  
 Quantity: 75 kg

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

- NOTE** : The above regulatory prescriptions are those valid on the date of publication of this sheet  
 However, given the possible evolution of transport regulations for hazardous materials, in case the present sheet is dating back to more than 12 months ago, it would be advisable to check their validity with your commercial agency

**SECTION 15 Regulatory information**

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture** : Ensure all national/local regulations are observed.  
**15.2. Chemical safety assessment** : No information available

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### SECTION 16 Other information

<b>Further information</b>	: Product for industrial use only For more information regarding the use of this product, please refer to our technical information or contact the sales department in your region This safety data sheet has been written in conformity with the regulation (UE) 453/2010.
<b>Text of R-Phrases in § 3</b>	: R11 : Highly flammable. R20 : Harmful by inhalation. R52/53 : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>Text of H-Phrases in § 3</b>	: H225 - Highly flammable liquid and vapour H280 - Contains gas under pressure; may explode if heated H332 - Harmful if inhaled H412 - Harmful to aquatic life with long lasting effects
<b>* Update</b>	: Modifications are indicated by an asterisk (*)

This sheet complements the technical sheets but does not replace them. The information given is based on our knowledge of the product, at the time of publication. It is given in good faith.

Besides, the attention of the user is drawn to the possible risks incurred by using the product for any other use than that for which it was intended.

In no way does this exempt the user from knowing and applying all the regulations controlling his activity. He alone will take on the responsibility for taking the precautions involved by the use of the product.

The aim of all the mandatory regulations mentioned is just to help the user to fulfil his obligations regarding the use of hazardous products.

This information must not be considered exhaustive. It does not exempt the user from ensuring that other obligations than those mentioned could apply, related to the storage and use of the product, this being his sole responsibility.

**End of document**

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