



## Safety Data Sheet

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### Section 1 – Identification

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**Product Identifier:** Fuel / Fuel Cartridge  
**Manufacturer:** Paslode  
155 Harlem Avenue  
Glenview, IL 60025  
**Distributor:** ITW Construction Products  
120 Travail Road  
Markham, ON L35 3J1  
**Information Telephone Number:** 800-222-6990  
**Information Email Address:** [tech@paslode.com](mailto: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.

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### Section 2 – Hazard(s) Identification

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**GHS Classification:** Flammable gas, 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 gas.  
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, and hot surfaces -  
No smoking.

Avoid breathing fume, gas, mist, vapors, and spray.  
Use only outdoors or in a well-ventilated area.

**Response**

Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.

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

Call a poison center, doctor or 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 and container in accordance with local, regional, national, and international regulations.

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

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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.

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### Section 4 – First-aid Measures

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**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 or 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.

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## Section 5 – Fire Fighting Measures

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<b>Suitable Extinguishing Media:</b>	Water spray, foam, carbon dioxide or dry chemical.
<b>Unsuitable Extinguishing Media:</b>	Do not use water jet as an extinguisher as this will spread fire.
<b>Specific Hazards:</b>	Extremely flammable. Contains gas under pressure; may explode if heated. Thermal decomposition (combustion) may produce carbon monoxide and carbon dioxide.
<b>Special Protective Equipment &amp; Precautions for Fire-fighters:</b>	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.

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## Section 6 – Accidental Release Measures

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<b>Personal Precautions, Protective Equipment &amp; Emergency Procedures:</b>	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.
<b>Methods &amp; Materials for Containment &amp; Cleanup:</b>	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.

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## Section 7 – Handling and Storage

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<b>Precautions for Safe Handling:</b>	Extremely flammable: 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, and 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 cartridge.
<b>Conditions for Safe Storage, including Incompatibilities:</b>	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.

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## Section 8 – Exposure Controls/Personal Protection

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### Exposure Limits:

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.

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## Section 9 – Physical and Chemical Properties

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

ca = circa (i.e., approximately)

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## Section 10 – Stability and Reactivity

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

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## Section 11 – Toxicological Information

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### Acute and Chronic Toxicity:

#### 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:

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

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## Section 12 – Ecological Information

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<b>Ecotoxicity:</b>	No significant ecotoxic effects are expected.
<b>Persistence and degradability:</b>	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.
<b>Bioaccumulative Potential:</b>	Not expected to bioaccumulate.
<b>Mobility in Soil:</b>	Material is gaseous under atmospheric conditions and not expected to adsorb to or be absorbed by soils.
<b>Other Adverse Effects:</b>	None identified.

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## Section 13 – Disposal Considerations

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

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## Section 14 – Transport Information

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### U.S. DOT AND CANADA TDG INFORMATION (ground shipment)\*

**PROPER SHIPPING NAME:** Hydrocarbon gas refills for small devices, LTD QTY

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

**UN NUMBER:** UN3150 **LABEL:** none

### IMDG INFORMATION (vessel shipment)\*

**PROPER SHIPPING NAME:** Hydrocarbon gas refills for small devices

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

**UN NUMBER:** UN3150 **LABEL:** Class 2.1

### IATA INFORMATION (air shipment)\*

**PROPER SHIPPING NAME:** Hydrocarbon gas refills for small devices

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

**UN NUMBER:** UN3150 **LABEL:** Class 2.1

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

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## Section 15 – Regulatory Information

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**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:

Physical: Flammable

Gas under pressure

Health: Specific target organ toxicity

Simple asphyxiant

**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 cartridge remains pressurized by an extremely flammable propellant and may retain this hazardous waste characteristic. Waste 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.

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## Section 16 – Other Information

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### 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:** May 26, 2021

**Prepared By:** ITW Residential & Renovation Product Safety Department

### Disclaimer of Expressed and Implied Warranties

The information in this document is believed to be correct as of the date issued. However, no warranty of merchantability, fitness for any particular purpose, or any other warranty is expressed or is to be implied regarding the accuracy or completeness of this information, the results to be obtained from the use of this information or the product, the safety of this product, or the hazards related to its use.

This information and product are furnished on the condition that the person receiving them shall make his own determination as to the suitability of the product for his particular purpose and on the condition that he assumes the risk of his use thereof.

# Product Information Sheet

## Panasonic Batteries

Panasonic Industrial Company  
A Division of Panasonic Corporation of North America  
5201 Tollview Drive, 1F-3  
Rolling Meadows, IL 60008  
Toll Free: 877-726-2228  
Fax: 847-468-5750  
Internet: [www.panasonic.com/industrial/batteries-oem](http://www.panasonic.com/industrial/batteries-oem)  
e-mail: [oembatteries@us.panasonic.com](mailto:oembatteries@us.panasonic.com)

**Product:** Lithium-ion Batteries  
(Li-ion)  
**Applicable models/sizes:** All Cylindrical  
and Prismatic Lithium-ion batteries  
**Revision:** – January 1, 2020

**The batteries referenced herein are exempt articles and are not subject to the OSHA Hazard Communication Standard requirement. This sheet is provided as a service to our customers.**

## SDS

Safety Data Sheets (SDS) are a sub-requirement of the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR Subpart 1910.1200. This Hazard Communication Standard does not apply to various subcategories including anything defined by OSHA as an "article". OSHA has defined "article" as a manufactured item other than a fluid or particle; (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g. minute or trace amounts of a hazardous chemical, and does not pose a physical hazard or health risk to employees.

*Because all of our batteries are defined as "articles", they are exempt from the requirements of the Hazard Communication Standard, hence a SDS is not required.*

The following components are found in a Panasonic Lithium Ion battery:

### Lithium Nickel Cobalt Aluminum Type - NCA

Component	Material	Formula / CAS
Positive Electrode	Lithium Nickel Cobalt Aluminum Oxide – NCA	LiNiCoAlO <sub>2</sub> 193214-24-3
Negative Electrode	Graphite	C 7440-44-0
Electrolyte	Ethylene Carbonate – Solvent	C <sub>3</sub> H <sub>4</sub> O <sub>3</sub> 96-49-1
	Diethyl Carbonate – Solvent	C <sub>5</sub> H <sub>10</sub> O <sub>3</sub> 105-58-8
	Lithium Hexafluorophosphate – Salt	LiPF <sub>6</sub> 21324-40-3



## DISPOSAL

All Panasonic Lithium ion batteries are classified by the federal government as non-hazardous waste and are safe for disposal in the normal municipal waste stream. These batteries, however, do contain recyclable materials. Panasonic is a Licensee of the Call2Recycle Battery Recycling Program. If you build our cells into a battery pack, please call 1-800-8-BATTERY or go to the Call2Recycle website at [www.call2recycle.org](http://www.call2recycle.org) for additional information on how your branded product can also participate in the program.

## TRANSPORTATION

All Panasonic lithium ion batteries are not subject to the other requirements of the US Department of Transportation (DOT) Subchapter C, Hazardous Materials Regulations if shipped in compliance with 49 CFR 173.185.

Effective January 1, 2020 all Panasonic lithium ion batteries can be shipped by air in accordance with International Civil Aviation Organization (ICAO) 2019-2020 edition, Section II or Section 1B or International Air Transport Association (IATA), 61th edition, Section II or 1B, Packing Instructions (PI) 965 (Batteries), PI 966 (Batteries, packed with equipment) and PI 967 (Batteries, contained in equipment) as appropriate.

All Panasonic lithium ion batteries are regulated by the International Maritime Organization (IMO), 2018 edition, 39<sup>th</sup> amendment, under Special Provisions 188 and 230.

**Notice:** The information and recommendations set forth are made in good faith and are believed to be accurate at the date of preparation. Panasonic Industrial Company makes no warranty expressed or implied.

All Panasonic lithium ion batteries are regulated by the ADR, 2019-2020 Edition under SP 188 and the TDG under SP 34.

All Panasonic lithium ion cells are tested and comply with the UN Model Regulations, Manual of Test and Criteria, Part III, subsection 38.3.

If you build any of our lithium ion cells into a battery pack, you must also assure that they are tested in accordance with the UN Model Regulations, Manual of Test and Criteria. Part III, subsection 38.3, 6<sup>th</sup> Revised Edition, Amendment 1..

If you plan on transporting any untested prototype battery packs contact your Panasonic Sales Representative for regulatory information. Check with your air carrier before shipping. Many air carriers have additional requirements.

### **FIRST AID**

If you get electrolyte in your eyes, flush with water for 15 minutes without rubbing and immediately contact a physician. If you get electrolyte on your skin wash the area immediately with soap and water. If irritation continues, contact a physician. If the battery is ingested, call the Rocky Mountain Poison and Drug Center at 800-498-8666 for the US and Canada or 303-389-1300 internationally or your local poison center immediately.

### **GENERAL RECOMMENDATIONS**

CAUTION: Risk of fire, explosion and burns. Do not short-circuit, crush, incinerate or disassemble battery.

### **FIRE SAFETY**

In case of fire, you can use dry chemical, alcohol resistant foam (ARAFF type) or carbon dioxide fire extinguishers. Cooling the exterior of the batteries with copious amounts of water will help prevent propagation and rupturing. Fire fighters should use self-contained breathing apparatus. Detailed information on lithium ion battery fires can be found in Guide 147 (Lithium Ion Batteries) of the US DOT Emergency Response Guide.

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