Pyre-X

Section 1. IDENTIFICATION

1.1 Product Identifier

SDS No.: 529-USA-CPP

Product Description:	**Pyre-X**
Other Means of Identification:	
CAS Number.:	Mixture
EPA Registration. No.	8536-35

1.2 Relevant Identified Uses of the Substance or Mixtures and Uses Advised Against

Recommended Use:	Insecticide
Uses Advised Against:	Use only in accordance with the pesticide product end-use label instructions

1.3 Details of the Supplier of the Safety Data Sheet

Company:

Cardinal Professional Products
PO Box 782
Hollister, CA 95024-0782
Telephone M-F, 8:00-4:30 PDT: 800-548-2223

SDS & Product Information, 8:00-4:30 PDT: 800-548-2223 or 831-637-0195
E-mail: sds@cardinalproproducts.com

1.4 Emergency Telephone Numbers

FOR CHEMICAL EMERGENCY (Spill, Leak, Fire, Exposure, or Accident)
Call CHEMTREC Day or Night

Within USA and Canada: 800-424-9300
Outside USA and Canada: +1-703-527-3887 (collect calls accepted)

Poison Control Center: 800-222-1222

NOTE TO PESTICIDE HANDLERS: If the pesticide product end-use labeling contains specific instructions, requirements, or information that conflict with the requirements of the Worker Protection Standard or with this Safety Data Sheet (SDS), **follow the instructions, requirements, or information on the end-use labeling**. If there is a conflict between specific instructions or requirements in the Worker Protection Standard and this SDS, **follow the instructions or requirements of the Worker Protection Standard.** See Section 15 of this SDS for further information.

Section 2. HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

• Gases Under Pressure (Liquefied Gas)	
• Skin corrosion/irritation	Category 3
• Serious eye damage/eye irritation	Category 2B
• Skin sensitization	Category 1
• Aspiration toxicity	Category 1
• Hazardous to the Aquatic Environment, Short Term (Acute) Hazard	Category 2
• Hazardous to the Aquatic Environment, Long Term (Chronic) Hazard	Category 3

2.2 GHS Label Elements

DANGER

Hazard Statements

H280	Contains gas under pressure; may explode if heated.
H304	May be fatal if swallowed and enters airways.
H320	Causes eye irritation.
H316	Causes mild skin irritation.
H317	May cause an allergic skin reaction.
H401	Toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Precautionary Statements

Prevention	P261	Avoid breathing mist/vapors/and spray.
	P264	Wash hands thoroughly after handling.
	P272	Contaminated work clothing should not be allowed out of the workplace.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
Response	P303+P361+P353+ P364	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash clothing before reuse.
	P333+P313	If skin irritation or rash occurs: Get medical advice.
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337+P313	If eye irritation persists: Get medical advice.
	P301+P310+P331	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.
Storage	P410	Protect from sunlight.
	P405	Store locked up.
Disposal	P501	Dispose of contents and container in accordance with government regulations.

2.3 Hazards Not Otherwise Classified

- May displace oxygen and cause rapid suffocation.
- Exposure to CO_2 gas can cause skin frostbite.

Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substance

Chemical Identity	Synonyms	CAS Number	% Weight/Weight		Relevant Information
			14.46 lb cylinder	9.61 lb cylinder	
Carbon Dioxide	CO_2	124-38-9	55	83	8 lbs of CO_2 present in cylinder for every Pyre-X formulation
Chemical Identity	**Synonyms**	**CAS Number**	**% Weight/Weight**		Proportional weight of active ingredient in liquid portion in cylinder
			14.46 lb cylinder	**9.61 lb cylinder**	
Pyrethrins	Pyrethrum, Pyrethroids	8003-34-7	0.45	0.17	1.0
Piperonyl Butoxide		51-03-6	2.2	0.84	5.0
Petroleum distillates, hydrotreated light		64742-47-8	1.7	0.67	4.0
Naphtha (petroleum), heavy alkylate	Odorless Mineral Spirits	64741-65-7	0.45 to 40.2*	0.16 to 15*	1.0 – 90.0*
Naphtha (petroleum), hydrotreated heavy	White spirit (type 3), Odorless Mineral Spirits, Isoparaffin L	64742-48-9	0.45 to 40.2*	0.16 to 15*	1.0 – 90.0*

* The exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice	**SEEK MEDICAL ATTENTION IN ALL CASES OF SUSPECTED POISONING.**
Eyes	IF IN EYES: • Hold eyes open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first five minutes; then continue rinsing eyes. • Call a poison control center or doctor for treatment advice.
Skin	IF ON SKIN OR CLOTHING: • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or physician for treatment advice.
Ingestion	IF SWALLOWED: • Call a poison control center or physician immediately for treatment advice. • Do not give any liquid to the person. • Do not induce vomiting unless told to do so by a poison control center or physician. • Do not give anything by mouth to an unconscious person.
Inhalation	IF INHALED: • Remove to fresh air. • If not breathing, call 911, then give artificial respiration. • If breathing difficult, give oxygen if qualified to do so. • Call a poison control center or physician immediately for treatment advice.
Protection of First Aiders and Medical Personnel	• Review the pesticide label for additional information. • Use personal protective equipment as required.

4.2 Most Important Symptoms and Effects, both Acute and Delayed

- Aspiration pneumonia hazard. May be fatal if swallowed and enters airways.
- Eye irritation and mild skin irritation.
- May cause an allergic skin reaction.
- May displace oxygen and cause rapid suffocation.
- Exposure to CO_2 gas can cause skin frostbite.

4.3 Indication of Immediate Medical Attention or Special Treatment

- Contains petroleum distillates. Vomiting may cause aspiration pneumonia hazard.
- For skin effects, a highly efficient therapeutic agent for Pyrethrin/Pyrethroid exposure is topical application of tocopherol acetate (Vitamin E).

Section 5. FIRE FIGHTING MEASURES

5.1 Extinguishing Media

Suitable Extinguishing Media	• Dry chemical or CO_2 extinguisher, water spray (fog), alcohol-resistant foam.
Unsuitable Extinguishing Media	• Direct water stream.

5.2 Specific Hazards Arising from the Chemical including Hazardous Combustion Products

- Do not apply this product in or on electrical equipment, due to the possibility of ignition or shock hazard.

Hazardous Combustion Products	• Carbon monoxide. Carbon dioxide.

5.3 Advice for Fire Fighters

Special Protective Equipment	• As in any fire, wear NIOSH-approved self-contained breathing apparatus pressure-demand and full turnout gear.
Precautions for Fire Fighters	• Stay upwind. • Do not breathe vapors. • Move containers from fire area if you can do it without risk. • Cool containers with flooding quantities of water until fire is out.
Supplemental Information	• This mixture contains a liquid that is combustible and also contains carbon dioxide (CO_2). As long as the CO_2 is mixed with the product, there is no risk of vapor ignition, but once the CO_2 gas has dissipated such as in a spill or unintended release, any remaining liquid product is a combustible liquid.

Section 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment, and Emergency Procedures

- While wearing personal protective equipment, evacuate personnel upwind of spill/leak and ventilate area.
- Extinguish or remove all sources of potential ignition. Pay attention to flashback. Take precautionary measures against static discharges.
- If indoors, ventilate area of spill.
- Soak up with absorbent material, such as sand, sawdust, earth or fuller's earth, and discard with chemical wastes.
- After clean-up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.

6.2 Environmental Precautions

- Do not allow spilled or leaking material to enter drains, sewers, or waterways.
- Prevent entry into basements and other confined areas.
- Do not flush into surface water or sanitary sewer system.
- See Section 12 for additional ecological information.

6.3 Methods and Materials for Containment and Cleaning Up

- Prevent further leakage or spillage if safe to do so.
- Dike and cover the spilled material where possible with sand, earth, or vermiculite (non-combustible absorbent material).
- Take precautionary measures against static discharges.

6.4 Other Information

Refer to protective measures listed in Section 8. For disposal, see Section 13.

Note: This material, as supplied, does not contain a reportable quantity (RQ) of a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA, 40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA, 40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Section 7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling

IF THIS PRODUCT IS BEING APPLIED AND THE INFORMATION IN THIS SDS DIFFERS FROM THAT ON THE END-USE LABELING FOR THIS PRODUCT, THE HANDLER MUST FOLLOW THE PRECAUTIONARY STATEMENTS ON THE END-USE LABELING.

- Take prudent precautions to avoid contact with skin, eyes, and clothing.
- Take prudent precautions to avoid breathing vapors and/or spray mists of this product.
- Wear PPE in accordance with the product's end-use label (See Section 8 of SDS).
- Always have adequate clean water available to wash the skin.
- Do not eat, drink, or smoke when using this product.
- Wash hands and face before eating, drinking, or smoking after handling material.
- Wash contaminated clothing before reuse.
- Mechanical ventilation should be used when handling this product in enclosed spaces.
- Avoid contact with incompatible materials. See Section 10 for specific materials to avoid.
- This product contains petroleum distillates, for which there is the potential for electrostatic accumulation and ignition of organic vapors in event of liquid release. Proper grounding procedures should be used when transferring this material in liquid form.
- Do not contaminate water, food, or feedstuffs by storage, handling, or disposal.
- Avoid release to the environment, unless using in accordance with the product's end-use label.
- Read and observe all precautions and instructions on the product's end-use label.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

- KEEP OUT OF REACH OF CHILDREN.
- Store product in original container.
- Containers should be kept closed and stored in a cool, dry, well-ventilated area under lock and key (secured).
- Keep away from heat, open flames, and hot surfaces.
- Post as a pesticide storage area.
- Do not contaminate water, food, or feed by storage, handling, or disposal.

7.3 Specific End Uses

Use only in accordance with the product's end-use label.

Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters

Occupational Exposure Limits (OELs)

NOTE: There are no OELs established for this product. Following are OELs for components:

CAS No.	Component	TYPE	VALUE		NOTE	Ref No.
124-38-9	Carbon Dioxide	PEL	5000 ppm	9000 mg/m^3		1
		TLV-TWA	5000 ppm			2
		STEL	30,000 ppm			2
		IDLH	40,000 ppm			3
8003-34-7	Pyrethrins	PEL		5 mg/m3		1
		TLV-TWA		5 mg/m^3		2
		IDLH		5000 mg/m3		3
51-03-6	Piperonyl Butoxide	PEL	none	none		1
		TLV-TWA	none	none		2
64742-47-8	Petroleum distillates, hydrotreated light	PEL		5 mg/m^3	if oil mist	1
		TLV-TWA		5 mg/m^3		2
		OEL-TWA	100 ppm	525 mg/m^3		4
64741-65-7	Naphtha (petroleum), heavy alkylate	PEL		5 mg/m^3	if oil mist	1
		TLV-TWA	none	none		2
		OEL-TWA	100 ppm	525 mg/m^3		4
64742-48-9	Naphtha (petroleum), hydrotreated heavy	PEL	100 ppm	400 mg/m^3	PEL for Naphtha	1
		PEL		5 mg/m^3	if oil mist	1
		TLV-TWA	none	none		2

Reference No.	SOURCE OF EXPOSURE LIMIT
1	US OSHA, Table Z-1 Limits for Air Contaminants, 29 CFR 1910.1000, Permissible Exposure Limit
2	US ACGIH, Threshold Limit Values (TLVs)
3	US NIOSH, Documentation for Immediately Dangerous to Life or Health
4	Supplier Occupational Exposure Limit (OEL)

8.2 Exposure/Engineering Controls

General Hygiene	• Wash promptly if skin becomes contaminated. • Wash at the end of each work shift and before eating, drinking, smoking, and using the toilet. • Use personal protective equipment as required. • Keep working clothes separate. • Do not eat, drink, smoke or apply cosmetics when using this product.
Equipment	Provide easy access to adequate water supply for eye flushing or skin decontamination in the work area. For field handling and application situations, refer to the product's end-use label for emergency water requirements.
Ventilation	Mechanical ventilation should be used when handling this product in enclosed spaces. Local exhaust ventilation may be necessary.
Monitoring Methods	Follow OSHA or EPA guidelines.

Individual Protection Measures

Skin	Mixers, loaders, applicators and other handlers must wear: • long-sleeved shirt, • long pants, • shoes and socks, and • chemical-resistant gloves. Note: Some materials that are chemical-resistant to this product are Barrier Laminate, Nitrile or Neoprene Rubber, or Viton. For more options, follow the instructions for category "E" on the EPA chemical-resistance category selection chart.

Eyes/Face	Wear tight sealing safety goggles.
Respiratory NOTE: Only respirators certified (approved) to meet NIOSH Standards shall be used for respiratory protection	**WHEN APPLYING AS A PESTICIDE, FOLLOW THE PRODUCT END-USE LABEL INSTRUCTIONS FOR RESPIRATORY PROTECTION.** Pesticide applicators using hand-held foggers in an enclosed area must wear a half-face, full-face, or hood-style NIOSH-approved respirator with: • a dust/mist filtering cartridge (MSHA/NIOSH approval number prefix TX-21C), • a canister or cartridge approved for pesticides (MSHA/NIOSH approval number TC-14G) or, • a cartridge or canister with any N, R, P, or HE prefilter. **RESPIRATORY PROTECTION SCENARIOS NOT ADDRESSED IN PRODUCT END-USE LABEL** <u>For emergency or planned entry into unknown concentrations:</u> • A full facepiece pressure-demand SCBA certified for a minimum service life of thirty minutes. • A combination full facepiece pressure-demand supplied-air respirator (SAR) with auxiliary self-contained air supply. <u>For escape*</u> • Air-purifying respirator equipped with full facepiece and an organic vapor cartridge. • Any air-purifying hood style CBRN escape-certified respirator. • Air-purifying respirator with canisters that include the escape gas mask (canister) respirator, the gas mask (canister) respirator, and the filter self-rescuer. • Any self-contained breathing apparatus with hood or full facepiece mask. *Respirators <u>certified</u> "escape only" can only be used for escape purposes and CANNOT be used for responding to emergencies.

Personal Protection for Spills/Emergency

Fire	If fire only, use normal firefighting equipment. If chemical releases and fire involved, wear recommended chemical protective clothing in conjunction with firefighting gear.
Spills	Minimum PPE: Full facepiece air-purifying respirator with organic vapor cartridge and chemical resistant gloves. Upgrade respiratory protection in accordance with the "Respiratory" section above.
Chemical Protective Clothing	• For small cleanup, where liquid splash or contact is unlikely, normal work clothes can be worn. • For cleanup, where liquid splash or contact is likely, a liquid impervious chemical coverall with booties and head cover should be worn, for example, Tyvek® QC or Saranex™ SL. • In confined areas or areas where substantial vapor levels exist, use a Level B suit made of a material such as Tychem® BR or a DuPont™ Responder® level suit or equivalent for use against permeation.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

Appearance	Colorless to pale yellow
Physical State	Liquid pressurized with gas
Odor	Sweet and alcohol-like
Odor Threshold	Not available
Color (Gardner Scale)	2
pH	Not applicable – immiscible in water
Melting Point/Freezing Point	Not available
Boiling Point/Boiling Range	Not available
Flash Point (°C)	54.0 °C (129.0 °F) Method: Tag Closed Cup GHS Category 3
Evaporation Rate	Not available

Flammability (solid, gas)	Combustible liquid only
Flammability Limits in air, Upper % by volume	Not available
Flammability Limits in air, Lower % by volume	Not available
Vapor Pressure	Not available
Vapor Density	Heavier than air
Relative Density (g/cm^3) (Specific Gravity)	0.770 g/mL @ 20 °C (without the addition of the CO_2)
Solubility	Immiscible in water. Miscible in alcohol, aromatic solvents, petroleum distillates.
Partition Coefficient (n-octanol/water)	Not available
Autoignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity (Kinematic)	2.065 @ 20 °C / 1.483 @ 40 °C

9.2 Other Information

Density @ 20 °C	6.426 lb/gal [does not include CO_2 component]
VOC content (%)	55.9 [does not include CO_2 component]

Section 10. STABILITY AND REACTIVITY

10.1 Reactivity

- No data available.

10.2 Chemical Stability

- Product is stable under recommended storage conditions.

10.3 Possibility of Hazardous Reactions

- None expected under normal processing.
- Hazardous polymerization does not occur.

10.4 Conditions to Avoid

- Exposure to heat, open flames, or hot surfaces.

10.5 Incompatible Materials

- May react with strong acids, bases, or other strong oxidizing materials.

10.6 Hazardous Decomposition Products

- Carbon monoxide. Carbon dioxide.

10.6 Other

- Sensitivity to Mechanical Impact: None.
- Sensitivity to Static Discharge: None.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

Product Information [without the CO_2 component]

Acute Toxicity, Oral	4650 mg/kg	LD_{50} Rat	Greater than Category 4
Acute Toxicity, Dermal	> 2000 mg/kg	LD_{50} Rabbit	Greater than Category 4
Acute Toxicity, Inhalation	> 5.43 mg/L	LC_{50} Rat, 4 hour	Greater than Category 3

Skin Corrosion / Irritation	Slight irritation at 72 hours. Skin Irritation Index – 1.21		Greater than Category 2. Classified as UN GHS Category 3
Serious Eye Damage / Irritation	Irritation cleared in 3 days		Category 2B
Irritation to Respiratory Tract			Not classifiable
Sensitization, Respiratory			Not classifiable
Sensitization, Skin	Possible dermal sensitizer		Category 1

Signs & Symptoms of Exposure

Skin	May cause skin irritation. Symptoms include redness and burning of skin. Exposure to CO_2 gas can cause skin frostbite.
Eyes	May cause mild eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes.
Ingestion	Swallowing this material may be harmful. Swallowing this product may result in an aspiration hazard, as it can enter the lungs and cause damage.
Inhalation	Symptoms are not expected at air concentrations below recommended exposure limits. May displace oxygen and cause rapid suffocation.
Chronic Effects	Prolonged or repeated contact may dry skin and cause dermatitis. Avoid repeated exposure.
Specific Target Organ Toxicity – single exposure	No data available for product.
Specific Target Organ Toxicity - repeated exposure	No data available for product.
Germ Cell Mutagenicity	No data available for product. Negative results based on available data for components in product.
Carcinogenicity	No data available for product. None of the components in this product are listed by OSHA, IARC, NTP, or ACGIH as a carcinogen or potential carcinogen.
Reproductive Toxicity	No data available for product.
Aspiration Hazard	GHS Category 1 If swallowed, aspiration potential is presumed based on petroleum constituents of product.
Interactive Effects	No data available for product.
Neurotoxicity	No data available for product.
Confirmation of exposure	No specific biological exposure indicator (BEI) for product.

Section 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic Toxicity	Hazardous to the Aquatic Environment, Short Term (Acute) Hazard, GHS Category 2 (Mixture Components Summation Method – does not include the CO_2 component) No data available for product. Pyrethrins component LC_{50} = 0.039 mg/L, 96 hr, Bluegill (20% concentration) EC_{50} = 0.025 mg/L, 48 hr, Daphnia Magna, static Piperonyl Butoxide EC_{50} = 2.8 mg/L, 48 hr, Daphnia Magna, static Petroleum distillates, hydrotreated light component EC_{50} = 1.4 mg/L, 48 hr, Daphnia Magna, static Naphtha (petroleum), heavy alkylate component No data available for this component, use CAS 8030-30-6 for read-across EC_{50} = 4.5 mg/L, 48 hr, Daphnia Magna, growth rate Naphtha (petroleum), hydrotreated heavy component EC_{50} = 3.3 mg/L, 72 hr, Algae, growth rate EC_{50} = 4.5 mg/L, 48 hr, Daphnia Magna, static

Long Term Ecotoxicity	Hazardous to the Aquatic Environment, Long Term (Chronic) Hazard, GHS Category 3 (Mixture Components Additivity Method – does not include CO_2 component) No data available for product. *1.0 % of the mixture consists of ingredients of unknown chronic hazards to the aquatic environment.* Pyrethrins component No data available. Piperonyl Butoxide EC_{50} = > 0.650 mg/L, 21 day, Daphnia Magna, inert Petroleum distillates, hydrotreated light component EC_{50} = 0.81 mg/L, 21 day, Daphnia Magna, semi-static Naphtha (petroleum), heavy alkylate component No data available for this component, use CAS 8030-30-6 for read-across EC_{50} = 10 mg/L, 21 day, Daphnia Magna, semi-static Naphtha (petroleum), hydrotreated heavy component EC_{50} = 10 mg/L, 21 day, Daphnia Magna, semi-static
Terrestrial Toxicity	No data available for product.

12.2 Persistence and Biodegradability (Environmental Fate)

- No data available for product.
- The "heavy" petroleum components of the product are persistent.
- All components are readily biodegradable.

12.3 Bioaccumulative Potential

- No data available for product.
- Based on individual components, up to 55% of liquid product is likely bioaccumulative.

12.4 Mobility in Soil

- No data available for product.

12.5 Results of PBT and vPBT Assessment

- No data available for product.
- Five of the components assessed as non-PBT. Pyrethrins component not assessed for PBT/vPBT but not expected to be persistent.

12.6 Other Adverse Effects

- This product may be toxic to fish, birds, bees, frogs, and other wildlife.

12.7 Additional Information – None.

Section 13. DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Safe Handling	• Do not contaminate water, food, or feed by storage or disposal. • Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollution Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. • Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. • For guidance, contact your State Water Board or Regional Office of the EPA.
Disposal of Product	• Pesticide wastes are acutely toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of local, state, and national regulations.

	• If these wastes cannot be disposed of by use according to label instructions, contact your Pesticide or Environmental Control Agency, a Hazardous Waste representative, or the product manufacturer or distributor for guidance.
Contaminated Container Disposal	• Non-refillable container: Do not reuse or refill container. • Follow instructions in the Container Handling portion of the Storage and Disposal section of the product's end-use label.

13.2 Additional Information – None.

Section 14. TRANSPORT INFORMATION

Land/Highway (US. DOT)

14.1	UN Number	UN1968
14.2	UN Proper Shipping Name	Insecticide gases, n.o.s. (Pyrethrins, Carbon Dioxide)
14.3	Transport Hazard Class(es)	2.2
14.4	Packing Group	Not applicable
14.5	Environmental Hazards Marine Pollutant Hazardous Substance Reportable Quantity	 No Yes (Pyrethrins) RQ = 1 lb (Pyrethrins)
14.6	Other Information	ERG 126 Use non-flammable gas label or placard

Water/Vessel (IMDG)

14.1	UN Number	UN1968
14.2	UN Proper Shipping Name	Insecticide gas, n.o.s. (Pyrethrins, Carbon Dioxide)
14.3	Transport Hazard Class(es)	2.2
14.4	Packing Group	Not applicable
14.5	Environmental Hazards Marine Pollutant Environmentally Hazardous Substance	 No No
Other Information		None

Air (IATA)

14.1	UN Number	UN1968
14.2	UN Proper Shipping Name	Insecticide gas, n.o.s. (Pyrethrins, Carbon Dioxide)
14.3	Transport Hazard Class(es)	2.2
14.4	Packing Group	Not applicable
14.5	Environmental Hazards Marine Pollutant Hazardous Substance Reportable Quantity	Not applicable
Other Information		Use non-flammable gas label or placard

14.6	Special Precautions for User	None
14.7	Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable
14.8	Additional Information	None

Section 15. REGULATORY INFORMATION

15.1 Regulatory Information

U.S. FEDERAL

FIFRA

This chemical is a pesticide product registered by the U.S. Environmental Protection Agency and is subject to certain labeling requirements under U.S. federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. The pesticide label also includes other important information, including directions for use. Following is the hazard information as required on the pesticide label.

CAUTION
Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

U.S. EPA Registration Number: 8536-35

OSHA

This product is a "Hazardous Chemical" when classified in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA - SARA Title III

Section 302.4 (RQ)	Pyrethrins CAS 8003-34-7 RQ is 1 lb or 0.454 kg
Section 302, EHS (TPQ)	None
Section 311/312 (Tier II)	Yes
SARA Hazard Codes	Product – Immediate Acute Health Hazard, Sudden Release of Pressure
Section 313	This product contains the following EPCRA section 313 chemicals subject to the reporting requirements of EPCRA section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372): **CAS Registry Number** / **Chemical Name** / **% by Weight** / **% de Minimis** 51-03-6 / Piperonyl Butoxide / see * / 1.0 * Liquid portion of product with no CO_2 / 5.0 * Product (based on CO_2 amount mixed in cylinder) / 0.84 to 2.2

TSCA

TSCA Inventory List, Section 8(b)	All components in this product are listed except Pyrethrins, which are not subject to TSCA.

STATE

Components in this product can be found on the following state right-to-know lists:		
Pyrethrins	CAS 8003-34-7	Massachusetts, New Jersey, Pennsylvania, Rhode Island
Piperonyl Butoxide	CAS 51-03-6	New Jersey, Rhode Island
California Proposition 65 Component:		
No component is listed to cause cancer, birth defects, or other reproductive harm.		

International Inventories:

Country or Region	Inventory Name		On Inventory (Yes/No)*
Australia	AICS	Australian Inventory of Chemical Substances	Yes
Canada	DSL	Domestic Substances List	Yes
Canada	NDSL	Non-Domestic Substances List	No
China	IECSC	Inventory of Existing Chemical Substances in China	Yes
Europe	EINECS	European Inventory of Existing Commercial Chemical Substances	Yes, except CAS 64742-47-8
Europe	ELINCS	European List of Notified Chemical Substances	No
Japan	ENCS	Inventory of Existing and New Chemical Substances (ENCS)	No, except CAS 64742-48-9
Korea	ECL	Existing Chemicals List	Yes
Mexico	INSQ	National Inventory of Chemical Substances	Yes, except CAS 51-03-6
New Zealand	NZIoC	New Zealand Inventory	Yes
Philippines	PICCS	Philippine Inventory of Chemicals and Chemical Substances	Yes
Taiwan	NECI	National Existing Chemical Inventory	Yes
USA & Puerto Rico	TSCA	Toxic Substances Control Act Inventory	Yes, except CAS 8003-34-7

* "Yes" - all components of this product comply with the inventory requirements administered by the governing country(s).

"No" - all components of this product are not listed or exempt from listing on the inventory administered by the governing country(s).

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this product by the supplier.

Section 16. OTHER INFORMATION

Version 1 Date: June 01, 2016

Revision History:

06-01-16 Original version of SDS. Classified and reformatted to comply with OSHA GHS, 29 CFR 1910.1200

National Fire Protection Association

Manufacturer recommendation*

NFPA Hazard Scale

0 - Minimal
1 - Slight
2 - Moderate
3 - Serious
4 - Severe

* The product mixture is not combustible while contained in the cylinder, but in the event the CO_2 component in the product container is fully released, any remaining or spilled liquid will be combustible.

Abbreviations and Acronyms:

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service
CBRN	Chemical, Biological, Radiological, and Nuclear
CERCLA	Comprehensive Environmental Response, Compensation, and Liability, Act
CFR	Code of Federal Regulations
DOT	Department of Transportation (USA)
EC_{50}	Half Maximal Effective Concentration - concentration of a material in water, a single dose which is expected to cause a biological effect on 50% of a group of test species
EPA	Environmental Protection Agency (USA)
EPCRA	Emergency Planning and Community Right to Know Act
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
GHS	Globally Harmonized System
IARC	International Agency for Research on Cancer

IATA	International Air Transport Association
IDLH	Immediately Dangerous to Life and Health - the maximum airborne concentration from which one could escape [within 30 minutes] without any escape-impairing symptoms or any irreversible health effects
IMDG	International Maritime Dangerous Goods
LC_{50}	Lethal Concentration - median dose at which 50% of test animals die from inhalation
LD_{50}	Lethal Dose - median dose at which 50% test animals die from oral or dermal exposure
NTP	National Toxicology Program
NIOSH	National Institute of Occupational Safety and Health
OSHA	Occupation Safety and Health Act (USA)
PBT / vPBT	Persistent, Bioaccumulative, Toxic / very Persistent, Bioaccumulative, Toxic
PEL	Permissible Exposure Limit (OSHA)
PPE	Personal Protective Equipment
ppm	part per million
SARA	Superfund Amendments and Reauthorization Act
STEL	Short Term Exposure Limit (ACGIH)
TLV	Threshold Limit Value (ACGIH)
TSCA	Toxic Substances and Control Act
TWA	Time Weighted Average - airborne concentration for a worker averaged in an 8 hour day
UN	United Nations

Key Literature References and Sources of Data:

- Toxnet – Toxicology Data Network, United States National Library of Medicine
- The International Uniform Chemical Information Database (**IUCLID**) – Organization for Economic Cooperation and Development (OECD)
- Manufacturer pesticide registration data for US EPA
- ECHA – European Chemicals Agency –Information on Chemicals database

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