

MSDS MATERIAL SAFETY DATA SHEET		0.1 Product	Knock Pest Freeze It
		0.2 Status	Active
		0.3 Version	3
		0.4 Version date	14-04-2025
1. Identification of the substance/mixture and of the company			
1.1 Product identification			
Product name		Knock Pest Freeze It	
Trade name		Knock Pest Freeze It	
Product code		KNOC00117AM	
Chemical description		Mixture	
UFI		H5A8-W003-900K-RUYS	
REACH registration number		-	
1.2 Relevant identified uses of the substance or mixture and uses advised against			
Identified use(s)		Immediate freezing spray.	
Use(s) advised against		Not identified.	
1.3 Details of the supplier of the safety data sheet			
Company identification		Name	Hofman Pest Control
Contact details		Address	De Leemkoele 2
		Zip code	7468 DM
		Town	Enter
		Country	The Netherlands
		Telephone	+31 (0)548-545277
		E-mail	info@hofmanpestcontrol.nl
		Website	www.hofmanpestcontrol.nl
1.4 Emergency telephone number			
Emergency telephone number		The Netherlands: National Poisoning Information Center – Utrecht TEL: +31 (0) 88 755 8000 Belgium: Antipoison Center – Brussels TEL: +32 (0)70 245 245 (Only for the purpose of informing medical personnel in case of acute intoxications)	
2. Hazards identification			
2.1 Classification of the substance or mixture			
Classification according to Regulation (EC) no. 1272/2008: Aerosol 1: Aerosol, category 1; H222-H229 The full text of the (EU)H-statements can be found in section 16.			



2.2	Label elements						
Labelling according to Regulation (EC) no. 1272/2008:							
Hazardous component(s)			-				
Hazard pictogram(s)							
Signal word			Danger				
Hazard statements			H222 Extremely flammable aerosol. H229 Pressurised container: May burst if heated.				
Precautionary measures - General - Prevention - Storage			P102 Keep out of reach of children. P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P211 Do not spray on an open flame or other ignition source. P251 Do not pierce or burn, even after use. P403 Store in a well-ventilated place. P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.				
2.3	Other hazards						
Results of PBT and vPvB assessment			PBT: The mixture does not contain any PBT substances at a concentration of 0.1% by weight or above. vPvB: The mixture does not contain any vPvB substances at a concentration of 0.1% by weight or above.				
Endocrine disrupting properties			The mixture does not contain any substances with endocrine disrupting properties in a concentration of 0.1% or more by weight.				
3. Composition / information on ingredients							
3.1	Substances		Not applicable (mixture).				
3.2	Mixtures		Mixture of the substances listed below with non-hazardous additions.				
Name component(s)		Weight %	CAS no.	EINECS no.	Index no.	REACH no.	Classification
Butane		51-70	106-97-8	203-448-7	601-004-00-0	01-2119474691-32	Flam. Gas 1A; H220 Press. Gas (Comp); H280
Propane		16-25	74-98-6	200-827-9	601-003-00-5	01-2119486944-21	Flam. Gas 1A; H220 Press. Gas (Comp); H280
Isobutane		16-25	75-28-5	200-857-2	601-004-00-0	01-2119485395-27	Flam. Gas 1A; H220 Press. Gas (Comp); H280
The full text of the (EU)H-statements can be found in section 16.							

4. First aid measures

4.1 Description of first aid measures

General	See the instructions below for each specific route of exposure.
First aid measures in case of inhalation	Ventilate the room. Immediately remove the injured person from the contaminated area and keep them at rest in a well-ventilated room. If feeling unwell, consult a doctor immediately.
First aid measures in case of skin contact	Wash with plenty of soap and water. If skin remains irritated, consult a doctor.
First aid measures in case of eye contact	Wash immediately and thoroughly with running water for at least 10 minutes. In case of persistent eye irritation: consult a doctor.
First aid measures in case of ingestion	It is possible to give activated charcoal in water or liquid paraffin medicine. Seek expert medical advice immediately.

4.2 Most important symptoms and effects, both acute and delayed

For symptoms and effects of substances, refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed

When seeking medical advice, keep the container or label available.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	CO ₂ or dry powder.
Unsuitable extinguishing media	Water with full jet.

5.2 Special hazards arising from the substance or mixture

Special exposure hazards	The aerosols can overheat and be ejected violently from a distance and may constitute a dangerous mechanism for fire. Manufactured under pressure in a sealed metal container (test pressure max 15 bar). Cool containers with water spray and try to remove them from fire. Aerosols may overheat and be ejected violently from a distance (protect head with safety helmet).
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5.3 Advice for firefighters

Special protective equipment	Use respiratory protection. Self-contained breathing apparatus may also be used, especially when working in enclosed and poorly ventilated areas and when using halogenated extinguishers (Halon 1211 fluobrene, Solkan 123, NAF, etc.). Wear a safety helmet and a full protective suit.
Special procedures	Keep containers cool with atomised water. Water mist can be used to protect those involved in eradication.
Additional information	The contaminated firewater should be destroyed in accordance with regulations.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions

For non-emergency personnel:

Leave the area of the spillage or release. Do not smoke. Leave the area and note that overheating may cause the cylinder to protrude a considerable distance. Use gloves and protective clothing.

For emergency responders:

Given the density of the aerosol, spillage is unlikely. However, if a container is damaged and there is a risk of spillage, isolate the container by moving it into the open air or covering it with inert material (e.g. sand, earth, vermiculite) and take care to avoid any source of ignition that could create a serious risk of fire. Use suitable gloves (PVC, butyl rubber, neoprene or similar) and protective clothing. Avoid all open flames and possible sources of ignition. Do not smoke. Ensure adequate ventilation. Evacuate the danger zone and consult an expert if necessary.

6.2 Environmental precautions

Environmental precautions

Minimise spillage.

In case of seepage into a watercourse or sewage system, inform the relevant authorities. Do not allow to enter sewers/in a surface water or groundwater.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up

If possible, recover the product for reuse or disposal. After wiping, wash the area and affected materials with water. After cleaning, ensure adequate ventilation.

Dispose of the absorbed material according to regulations.

6.4 Reference to other sections

Safe handling

See section 7.

Personal protection

See section 8.

Removal of the waste product

See section 13.

7. Handling and storage

7.1 Precautions for safe handling

Handling

Avoid contact and inhalation of vapours.

Vapours are heavier than air and can spread close to the ground and form explosive mixtures with air. Prevent the formation of flammable or explosive concentrations in the air.

Also, do not puncture or burn after use. Use in sufficiently ventilated areas.

See also section 8.

Do not smoke near the product.

Do not eat, drink or smoke while using this product.

Container under pressure. Protect from sunlight. Do not expose to temperatures above 50 °C. Do not spray into eyes or onto skin, it may cause cold burns.

Protection against fire and explosion

See section 6.

7.2	Conditions for safe storage, including any incompatibilities	
Storage	Protect against freezing. Keep away from heat and direct sunlight. Protect from moisture and water. Keep away from sources of combustion. Keep out of the reach of children.	
Requirements to be met by storage facilities and tanks	Keep containers upright and safe by avoiding the possibility of falls or collisions. Keep away from heat, unattended flames, sparks and other sources of ignition. Avoid direct sunlight. Observe official regulations for storage of containers with pressure containers. Store in a dry, cool and well-ventilated place.	
Information on storage in one common storage facility	When handling the product, do not contaminate food, beverages or containers intended to contain them. Keep away from edibles. To prevent the metal container from spoiling, keep it away from acidic or alkaline products.	
7.3	<u>Specific end use(s)</u>	
Freezing spray. Professional and consumer use. Keep away from heat, sparks, open flames. Do not use on hot surfaces or surfaces exposed to direct sunlight. Do not inhale spray/vapour. Avoid contact with eyes, skin, clothing. Do not eat, drink or smoke while using. Do not use in confined and/or restricted areas. Excessive use may cause accumulation of flammable gas in air. Spray only briefly and ensure good ventilation after use.		
8. Exposure controls / personal protection		
8.1	<u>Control parameters</u>	
Occupational exposure limits	The product does not contain any substances with critical values that need to be monitored in the workplace.	
Biological limit values	No information available.	
DNELs	No information available.	
PNECs	No information available.	
8.2	<u>Exposure controls</u>	
Appropriate engineering controls	No further data. See section 7.	
Personal protection equipment		
General protection and health measures	The usual precautions should be observed when handling chemicals. Keep away from food, drink and animal feed. Wash hands before each work break and at the end of work. Do not eat, drink, smoke or sniff while working. <i>Consumer use:</i> Work in a well-ventilated area or fitted with ventilation devices. Do not use on hot surfaces or surfaces exposed to sunlight to prevent rapid evaporation of the product. Use personal protective equipment (see below). <i>Professional use:</i> Ensure good workplace ventilation by effective local exhaust ventilation. If these steps are not sufficient to keep the concentration of the product below workplace exposure limits, wear appropriate respiratory protection.	



	Provide an eye wash system. Before using the product, refer to the label for further hazard information. When selecting personal protective equipment, seek appropriate advice from the supplier. Personal protective equipment must comply with the applicable regulations.
Eye / face protection	 Safety glasses (EN166).
Skin protection	Avoid direct contact with skin. It is best to use cotton anti-static clothing.
Hand protection	 Protective gloves. Glove material: nitrile. Thickness: 0.40 mm. Breakthrough time: > 480 minutes.
Respiratory protection	Work in an adequately ventilated area to prevent inhalation of the product.
Thermal hazards	No information available.
Environmental exposure controls	Use according to good working practices to prevent contamination of the environment. See section 6.
9. Physical and chemical properties	
9.1 Information on basic physical and chemical properties	
Physical state	Aerosol.
Colour	Colourless.
Odour	Characteristic
Odour threshold	No data available.
Melting point/freezing point	<-100°C (propellant).
Boiling point/range (1013 hPa)	>-42°C (propellant).
Flammability	Flammable.
Lower and upper explosion limit	Lower: 1.8% (vol). Upper: 9.5% (vol).
Flash point	<-80°C (propellant).
Auto-ignition temperature	>400°C (propellant).
Decomposition temperature	No data available.
pH	Not applicable.
Kinematic viscosity	No data available.
Dynamic viscosity	No data available.
Solubility in water	Negligible.
Partition coefficient n-octanol/water	No data available.
Vapour pressure at 20 °C	4.4 bar.
Density	No data available.
Relative density	0.54 kg/l.
Vapour density	>2 (propellant).

Particle characteristics	No data available.
9.2 Other information	
Other information	Pressure at 20 °C: 4.3 bar. Deformation pressure: 16.5 bar (FEA 621). Container burst pressure: 18 bar (FEA 621). Flash point of the liquid phase: < 0°C. Flammability of propellant: < 0°C.
Form	Liquid gas under pressure.
Explosives	Not applicable.
Flammable gases	Not applicable.
Aerosols	Highly flammable aerosol. Container under pressure: may burst open when heated.
Oxidising gases	Not applicable.
Gases under pressure	Not applicable.
Flammable liquids	Not applicable.
Flammable solids	Not applicable.
Self-reactive substances and mixtures	Not applicable.
Pyrophoric liquids	Not applicable.
Pyrophoric solids	Not applicable.
Self-heating substances and mixtures	Not applicable.
Substances and mixtures, which emit flammable gases in contact with water	Not applicable.
Oxidising liquids	Not applicable.
Oxidizing solids	Not applicable.
Organic peroxides	Not applicable.
Corrosive to metals	Not applicable.
Desensitised explosives	Not applicable.
10. Stability and reactivity	
10.1 Reactivity	
Reactivity	Under standard handling and storage conditions, the product shows no hazardous reactions. Isobutane: Reacts with strong oxidising agents, acetylene, halogens and nitrogen oxides and causes fire and explosion hazards.
10.2 Chemical stability	
Stability	Stable at room temperature and if used as recommended.
Thermal degradation / conditions to avoid	No decomposition when used according to product specification.
10.3 Possibility of hazardous reactions	
Hazardous reactions	Contact with hot surfaces can cause thermal shock and immediate severe reaction.
10.4 Conditions to avoid	
Conditions to avoid	Avoid contact with flammable materials. The product could ignite. Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition. The aerosol product is stable for more than 36 months and no hazardous reactions can occur under normal storage conditions because the container is almost hermetically sealed. To prevent the metal container from spoiling, keep it away from acidic or alkaline products.

		Beware of heat, as the temperature of more than 50°C has increased the pressure inside the container, deforming the cylinder until breakout. During product storage, protect from moisture and water. Pressurised container: may burst open when heated. Pressurised container: do not pierce or burn, even after use.
10.5	Incompatible materials	
	Materials to avoid	It can generate flammable gases to come into contact with elemental metals, nitrides and strong reducing agents. It can generate toxic gases to come into contact with oxidising agents, mineral acids, organic peroxides and organic water peroxides. In contact with oxidising agents, mineral acids, organic nitrides, peroxides and water peroxides, strong oxidising agents can ignite it.
10.6	Hazardous decomposition products	
	Hazardous decomposition products	Under normal storage and use conditions, no hazardous reactions will occur.
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.
	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.
	Specific target organ toxicity – single exposure	Based on available data, the classification criteria are not met.
	Specific target organ toxicity – repeated exposure	Based on available data, the classification criteria are not met.
	Aspiration hazard	Based on available data, the classification criteria are not met.

Additional toxicological information

CAS no.	Substance	Health effects
106-97-8	Butane	Route of exposure: The substance may be absorbed by inhalation. Inhalation risk: The liquid evaporates very rapidly, rapidly displacing air and posing a serious risk of asphyxiation when contained in a confined space. EXPOSURE IN SHORT TERM: Rapid evaporation of the liquid may cause frostbite. The substance may affect the central nervous system. Acute symptoms: Inhalation: Drowsiness. Unconsciousness. Skin on contact with liquid: frostbite. Eyes on contact with liquid: frostbite Remarks: High concentrations in air cause oxygen deficiency resulting in risk of unconsciousness or death.
74-98-6	Propane	Route of exposure: The substance may be absorbed by inhalation. Inhalation risk: The liquid evaporates very rapidly, rapidly displacing air and posing a serious risk of asphyxiation when contained in a confined space. EXPOSURE IN SHORT TERM: Rapid evaporation of the liquid may cause frostbite. The substance may affect the central nervous system. Acute symptoms: Inhalation: Drowsiness. Unconsciousness. Skin on contact with liquid: frostbite. Eyes on contact with liquid: frostbite Remarks: High concentrations in air cause oxygen deficiency resulting in risk of unconsciousness or death.
75-28-5	Isobutane	Route of exposure: The substance may be absorbed by inhalation. Inhalation risk: The liquid evaporates very rapidly, rapidly displacing air and posing a serious risk of asphyxiation when contained in a confined space. EXPOSURE IN SHORT TERM: Rapid evaporation of the liquid may cause frostbite. The substance may cause effects on the cardiovascular system resulting in impaired functions and breathing difficulties. Exposure at high concentration may cause death. Acute symptoms: Inhalation: Shortness of breath. Asphyxiation. Skin on contact with liquid: frostbite. Eyes on contact with liquid: frostbite.

11.2 Information on other hazards

Endocrine disrupting potential	The mixture does not contain any substances with endocrine disrupting properties in a concentration of 0.1% or more by weight.
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12. Ecological information

12.1 Toxicity

Aquatic and/or terrestrial toxicity	No relevant information available.
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12.2 Persistence and degradability

Persistence and degradability	No relevant information available.
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12.3 Bioaccumulative potential

Bioaccumulation	No relevant information available.
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12.4 Mobility in soil

Mobility	No relevant information available.
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12.5 Results of PBT and vPvB assessment

Assessment	PBT: The mixture does not contain any PBT substances at a concentration of 0.1% by weight or above. vPvB: The mixture does not contain any vPvB substances at a concentration of 0.1% by weight or above.
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12.6 Endocrine disrupting properties

Endocrine disrupting potential	The mixture does not contain any substances with endocrine disrupting properties in a concentration of 0.1% or more by weight.
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12.7	Other adverse effects	
Other adverse effects		No relevant information available.
13. Disposal considerations		
13.1	Waste treatment methods	
Product disposal	The waste should be disposed of in accordance with applicable regulations, with empty containers being delivered for final disposal and equipped to safely handle pressure containers containing flammable liquids and gas waste. Empty containers heated to temperatures above 70 °C may burst. Re-use if possible.	
European list of waste products	No data available.	
Disposal of packaging	Dispose in accordance with local regulations.	
14. Transport information		
Transport by road, by rail and inland waterway transport (ADR/RID/ADN)	<u>14.1 UN-number:</u> <u>14.2 UN proper shipping name:</u> <u>14.3 Transport hazard class(es):</u> <u>14.4 Packing group:</u>	UN1950 AEROSOLS 2 - Hazard label: 2.1  Classification code: 5F Gases Excepted quantity: E0 (not allowed as exempt quantity) Limited quantity (LQ): 1 L Transport category: 2 Tunnel restriction code: D
Marine transport (IMDG)	<u>14.1 UN-number:</u> <u>14.2 UN proper shipping name:</u> <u>14.3 Transport hazard class(es):</u> <u>14.4 Packing group:</u>	UN1950 AEROSOLS 2.1 - Hazard label: 2.1  Excepted quantity: E0 (not allowed as exempt quantity) Limited quantity (LQ): 1 L
Air transport (ICAO-IATA)	<u>14.1 UN-number:</u> <u>14.2 UN proper shipping name:</u> <u>14.3 Transport hazard class(es):</u> <u>14.4 Packing group:</u>	UN1950 AEROSOLS, flammable 2.1 - Hazard label: 2.1 

14.5	Environmental hazards
Environmental hazard	Not applicable.
Marine pollutant	Not applicable.
14.6	Special precautions for user
Warning	Gases.
Hazard identification number (Kemler code)	-
EMS number	F-D,S-U.
Storage code	SW1 Protected against heat sources. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity of more than 1 litre: Category B. For WASTE AEROSOLS: Category C. Free from living areas.
Segregation code	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for Class 9. Class 1 "Segregated from" storage, except for section 1.4. For AEROSOLS with a capacity of more than 1 litre: Segregation as for proper subdivision of Class 2. For WASTE AEROSOLS: Segregation as for proper subdivision of Class 2.
14.7	Maritime transport in bulk according to IMO instruments
	Not applicable.
15. Regulatory information	
15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture
Relevant EU rule(s)	<u>Directive 2012/18/EU</u> <u>Dangerous substances listed by name - ANNEX I</u> None of the ingredients are listed. <u>Seveso category</u> P3a FLAMMABLE AEROSOLS <u>Threshold (tonnes) for application of low threshold establishment requirements</u> 150 t <u>Threshold (tonnes) for application of high threshold establishment requirements</u> 500 t <u>REGULATION (EU) 2019/1021 on persistent organic pollutants (POPs)</u> The mixture does not contain any substances identified as persistent organic pollutants (POPs). <u>LIST OF AUTHORISED SUBSTANCES (ANNEX XIV)</u> The product does not contain any substances listed in Annex XIV. <u>REGULATION (EC) No 1907/2006 ANNEX XVII</u> Restriction conditions: 3, 40 <u>Regulation (EU) No 649/2012 (PIC)</u> There are no substances listed in this Regulation. <u>REGULATION (EU) 2019/1148 - Explosives precursors</u> The mixture does not contain explosives precursors in concentrations equal to or greater than 1%. <u>Substances of very high concern (SVHC) according to REACH, Article 59</u> The mixture does not contain any SVHC substances in a concentration equal to or greater than 0.1% by weight. <u>Regulation (EC) No 1005/2009: ozone-depleting substances</u> The mixture does not contain ozone-depleting substances.
National regulations	No further information known.

15.2 Chemical safety assessment

A chemical safety assessment has been carried out for the components of the mixture. Relevant information can be found in the text of the safety data sheet.

16. Other information

Indication of changes (revised safety data sheet)	Alignment to regulation. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU. Restructuring and revising sections 1 to 15.
Sources of used key data	This information is based on the currently available information (Producer(s)). See also the website: https://echa.europa.eu/information-on-chemicals/registered-substances
(EU)H-statement(s)	H220 Extremely flammable gas. H222 Extremely flammable aerosol. H229 Pressurised container: May burst if heated. H280 Contains gas under pressure; may explode if heated.
Classification procedure	Physicochemical hazards: classification of the mixture is based on the criteria set out in Part 2 of Annex I to Regulation (EC) No 1272/2008. If applicable, the methods are listed in section 9. Health and environmental hazards: the classification of the mixture is based on the calculation method set out in Parts 3 and 4 of Annex I to Regulation (EC) No 1272/2008, using ingredient data.
List of abbreviations and acronyms	ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. ADR/RID/ADN: Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways. ATE: Acute toxicity estimate. BCF: Bio-concentration factor. CAS: Chemical Abstracts Service. CLP: Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008. DGR: Dangerous Goods Regulations. DNEL: Derived No Effect Level. DMEL: Derived Minimal Effect Level. EC-No.: The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union). EINECS: European Inventory of Existing Commercial Chemical Substances. ELINCS: European List of Notified Chemical Substances. Flam. Gas : Flammable gases. GHS: Globally Harmonized System of Classification and Labelling of Chemicals. IATA: International Air Transport Association (provisions concerning the international carriage of dangerous goods by air). IATA/DGR: Dangerous Goods Regulations (DGR) for the air transport (IATA). ICAO: International Civil Aviation Organization. ICAO-TI: Technical instructions for the safe transport of dangerous goods by air. IMDG: International Maritime Dangerous Goods Code. Log POW: n-Octanol/water. M-factor: Multiplication factor.

OECD: Organisation for Economic Co-operation and Development.
PBT: Persistent, Bioaccumulative and Toxic substance.
PNEC: Predicted No Effect Concentration.
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.
SCL: Specific concentration limit.
STOT SE: Specific target organ toxicity —single exposure.
SVHC: Substances of Very High Concern.
vPvB: Very Persistent and Very Bioaccumulative.

This information is to our knowledge correct and complete on the date of issue of this safety data sheet. The information only concerns the product and does not give any guarantee for the quality and the completeness of the properties of the product, or in case of mixing or using in any other process. It remains the responsibility of the user to assure himself that the information is suitable and complete concerning the special use he makes of the product.
Hofman Pest Control denies all responsibility for loss or damage resulting from the use of these data.

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