Safety data sheet
according to UK REACH

Printing date 27.11.2024 Version number 1.01 (replaces version 1.00) Revision: 27.11.2024

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

· **1.1 Product identifier**

· **Trade name: 402C**
· **Other Means of Identification:** Super Duster™ HFO-1234ZE
· **Related Part Number:** 402C-Aerosol, 402C-235G
· **CAS Number:**
29118-24-9
· **ELINCS Number:**
471-480-0

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
· **Application of the substance / the mixture** Aerosol duster
· **Uses advised against** Not applicable

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**

MG Chemicals Ltd. (Head Office)
1210 Corporate Drive
Burlington, Ontario L7L 5R6
CANADA
+(1) 905-331-1396
info@mgchemicals.com

MG Chemicals
Heame House, 23 Bliston Street
Sedgely Dudley DY3 1JA.
United Kingdom
+(44) 1663 362888

MG Chemicalst Ltd.
Level 2, Vision Exchange, Building Territorials Street,
Zone 1, Central Business, District,
Birkirkara CBD 1070,
MALTA

· **Further information obtainable from:** sds@mgchemicals.com

· **1.4 Emergency telephone number:**

Verisk 3E (Access code: 335388)
+(44) 20 3514787
+(1) 760 476 3961
UK Toll free: +(0) 800 680 0425

Members of the public seeking specific information on poisons should contact:
In England and Wales: NHS 111 - dial 111
In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**
Aerosol 3 H229 Pressurised container: May burst if heated.

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· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the GB CLP regulation.

· **Hazard pictograms** Not applicable

· **Signal word** Warning

· **Hazard-determining components of labelling:**
trans-1,3,3,3-Tetrafluoroprop-1-ene

· **Hazard statements**
H229 Pressurised container: May burst if heated.

· **Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P251 Do not pierce or burn, even after use.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

· **2.3 Other hazards**

The jet or liquid may cause frostbite in contact with skin or eyes.
May displace oxygen and cause rapid suffocation.
Inhalation overexposure following an intentional abuse or use in confined space may cause cardiac or central nervous systems effects.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Determination of endocrine-disrupting properties** Endocrine Disruptor substance ≥ 0.1% = none

SECTION 3: Composition/information on ingredients

· **3.1 Substances**

· **CAS No. Description**
29118-24-9 trans-1,3,3,3-Tetrafluoroprop-1-ene

· **Identification number(s)**

· **ELINCS Number:** 471-480-0

· **Dangerous components:**			
CAS: 29118-24-9 ELINCS: 471-480-0	trans-1,3,3,3-Tetrafluoroprop-1-ene	Aerosol 3, H229	100.0%

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **After inhalation:**
Remove person to fresh air and keep comfortable for breathing.
If feeling unwell: Call a POISON CENTRE or doctor.

· **After skin contact:** Wash with plenty of water or shower.

· **After eye contact:**
Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

· **After swallowing:** Rinse mouth.

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(Contd. of page 2)

· **4.2 Most important symptoms and effects, both acute and delayed**
If frostbite occurs: Thaw frosted parts with lukewarm water. Do not use hot water. Do not rub affected area. Get immediate medical attention.

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

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

· **5.2 Special hazards arising from the substance or mixture**
Prevent fire-fighting wash from entering waterway or sewer system.
Aerosols containers may erupt with force at temperatures above 50 °C [122 °F].
Produces irritating and toxic fumes in fires or in contact with hot surfaces.
Vapors are heavier than air. Vapors may travel to sources of ignition near the ground. They can cause flash fire or ignite explosively.
· **Hazardous combustion products:**
Carbon Oxides (COx)
Halogenated compounds
Hydrogen flourides

· **5.3 Advice for firefighters**
· **Protective equipment:** Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Avoid breathing mist, spray, or vapors.
For very large spills, wear self-contained breathing apparatus before approaching the spill. Wear cold-insulating clothing and gloves.
For aerosol can spills in confined or low lying space, leave the immediate spill area.
If it can safely be done, extinguish open flames or remove high temperature sources to avoid producing toxic decomposition products.

· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**
For aerosol can spills at room temperature, the product turns gaseous and disperses in atmosphere. Ensure adequate ventilation, especially in low or enclosed areas.

· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Avoid contact with skin and eyes.

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Avoid breathing gas or spray. In cases of inadequate ventilation wear respiratory protection.
Do not pierce or burn, even after use.
Wear cold-insulating gloves if exposure to liquid or aerosol jet is likely. Wear eye protection.
HOLD CAN UPRIGHT to avoid ejection of liquid stream during use. Do NOT spray when container is more than 45 degrees off vertical or inverted.

· **Information about fire - and explosion protection:** No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurised containers.
Keep in a dry and clean area, away from incompatible substances

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:**
Protect from heat and direct sunlight.
Do not expose to temperatures exceeding 50 °C [122 °F].

· **7.3 Specific end use(s)** See section 1.2

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:** Not required.

· **Additional information:**
The lists valid during the making were used as basis.
Refer to the national or regional occupational exposure limit regulation for abbreviations and acronyms.

· **8.2 Exposure controls**

· **Appropriate engineering controls** No further data; see section 7.

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:** Wash hands before breaks and at the end of work.

· **Respiratory protection:**
Use suitable respiratory protective device in case of insufficient ventilation.
If the product is heated or worker has a known allergic reaction, consider using a full mask with organic vapor cartridge or with an independent air supply.

· **Hand protection**
If exposure to the jet or liquid is likely, wear cold-insulating gloves to protect the skin against frostbites.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.



Protective gloves: EN374

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· **Eye/face protection**
Not required.



Wear safety glasses: EN 166

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties	
· **Physical state**	Aerosol (gas+liquid)
· **Form:**	Liquefied gas
· **Colour:**	Colourless
· **Odour:**	Ether-like
· **Odour threshold:**	Not determined.
· **Melting point/freezing point:**	Undetermined.
· **Boiling point or initial boiling point and boiling range**	-19 °C
· **Flammability**	Not applicable.
· **Lower and upper explosion limit**	
· **Lower:**	Not determined.
· **Upper:**	Not determined.
· **Flash point:**	Not applicable, as aerosol.
· **Auto-ignition temperature:**	368 °C
· **Decomposition temperature:**	Not determined.
· **pH**	Not determined.
· **Viscosity:**	
· **Kinematic viscosity**	Not determined.
· **Dynamic:**	Not determined.
· **Solubility**	
· **water at 20 °C:**	.373 g/l
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Vapour pressure at 20 °C:**	4,192 hPa
· **Relative density at 25 °C:**	1.17
· **Vapour density (air=1):**	3.94
· **Particle characteristics**	Not available
· 9.2 Other information	
· 9.2.1 Information with regard to physical hazard classes	
· **Aerosols**	Pressurised container: May burst if heated.
· 9.2.2 Other safety characteristics	
· **Evaporation rate**	≥1 (ButAc=1)
· **Ignition temperature:**	Not determined.
· **Explosive properties:**	Not determined.
· **Solvent content:**	
· **Organic solvents:**	Not available
· **VOC (EC)**	0.00 %

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· **Molecular weight**	114.04 g/mol

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.

· **10.2 Chemical stability** Chemically stable at normal temperatures and pressures.
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.

· **10.3 Possibility of hazardous reactions** No dangerous reactions known.

· **10.4 Conditions to avoid** Temperatures above 50 °C, open flames, and incompatible substances

· **10.5 Incompatible materials:**
Strong oxidizing agents
Alkali metals

· **10.6 Hazardous decomposition products:**
No dangerous decomposition products known.
Hazardous combustion products: see section 5.

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SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**		
29118-24-9 trans-1,3,3,3-Tetrafluoroprop-1-ene		
Inhalative	LC50/4 h	207,000 mg/L (rat)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.
· **Summary of Effects and Symptoms by Routes of Exposure**
· **Eyes:**
Contact with the liquid may cause frostbite due to heat lost caused by rapid evaporation. Exposure to the jet can lead to frostbite.
· **Skin:**
Contact with the liquid may cause frostbite due to heat lost caused by rapid evaporation. Exposure to the jet can lead to frostbite.
· **Inhalation:** Extreme exposure may cause central nervous system depression and irregular heart beat.
· **Swallowed:** See inhalation and skin symptoms

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· **Additional toxicological information:**
· **Delayed and immediate effects as well as chronic effects from short and long-term exposure**
Contact with the liquid may cause frostbite due to heat lost caused by rapid evaporation. Exposure to the jet can lead to frostbite.

· **11.2 Information on other hazards**

· **Endocrine disrupting properties**
Substance is not listed.

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

· **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.

· **12.7 Other adverse effects**
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation** This material and its container must be disposed of as hazardous waste.

· **Uncleaned packaging:**
· **Recommendation:**
Containers may still present a chemical hazard/ danger when empty.
Dispose of contents in accordance with all local, regional, national, and international regulations.
Where possible retain label warnings and SDS and observe all notices pertaining to the product.

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SECTION 14: Transport information

· **14.1 UN number or ID number**
· **ADR, IMDG, IATA** UN1950

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· 14.2 UN proper shipping name
· ADR, IMDG AEROSOLS
· IATA Aerosols, non-flammable

· 14.3 Transport hazard class(es)

· ADR



· Class 2 5A Gases.
· Label 2.2

· IMDG, IATA



· Class 2.2 Gases.
· Label 2.2

· 14.4 Packing group
· ADR, IMDG, IATA Not applicable

· 14.5 Environmental hazards: Not applicable.

· 14.6 Special precautions for user Not applicable.
· Hazard identification number (Kemler code): -
· EMS Number: F-D,S-U
· Stowage Code SW1 Protected from sources of heat.
SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
· Segregation Code SG69 For AEROSOLS with a maximum capacity of 1 litre:
Segregation as for class 9. Stow "separated from" class 1 except for division 1.4.
For AEROSOLS with a capacity above 1 litre:
Segregation as for the appropriate subdivision of class 2.
For WASTE AEROSOLS:
Segregation as for the appropriate subdivision of class 2.

· 14.7 Maritime transport in bulk according to IMO instruments Not applicable.

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· **Transport/Additional information:**



Limited Quantity

· **ADR**

· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E0 Not permitted as Excepted Quantity
· **Transport category**	3
· **Tunnel restriction code**	E

· **IMDG**

· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E0 Not permitted as Excepted Quantity

· **UN "Model Regulation":** UN 1950 AEROSOLS, 2.2

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Poisons Act**

· **Regulated explosives precursors (Part 1)**

Substance is not listed.

· **Regulated poisons (Part 2)**

Substance is not listed.

· **Reportable explosives precursors (Part 3)**

Substance is not listed.

· **Reportable poisons (Part 4)**

Substance is not listed.

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** Substance is not listed.

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

Substance is not listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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· **Relevant phrases**
H229 Pressurised container: May burst if heated.

· **Department issuing SDS:** Regulatory department
· **Contact:** sds@mgchemicals.com
· **Date of previous version:** 17.05.2024
· **Version number of previous version:** 1.00
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Aerosol 3: Aerosols – Category 3
· *** Data compared to the previous version altered.**