

ITW RAMSET – FUEL CELL

Safety Data Sheet

Section 1 – Identification

Product Identifier: Cordless Fuel Cell
Manufacturer: Paslode
888 Forest Edge Drive
Vernon Hills, IL 60061-1900
Information Telephone Number: 847-634-1900
Information Facsimile Number: 847-634-6602
Information Email Address: tech@paslode.com
Emergency Telephone Number: Call CHEMTREC Day or Night
Within U.S. and Canada: 1-800-424-9300
Outside U.S. and Canada: +1 703-527-3887 (collect calls accepted)
Recommended Use: Fuel for ITW-affiliated brand cordless tools (see below).
Restrictions on Use: Use only with Paslode, Duo-Fast, Ramset, and Spit cordless tools.

Section 2 – Hazard(s) Identification

GHS Classification: Flammable aerosol, Category 1
Gases Under Pressure - Liquefied gas
Specific Target Organ Toxicity - Single Exposure Category 3
Simple Asphyxiant
GHS Signal Word: Danger
GHS Hazard Statements: Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
May cause drowsiness or dizziness.
May displace oxygen and cause rapid suffocation.
GHS Hazard Symbols:



GHS Precautionary Statements: **Prevention**
Keep out of the reach of children.
Keep away from heat/sparks/open flames/hot surfaces -
No smoking.
Do not spray on an open flame or other ignition sources.
Pressurized container: Do not pierce or burn, even after use.
Avoid breathing fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.

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Response

IF INHALED: Remove person to fresh air and keep in position comfortable for breathing.

Call a POISON CENTER/doctor/physician if you feel unwell.

Storage

Protect from sunlight.

Do not expose to temperatures exceeding 50°C/122°F.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Disposal

Dispose of or recycle contents/container in accordance with local/regional/national/international regulations.

Section 3 – Composition/Information on Ingredients (Fuel and Propellant)

Hazardous Component	CAS-No.	Weight %
1-butene (butylene)	106-98-9	0 - 80
propene (propylene)	115-07-1	20 – 100

Concentration ranges are declared because SDS applies to a group of substantially similar mixtures.

Section 4 – First-aid Measures

Description of Necessary Measures:

Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing. If not breathing, provide artificial respiration. Get immediate medical attention.

Skin Contact: IF ON SKIN: Frostbite may occur from contact with liquefied gas. In case of frostbite, wash with plenty of water; do not remove clothing. Get immediate medical attention. If frostbite not evident: Immediately remove/take off all contaminated clothing. Rinse skin with water/shower.

Eye Contact: IF IN EYES: Frostbite may occur from contact with liquefied gas. Rinse eyes cautiously with plenty of water for several minutes. Remove contact lenses if present and easy to do. Get immediate medical attention.

Ingestion: IF INGESTED: Frostbite may occur from contact with liquefied gas. Get immediate medical attention.

Most Important Symptoms/Effects:

Immediate Effects: Direct contact with skin, eyes or internal tissues may result in frostbite. May cause drowsiness or dizziness if expelled fuel displaces oxygen in an enclosed, poorly ventilated space. Rapid suffocation may result.

Delayed Effects: No significant effects are expected.

Indication of Immediate Medical

Attention & Special Treatment, if any: Treat symptomatically and supportively.

Section 5 – Fire Fighting Measures

Suitable Extinguishing Media: Water spray, foam, carbon dioxide or dry chemical.

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Unsuitable Extinguishing Media: Specific Hazards:	Do not use water jet as an extinguisher as this will spread fire. Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Thermal decomposition (combustion) may produce carbon monoxide and carbon dioxide.
Special Protective Equipment & Precautions for Fire-fighters:	Avoid contact or inhalation with material or combustion products. Use self-contained breathing apparatus in confined spaces. Eliminate all sources of ignition. Cool containers with water from unmanned hose holder at maximum distance. Isolate hazard area and deny entry to unauthorized persons.

Section 6 – Accidental Release Measures

Personal Precautions, Protective Equipment & Emergency Procedures:	Eliminate all sources of ignition and isolate hazard area. Ventilate area to maximum extent possible. Wear appropriate chemical resistant clothing and eye protection. See Sections 5, 7, 8, and 11 of this Safety Data Sheet for additional information.
Methods & Materials for Containment & Cleanup:	Contain fire-fighting water to maximum extent possible and do not flush fire-fighting water to surface water or sanitary sewer system. Place waste material in appropriate container and dispose of per Section 13 of this Safety Data Sheet.

Section 7 – Handling and Storage

Precautions for Safe Handling:	Extremely flammable aerosol: Do not handle or use near extreme heat, sparks, open flames or hot surfaces. Pressurized container: Do not pierce or burn, even after use. Avoid breathing fume/gas/mist/vapors/spray. Wear appropriate personal protective equipment. Use only outdoors or in a well-ventilated area. For maximum number of tool cycles, use before date code on fuel cell.
Conditions for Safe Storage, including Incompatibilities:	Do not expose to temperatures exceeding 50°C/122°F. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated area. See Section 10 of this Safety Data Sheet for incompatible materials.

Section 8 – Exposure Controls/Personal Protection

Exposure Limits:

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Hazardous Component	OSHA PEL	ACGIH TLV
1-butene (butylene)	Not Established	250 (TWA)
propene (propylene)	Not Established	500 (TWA)

(PEL = Permissible Exposure Limit TLV = Threshold Limit Value TWA = Time-Weighted Average)

Engineering Controls:	Ensure adequate air exchange when used with installation tools.
Individual Protection Measures:	
Eye/Face Protection:	Wear safety glasses with side shields when used with installation tools.
Skin Protection:	Chemical resistant clothing not required during normal use with installation tools. Appropriate gloves and protective outerwear appropriate for the physical hazards typically encountered on construction sites is recommended.
Respiratory Protection:	Not required during normal use with installation tools in well-ventilated areas or outdoors. Self-contained breathing apparatus required in confined spaces.
Other Protection:	Provide first-aid supplies for significant contact injuries.

Section 9 – Physical and Chemical Properties

Appearance:	Colorless gas	Upper/Lower Explosive Limits:	ca. 2-10% in air
Odor:	Faintly olefinic	Vapor Pressure:	ca. 50-175 psig at 70°F
Odor Threshold:	ca. 30 mg/m ³	Vapor Density (air = 1):	ca. 1.5
pH:	Not applicable	Relative Density (H₂O=1):	ca. 0.6 - liquefied gas
Melting Point/Freezing Point:	ca. -300°F	Solubility:	Slight
Initial Boiling Point/Range:	ca. -50°F	Partition Coefficient (Oct/H₂O):	K _{ow} = ca. 2
Flash Point:	ca. -160°F	Auto-Ignition Temperature:	ca. 800°F
Evaporation Rate:	Not applicable	Decomposition Temperature:	Not available
Flammability:	Flammable gas	Viscosity:	Not applicable

ca = circa (i.e., approximately)

Section 10 – Stability and Reactivity

Reactivity:	No significant reactivity known.
Chemical Stability:	Stable under normal conditions of use.
Possibility of Hazardous Reactions:	No significant possibility under normal conditions of use.
Conditions to Avoid:	Extreme heat, sparks, open flames or hot surfaces.
Incompatible Materials:	Strong acids, halogens, and oxidizing agents.
Hazardous Decomposition Products:	Carbon monoxide and carbon dioxide.

Section 11 – Toxicological Information

Acute and Chronic Toxicity:

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Component Analysis - LD50/LC50:

The components of this material have been reviewed in various sources and the following selected endpoints are published:

1-butene (CAS 106-98-9) LC50 (rat) = 658 mg/L (4 hour)

propene (CAS 115-07-1) LC50 (rat) = 658 mg/L (4 hour)

Immediate Effects: Direct contact with skin, eyes or internal tissues may result in frostbite. May cause drowsiness or dizziness if expelled fuel displaces oxygen in an enclosed, poorly ventilated space. Rapid suffocation may result.

Delayed Effects: No significant effects are expected. Propene listed as IARC-3/ACGIH TLV-A4.

Likely Routes of Exposure:

Inhalation:	May cause drowsiness or dizziness if expelled fuel displaces oxygen in an enclosed, poorly ventilated space. Rapid suffocation may result.
Skin Contact:	Contact with liquefied gas may cause frostbite.
Eye Contact:	Contact with liquefied gas may cause frostbite.
Ingestion:	Contact with liquefied gas may cause frostbite.
Irritation/Corrosivity Data:	No data available.
Respiratory Sensitization:	No data available.
Dermal Sensitization:	No data available.
Germ Cell Mutagenicity:	No data available.
Reproductive Toxicity:	No data available.
STOT - Single Exposure:	No known effects beyond simple asphyxiation.
STOT - Repeated Exposure:	No known effects.
(STOT = Specific Target Organ Toxicity)	
Aspiration Hazard:	No data available.
Medical Conditions Aggravated by Exposure:	None known.

Section 12 – Ecological Information

Ecotoxicity:	No significant ecotoxic effects are expected.
Persistence and degradability:	Material is gaseous under atmospheric conditions and expected to dissipate primarily into the air when released into the environment. Material components are readily degradable based upon a variety of studies.
Bioaccumulative Potential:	Not expected to bioaccumulate.
Mobility in Soil:	Material is gaseous under atmospheric conditions and not expected to adsorb to or be absorbed by soils.
Other Adverse Effects:	None identified.

Section 13 – Disposal Considerations

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Dispose of or recycle contents/container in accordance with local/regional/national/international regulations. See U.S. Resource Conservation and Recovery Act (RCRA) discussion in Section 16 of this Safety Data Sheet.

Section 14 – Transport Information

U.S. DOT INFORMATION (ground shipment)*

PROPER SHIPPING NAME: Aerosols, LTD QTY

HAZARD CLASS: 2.1 **PRODUCT RQ (lbs):** none

UN NUMBER: UN1950 **LABEL:** none

IMDG INFORMATION (vessel shipment)*

PROPER SHIPPING NAME: Aerosols, LTD QTY

HAZARD CLASS: 2.1 **PRODUCT RQ (lbs):** none

UN NUMBER: UN1950 **LABEL:** none

IATA INFORMATION (air shipment)*

PROPER SHIPPING NAME: Consumer Commodity

HAZARD CLASS: 9 **PRODUCT RQ (lbs):** none

UN NUMBER: ID8000 **LABEL:** Class 9

* Strictly observe all applicable special provisions, packaging requirements, quantity limitations, stowage requirements, and consumer commodity/limited quantity considerations.

Section 15 – Regulatory Information

TSCA STATUS: All components are included in the TSCA Chemical Inventory.

CERCLA REPORTABLE QUANTITY: none

SARA TITLE III:

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES: none

SECTION 311/312 HAZARD CATEGORIES:

Acute Health yes

Chronic Health no

Fire yes

Reactive no

Sudden Release of Pressure yes

SECTION 313 TOXIC CHEMICALS: propene (propylene) CAS No. 115-07-1
20-100% by weight

RCRA STATUS: If discarded in its purchased form within the U.S., this product may be classified as a U.S. Environmental Protection Agency (EPA) RCRA D001 (ignitable) hazardous waste. Even after use, the fuel cell remains pressurized by an extremely flammable propellant and may retain this hazardous waste characteristic. Waste

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generators must consider federal, state, and local hazardous waste regulations to determine a proper disposal method based on their status as a conditionally exempt, small quantity or large quantity generator per U.S. EPA or state-equivalent regulations. If discarded outside of the U.S. then classification, handling, and disposal of waste product must comply with all relevant international waste regulations.

CANADIAN STATUS: All components listed on Domestic Substances List (DSL).

EUROPEAN UNION: All components listed on European Inventory of Existing Commercial Chemical Substances (EINECS):

<u>Component</u>	<u>EINECS No.</u>
1-butene	203-449-2
propene	204-062-1

STATE REGULATORY INFORMATION: No component of fuel gas or propellant is included on California Proposition 65 lists as a carcinogen or reproductive toxin.

Section 16 – Other Information

Hazardous Materials Identification System (HMIS) Ratings:

Health: 1

Flammability: 4

Physical Hazards: 0

Personal Protection: **See Note below.**

Hazard Ratings: Severe to Minimal (4 to 0)

Note: Personal Protection rating to be supplied by user depending on conditions of use. Wear safety glasses with side shields when using this product with installation tools.

Date Prepared: July 13, 2014

Prepared By: Paslode Product Safety Department

Disclaimer of Expressed and Implied Warranties

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