

Safety Data Sheet



Company Information:

Manufacturer : Premier Farnell
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Section 1. Identification

GHS product identifier	Dusting Gas/Freeze Spray
Other means of identification	Dusting agents
Product type	Aerosol

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	Gases Under Pressure - Compressed gas
GHS label elements Hazard pictogram	
Signal word	Warning
Hazard statements	Contains gas under pressure; may explode if heated
<u>Precautionary statements</u>	
Prevention	Not applicable
Response	Not applicable
Storage	Protect from sunlight. Store in a well-ventilated place
Disposal	Not applicable
Hazards not otherwise classified	None known

Section 3. Composition/information on ingredients

Substance/mixture	Substance	
Other means of identification	Dusting agents	
<u>CAS number/other identifiers</u> CAS number	Not available	
Product code	1671/1672/1697	
Ingredient name	%	CAS number
1,1,1,2 Tetrafluoroethane	100	811-97-2
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. Occupational exposure limits, if available, are listed in Section 8.		

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Section 4. First aid measures

<u>Description of necessary first aid measures</u>	
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 if irritation occurs.
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 if adverse health effects persist or are severe. 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. Get medical attention if symptoms occur. 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 if adverse health effects persist or are severe. 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.
<u>Most important symptoms/effects, acute and delayed</u>	
<u>Potential acute health effects</u>	
Eye contact	Contact with rapidly expanding gas may cause burns or frostbite. Irritating to eyes
Inhalation	Harmful by inhalation. At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.
Skin contact	Contact with rapidly expanding gas may cause burns or frostbite. May cause skin irritation
Ingestion	No known significant effects or critical hazards
<u>Over-exposure signs/symptoms</u>	
Eye contact	Adverse symptoms may include the following: irritation redness
Inhalation	Adverse symptoms may include the following: respiratory tract irritation coughing
Skin contact	Adverse symptoms may include the following: frostbite irritation redness dryness cracking

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Ingestion	Adverse symptoms may include the following : frostbite frostbite Irritating to mouth, throat and stomach. Ingestion Seek medical attention.
<u>Indication of immediate medical attention and special treatment needed, if necessary</u>	
Notes to physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment
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.
See toxicological information (Section 11)	

Section 5. Fire-fighting measures

<u>Extinguishing media</u> Suitable extinguishing media	Use an extinguishing agent suitable for the surrounding fire
Unsuitable extinguishing media	None known
Specific hazards arising from the chemical	In a fire or if heated, a pressure increase will occur and the container may burst. Bursting aerosol containers may be propelled from a fire at high speed
Hazardous thermal decomposition products	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds
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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool
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

<u>Personal precautions, protective equipment and emergency procedures</u>	
For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment
For emergency responders	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
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).

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
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). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Empty containers retain product residue and can be hazardous.
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 away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters	
Occupational exposure limits	
Ingredient name	Exposure limits
1, 1, 1, 2 Tetrafluoroethane	AIHA WEEL (United States, 10/2011). TWA: 1000ppm 8 hours.
Appropriate engineering controls	Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapours 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.

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<u>Individual protection measures</u>	
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.
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 sideshields.
<u>Skin protection</u>	
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	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator

Section 9. Physical and chemical properties

<u>Appearance</u>	
Physical state	Gas. [Aerosol.]
Colour	Clear. Colourless.
Odor	Ethereal. Faint odor
Odor threshold	Not available
pH	Not available
Melting point	-101°C (-149.8°F)
Boiling point	-26.2°C (-15.2°F)
Flash point	Not available
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Lower and upper explosive (flammable) limits	Not available
Vapour pressure	Not available
Vapour density	3.5 [Air = 1]

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Relative density	Not available
Solubility	Not available
Partition coefficient : n-octanol/water	Not available
Auto-ignition temperature	750°C (1382°F)
Decomposition temperature	Not available
Viscosity	Not available
<u>Aerosol product</u> Type of aerosol	Spray
Heat of combustion	4.2 kJ/g

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

Section 11. Toxicological information

<u>Information on toxicological effects</u>				
<u>Acute toxicity</u>				
Product/ingredient name	Result	Species	Dose	Exposure
1,1,1,2 Tetrafluoroethane	LC50 Inhalation Vapor	Rat	1500 g/m ³	4 hours
<u>Irritation/Corrosion</u> Not available				
<u>Sensitization</u> Not available				
<u>Mutagenicity</u> Not available				
<u>Carcinogenicity</u> Not available				
<u>Reproductive toxicity</u> Not available				
<u>Teratogenicity</u> Not available				
<u>Specific target organ toxicity (single exposure)</u> Not available				
<u>Specific target organ toxicity (repeated exposure)</u> Not available				
<u>Aspiration hazard</u> Not available				

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Information on the likely routes of exposure	Not available
<u>Potential acute health effects</u>	
Eye contact	Contact with rapidly expanding gas may cause burns or frostbite. Irritating to eyes
Inhalation	Harmful by inhalation. At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen
Skin contact	Contact with rapidly expanding gas may cause burns or frostbite. May cause skin irritation
Ingestion	No known significant effects or critical hazards
<u>Symptoms related to the physical, chemical and toxicological characteristics</u>	
Eye contact	Adverse symptoms may include the following : irritation redness
Inhalation	Adverse symptoms may include the following : respiratory tract irritation coughing
Skin contact	Adverse symptoms may include the following : frostbite irritation redness dryness cracking
Ingestion	Adverse symptoms may include the following : frostbite Irritating to mouth, throat and stomach. Ingestion Seek medical attention
<u>Delayed and immediate effects and also chronic effects from short and long term exposure</u>	
<u>Short term exposure</u>	
Potential immediate effects	Not available
Potential delayed effects	Not available
<u>Long term exposure</u>	
Potential immediate effects	Not available
Potential delayed effects	Not available
Potential chronic health effects	Not available
General	No known significant effects or critical hazards
Carcinogenicity	No known significant effects or critical hazards
Mutagenicity	No known significant effects or critical hazards
Teratogenicity	No known significant effects or critical hazards
Developmental effects	No known significant effects or critical hazards
Fertility effects	No known significant effects or critical hazards
Numerical measures of toxicity	
Acute toxicity estimates	Not available

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Section 12. Ecological information

Toxicity	Not available		
Persistence and degradability	Not available		
Bioaccumulative potential			
Product/ingredient name	LogPow	BCF	Potential
1,1,1,2 Tetrafluoroethane	1.06	-	low
<u>Mobility in soil</u> Soil/water partition coefficient (K _{oc})	Not available		
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. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.
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Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	-	-	-	UN3159	UN3159	UN3159
UN proper shipping name	Consumer commodity ORM-D DOT SP 15146	Packaging Not approved For export to Canada	Consumer commodity ORM-DDOT SP15146	(1,1,1,2 Tetrafluoroethane)	(1,1,1,2-Tetrafluoroethane)	(1,1,1,2 Tetrafluoroethane)
Transport hazard class(es)	ORM-D	-	ORM-D	2	2	2
Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.	No.
Additional information	Special provisions Must have a copy of DOTSP 15146 with each shipment.	Packaging Not approved For export to Canada	Must have a copy of DOTSP 15146 with each shipment.	-	-	Must have a copy of DOTSP 15146 with each shipment. Limited quantity: 120 ml The environmentally hazardous substance mark may appear if required by other transportation regulations.



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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 Annex II of MARPOL 73/78 and the IBC Code	Not available

Section 15. Regulatory information

U.S. Federal regulations	TSCA 8(a) CDR Exempt/Partial exemption: Not determined All components are listed or exempted.					
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	Not 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	Sudden release of pressure					
Composition/information on ingredients						
Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
1,1,1,2 Tetrafluoroethane	100	No	Yes	No	No	No
State regulations						
Massachusetts	None of the components are listed					
New York	None of the components are listed					
New Jersey	None of the components are listed					
Pennsylvania	None of the components are listed					
International regulations						
Chemical Weapon Convention List Schedules I, II & III Chemicals	Not listed					
Montreal Protocol (Annexes A, B, C, E)	Not listed					
Stockholm Convention on Persistent Organic Pollutants	Not listed					

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Rotterdam Convention on Prior Inform Consent (PIC)	Not listed
UNECE Aarhus Protocol on POPs and Heavy Metals	Not listed
International lists National inventory	
Australia	All components are listed or exempted
Canada	All components are listed or exempted
China	All components are listed or exempted
Europe	All components are listed or exempted
Japan	All components are listed or exempted
Malaysia	Not determined
New Zealand	All components are listed or exempted
Philippines	All components are listed or exempted
Republic of Korea	All components are listed or exempted
Taiwan	All components are listed or exempted

Section 16. Other information

Hazardous Material Information System (U.S.A.)	Health	1
	Flammability	1
	Physical hazards	1
National Fire Protection Association (U.S.A.)		
Key to abbreviations	<p>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 MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations</p>	

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