

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP)

Effective date: 02.02.2017

Spray Control™ Citronella**1 Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Material Name:** Spray Control™ Citronella**Product code:** Spray Control™ Citronella**1.2 Relevant identified uses of the substance or mixture and uses advised against:****Relevant identified uses:** For use as a bark-deterrent spray only.**Uses advised against:** Any uses inconsistent with product labeling are advised against**1.3 Details of the manufacturer/supplier of the safety data sheet****Manufacturer:**Radio Systems PetSafe Europe Ltd.
2nd Floor, Elgee Building, Market Square
Dundalk Co. Louth, Ireland
+353 (0) 76 892 0427
callen@petsafe.net**1.4 Emergency telephone number:****CHEMTREC**

Within Ireland: CHEMTREC +353 (0) 76 892 0427 (24 hours)

Outside USA and Canada: +1-703-527-3887 (CHEMTREC, 24 hours)

2 Hazards identification**2.1 Classification of the substance or mixture:****In compliance with EC regulation No. 1272/2008 (CLP).**

Liquefied gas

Hazard-determining components of labeling:*trans*-1,3,3,3-Tetrafluoropropene**2.2 Label elements****Hazard pictograms:****Signal word:** Warning**Hazard statements:**

H280 Contains gas under pressure; may explode if heated.

Precautionary statements:

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/eye protection/face protection.

P284 In case of inadequate ventilation wear respiratory protection.

P308+P313 IF exposed or concerned: Get medical advice/attention.

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

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2.3 Other hazards: None known.

Classification system:

The classification is according to EC regulation No. 1272/2008(CLP), and extended by company and literature data. The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

3 Composition/information on ingredients

3.1 Substances: Not applicable

3.2 Mixtures:

Name	CAS No	EC No	REACH Registration No	Classification according to Regulation (EC) No1272/2008 (CLP)	Weight %
<i>trans</i> -1,3,3,3-Tetrafluoropropene	29118-24-9	471-480-0	Not Available	Not classified	99
Citronella Oil	8000-29-1	616-771-7	Not Available	Eye Dam. 1; H318 Aquatic Chronic 2; H411	1

Additional information:

None

Full text of H and EUH phrases: see sections 2.2 or 16 for applicable H and/or EUH phrases

4 First aid measures

4.1 Description of first aid measures

General notes: No additional information.

Following inhalation:

Loosen clothing as necessary and position individual in a comfortable position.

Maintain an unobstructed airway.

Get medical advice/attention if you feel unwell.

Following skin contact:

Rinse affected area with soap and water.

If symptoms develop or persist, seek medical attention.

Following eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes.

If symptoms develop or persist, seek medical attention.

Following ingestion:

Rinse mouth thoroughly.

Seek medical attention if irritation, discomfort, or vomiting persists.

Self-protection of the first-aider:

See Section 8.2

4.2 Most important symptoms and effects, both acute and delayed:

No additional information.

4.3 Indication of any immediate medical attention and special treatment needed:

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If seeking medical attention provide SDS document to physician.
Physician should treat symptomatically.

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

Unsuitable extinguishing media:

None.

5.2 Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors.

Contents under pressure.

In a fire or if heated, a pressure increase will occur and the container may burst or explode.

5.3 Advice for fire-fighters

Protective equipment:

Wear protective eye wear, gloves and clothing.

Refer to Section 8.

Additional information:

Shut off sources of ignition.

Heating causes a rise in pressure, risk of bursting and combustion.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation.

Ensure air handling systems are operational.

Wear protective eye wear, gloves and clothing.

Vapors can accumulate in low areas.

6.2 Environmental precautions:

Should not be released into the environment.

Prevent from reaching drains, sewer or waterway.

6.3 Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing.

Unprotected personnel should not return to the affected area until air has been tested and determined safe.

Dispose of contents / container in accordance with local regulations.

6.4 Reference to other sections: None

7 Handling and storage

7.1 Precautions for safe handling:

Use only with adequate ventilation.

Avoid breathing mist or vapor.

Do not eat, drink, smoke or use personal products when handling chemical substances.

Do not puncture, crush, or incinerate containers, even when empty.

Protect cylinders from physical damage.

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7.2 Conditions for safe storage, including any incompatibilities:

- Protect from freezing and physical damage.
- Protect from direct sunlight.
- Store in a cool, well-ventilated area.
- Store cylinders upright.
- Store away from all ignition sources (open flames, hot surfaces, direct sunlight, spark sources).

7.3 Specific end use(s): No additional information.

8 Exposure controls/personal protection



8.1 Control parameters:

Occupational Exposure limit values:

Only those substances with limit values have been included in the table below

Chemical name	Country	Limit Value – Eight Hours		Limit Value – Short Term*	
		ppm	mg/m ³	ppm	mg/m ³
<i>trans</i> -1,3,3,3-Tetrafluoropropene	EU	Not available	Not available	Not available	Not available
	Germany (AGS)	1000	4700	2000	9400
	Ireland	Not available	Not available	Not available	Not available
	Sweden	Not available	Not available	Not available	Not available
	Switzerland	1000	4700	2000	9400

**Short term is 15 minutes unless otherwise specified*

8.2 Exposure controls

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment:

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection in compliance with European Standard EN 166.

Skin protection:

Select glove material impermeable and resistant to the substance in compliance with European Standard EN 374 and/or EN 420. For continuous contact, we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified.

Glove thickness should be typically greater than 0.35 mm depending on the glove make and model. Always seek advice from glove suppliers.

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Respiratory protection:

Use a NIOSH/MSHA or European Standard EN149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

General hygienic measures:

Wash hands before breaks and at the end of work.
Avoid contact with skin, eyes and clothing.
Wash contaminated clothing before reuse.

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.

See section 6 for information on accidental release measures.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance (physical state, color):	Colorless liquefied gas	Explosion limit lower: Explosion limit upper:	Not available. Not available.
Odor:	Slight ether-like	Vapor pressure:	Not available.
Odor threshold:	Not available.	Vapor density:	4 (Air = 1.0)
pH-value:	Neutral	Relative density:	Not available.
Melting/Freezing point:	Not available.	Solubilities:	0.373 g/L
Boiling point/range:	-19 °C	Partition coefficient (n-octanol/water):	log Pow 1.6
Flash point (closed cup):	Not available.	Auto/Self-ignition temperature:	368 °C
Evaporation rate:	Not available.	Decomposition temperature:	Not available.
Flammability (solid, gaseous):	Not available.	Dynamic viscosity:	Not available.
Density:	Not available.	Kinematic viscosity:	Not available.
Explosive properties:	Not available.	Oxidizing properties:	Not available.

9.2 Other information: Not available

10 Stability and reactivity

10.1 **Reactivity:** Does not react under normal conditions of use and storage.

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- 10.2 Chemical stability:** Stable under normal conditions of use and storage.
- 10.3 Possibility of hazardous reactions:** None under normal conditions of use and storage.
- 10.4 Conditions to avoid:** Protect from sunlight and do not expose to temperatures exceeding 50°C.
- 10.5 Incompatible materials:** Alkali metals.
- 10.6 Hazardous decomposition products:**
Pyrolysis products containing fluoride.
Fluorocarbons.
Hydrogen fluoride.

11 Toxicological information**11.1 Information on toxicological effects:****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 sensitization:

Based on available data, the classification criteria are not met.

Germ cell mutagenicity:

Based on available data, the classification criteria are not met.

Carcinogenicity:**IARC (International Agency for Research on Cancer):**

No additional information

NTP (National Toxicology Program):

No additional information

Reproductive Toxicity:

Based on available data, the classification criteria are not met.

STOT-single and repeated exposure:

Based on available data, the classification criteria are not met.

Aspiration hazard:

Based on available data, the classification criteria are not met.

12 Ecological information**12.1 Toxicity:**

Based on available data, the classification criteria are not met.

12.2 Persistence and degradability: No additional information.

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12.3 Bioaccumulative potential: No additional information.

12.4 Mobility in soil: No additional information.

General notes: No additional information.

12.5 Results of PBT and vPvB assessment:

PBT: This product does not contain any substances that are assessed to be a PBT.

vPvB: This product does not contain any substances that are assessed to be a vPvB.

12.6 Other adverse effects: No additional information.

13 Disposal considerations

13.1 Waste treatment methods


Relevant information:

Consult with EU Directive 2008/98/EC for the classifications of hazardous waste prior to disposal. Furthermore, consult with your regional, national or European waste requirements or guidelines, if applicable, to ensure compliance. Final decisions on the appropriate waste management method, in line with regional, national and European legislation, remains the responsibility of the waste treatment operator.

14 Transport information

Land transport:

DOT (49 CFR) transport

14.1 UN Number:	UN3163
14.2 UN Proper shipping name:	Liquefied gas, N.O.S. (<i>trans</i> -1,3,3,3-Tetrafluoropropene)
14.3 UN Transport hazard classes:	2.2
14.4 Packing group:	None
Danger label:	2.2 Non-Flammable Gas 
14.5 Environmental hazards:	No
14.6 Special precautions for user:	None
Limited quantity:	120 mL

ADR/RID


14.1 UN Number:	UN3163
14.2 UN Proper shipping name:	Liquefied gas, N.O.S. (<i>trans</i> -1,3,3,3-Tetrafluoropropene)
14.3 UN Transport hazard classes:	2.2

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14.4 Packing group:	None
Danger label:	2.2 Non-Flammable Gas 
Tunnel restriction code:	(C/E)
Transport category:	3
Hazard ID number:	None
14.5 Environmental hazards:	None
14.6 Special precautions for user:	None
Limited quantity:	120 mL


Air transport:

IATA-DGR

14.1 UN Number:	UN3163
14.2 UN Proper shipping name:	Liquefied gas, N.O.S. (<i>trans</i> -1,3,3,3-Tetrafluoropropene)
14.3 UN Transport hazard classes:	2.2
14.4 Packing group:	None
Danger label:	2.2 Non-Flammable Gas 
14.5 Environmental hazards:	No
14.6 Special precautions for user:	None
Limited quantity:	Forbidden in passenger and cargo aircraft.

Sea transport:

IMDG

14.1 UN Number:	UN3163
14.2 UN Proper shipping name:	Liquefied gas, N.O.S. (<i>trans</i> -1,3,3,3-Tetrafluoropropene)
14.3 UN Transport hazard classes:	2.2
14.4 Packing group:	None
Danger label:	2.2 Non-Flammable Gas 
EMS code:	None
14.5 Environmental hazards:	No

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14.6 Special precautions for user: None

Limited quantity: None

Quantity exception: None

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: Not applicable

15 Regulatory information

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

European Union

REACH Article 57 (SVHC): Not listed

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles: Not listed

European Inventory of Existing Commercial Chemical Substances (EINECS): All ingredients are listed or exempted

Priority List Chemicals: Not listed

Chemical Weapons Convention List Schedule I Chemicals: Not listed

Chemical Weapons Convention List Schedule II Chemicals: Not listed

Chemical Weapons Convention List Schedule III Chemicals: Not listed

Other regulations

Germany MAK: *trans*-1,3,3,3-Tetrafluoropropene: 1000 ml/m³, 4700 mg/m³.

15.2 Chemical Safety Assessment:

This product does not contain substances for which Chemical Safety Assessments are still required.

16 Other information

Indication of Changes: Not applicable

Abbreviations and Acronyms: None

Classification procedure:

Classification according to Regulation (EC) No. 1272/2008 (CLP)	Method Used
Liquefied gas	Calculation method

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Spray Control™ Citronella**Supplemental Hazards per EC 1272/2008 Annex II, Parts 1-5:** Not applicable**Manufacturer's Statement:**

This product has been classified in accordance with EC 1272/2008 (CLP) and EC 1907/2006 (REACH). The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.