

MSDS Preparation Date (dd/mm/yyyy): 13/04/2008

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product identifier : **PROPYLENE/I-BUTENE: 5545 (UN1075)**
Product Code(s) : 92004
Product Use : Fuel
Chemical Family : Mixture
Supplier's name and address: **Powers Fasteners, Inc.**
 2 Powers Lane
 Brewster, NY, USA
 10509
Information Telephone No. : (914) 235-6300 (8am - 8pm EST, Monday - Thursday; 8am - 7pm, Friday)
24 Hr. Emergency Tel # : Chemtrec (800) 424-9300 (Within Continental U.S.); Chemtrec (703) 527-3887 (Outside U.S.).

Manufacturer's name and address:
 Refer to Supplier

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>CAS #</u>	<u>% (weight)</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
			<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Propylene	115-07-1	40.00 - 70.00	500 ppm	N/Av	N/Av	N/Av
1-Butene	106-98-9	30.00 - 60.00	N/Av	N/Av	N/Av	N/Av

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
 Colourless gas. Mildly olefinic odor.
 DANGER! Flammable gas. Contents under pressure. May cause flash fire. Asphyxiant, can replace oxygen in confined area. Inhalation may cause respiratory irritation and central nervous system depression. Contact with liquid may cause frostbite. May have mutagenic effects.

*****POTENTIAL HEALTH EFFECTS*****

Target organs : Lungs, eyes, skin, central nervous system.
Routes of exposure : *Inhalation:* YES *Skin Absorption:* NO *Skin & Eyes:* YES *Ingestion:* NO
Signs and symptoms of short-term (acute) exposure

- Inhalation* : May cause irritation to the nose, throat and upper respiratory tract. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Asphyxiant, can replace oxygen in confined area.
- Skin* : If product is sprayed directly on skin, symptoms of frostbite may be experienced including numbness, prickling and itching.
- Eyes* : Spraying the product directly into the eyes may cause freezing, and could cause eye damage.
- Ingestion* : Not an expected route of entry under normal conditions of use.

Effects of long-term (chronic) exposure : None known.
Conditions aggravated by overexposure : Pre-existing skin, eye, respiratory and central nervous system disorders.
Carcinogenic status : See TOXICOLOGICAL INFORMATION, Section 11.
Additional health hazards : Possible mutagen See TOXICOLOGICAL INFORMATION, Section 11.
Potential environmental effects : See ECOLOGICAL INFORMATION (Section 12).

SECTION 4 - FIRST AID MEASURES

Inhalation : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. When symptoms persist or in all cases of doubt seek medical advice.
Skin contact : Flush affected skin with gently flowing lukewarm water for at least 20 minutes. Treat for frostbite if necessary by gently warming affected area. Seek immediate medical attention/advice.

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- Eye contact** : In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek immediate medical attention/advice.
- Ingestion** : Not an expected route of entry.
- Notes For Physician** : Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

- Fire hazards/conditions of flammability** : Flammable gas. Closed containers are contained under pressure and may explode if exposed to excess heat for a prolonged period of time. Vapours are heavier than air and collect in confined and low-lying areas. Vapour can travel considerable distance and flashback to a source of ignition.
- Flammability classification (OSHA 29 CFR 1910.1200)** : Flammable gas
- Flash point** : -108°C / -162°F
- Flash point Method** : N/Av **Auto-ignition temperature** : N/Av
- Lower flammable limit (% by vol.)** : 1.6 **Upper flammable limit (% by vol.)** : 11.1
- Oxidizing properties** : None known.
- Flame Projection Length** : N/Av **Flashback observed** : N/Av
- Explosion data: Sensitivity to mechanical impact / static discharge** : May be sensitive to static discharge. Not expected to be sensitive to mechanical impact.
- Suitable extinguishing media** : Dry chemical, foam, carbon dioxide and water fog.

- Special fire-fighting procedures/equipment** : Firefighters should wear proper protective equipment and self contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. If feasible, stop the flow of gas. Do not completely extinguish flame unless gas flow is shut off. Water spray may be useful in cooling equipment exposed to heat and flame.

- Hazardous combustion products** : Carbon oxides; irritating fumes and smoke.
- NFPA Rating** : 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe
 : *Health:* 1 *Flammability:* 4 *Instability:* 1 *Special Hazards:* None

SECTION 6 - ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.
- Environmental precautions** : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces.
- Spill response/cleanup** : Remove all sources of ignition. Ventilate area of release. Turn off gas flow if you can do so without risk. Isolate for ½ mile in all directions if tank or tank car is involved in fire. Notify the appropriate authorities as required. North American Emergency Response Guide # 115.
- Prohibited materials** : None known.
- Special spill response procedures** : If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8002).
 US CERCLA Reportable quantity (RQ): None reported.

SECTION 7 - HANDLING AND STORAGE

- Safe Handling procedures** : Flammable gas. Wear protective equipment during handling. Use in a well ventilated area. Do not breathe vapours or spray mist. Avoid contact with skin and eyes. Keep away from heat and sources of ignition. Use only non-sparking tools with this material. Keep away from acids and other incompatibles. Do not puncture or incinerate containers. Ground all equipment during handling.

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- Storage requirements** : Store in a cool, dry, well ventilated area, away from heat and ignition sources. Keep away from incompatibles. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area.
- Incompatible materials** : Strong oxidizing agents and acids.
- Special packaging materials** : Always keep in containers made of the same materials as the supply container.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

- Ventilation and engineering measures** : Use only in well-ventilated areas. Provide sufficient ventilation to keep vapour concentration below the given TLV and/or PEL.
- Respiratory protection** : If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. Advice should be sought from respiratory protection specialists.
- Skin protection** : Thermally insulated protective gloves must be worn during use. Advice should be sought from glove suppliers.
- Eye / face protection** : Use chemical goggles and face shield when contact with product is possible.
- Other protective equipment** : Wear resistant clothing and boots. An eyewash station and safety shower should be made available in the immediate working area.
- General hygiene considerations** : Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities.
- Permissible exposure levels** : For individual ingredient exposure levels, see Section 2.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

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| Physical state : Gas | Appearance : Colourless gas. |
| Odour : Mildly olefinic odor. | Odour threshold : N/Av |
| pH : N/Av | |
| Boiling point : N/Av | Specific gravity : 0.5541 |
| Melting/Freezing point : <-138°C / -217°F | Coefficient of water/oil distribution : N/Av |
| Vapour pressure (mmHg @ 20° C / 68° F) : Approximately 96 psig @ 70°F | Solubility in water : <0.1% by weight @ 70°F |
| Vapour density (Air = 1) : >1.5% by weight @ 70°F | Evaporation rate (n-Butyl acetate = 1) : N/Av |
| Volatile organic Compounds (VOC's) : N/Av | Volatiles (% by weight) : 100% |

SECTION 10 - REACTIVITY AND STABILITY DATA

- Stability and reactivity** : Stable when stored as a liquid in steel tanks under its own vapor pressure.
- Hazardous polymerization** : Will not occur.
- Conditions to avoid** : Keep this product away from heat, sparks, flame, and other sources of ignition (e.g. pilot lights, electric motors, static electricity).
- Materials To Avoid And Incompatibility** : Incompatible materials (see Section 7).
- Hazardous decomposition products** : None known, refer to hazardous combustion products in Section 5.

SECTION 11 - TOXICOLOGICAL INFORMATION

- Toxicological data** : There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

<u>Ingredients</u>	LC₅₀(4hr)	LD₅₀	
	<u>inh, rat</u>	<u>oral</u>	<u>dermal</u>
Propylene	>50000ppm/4H	N/Av	N/Av
1-Butene	N/Av	N/Av	N/Av

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- Carcinogenic status** : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.
- Reproductive effects** : Not expected to have other reproductive effects.
- Teratogenicity** : Not expected to be a teratogen.
- Mutagenicity** : An ingredient in this product may cause mutagenic effects based on studies in laboratory animals. This product contains: Propylene.
- Epidemiology** : Not available.
- Sensitization to material** : Not expected to be a skin or respiratory sensitizer.
- Synergistic materials** : Not available.
- Irritancy** : May cause irritation to upper respiratory system.
- other important hazards** : None known.




SECTION 12 - ECOLOGICAL INFORMATION

- Environmental effects** : The ecological characteristics of this product have not been fully investigated. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.
- Important environmental characteristics** : No information available.
- Ecotoxicological** : No data is available on the product itself.

SECTION 13 - DISPOSAL CONSIDERATIONS

- Handling for Disposal** : Handle waste according to recommendations in Section 7.
- Methods of Disposal** : Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.
- RCRA** : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14 - TRANSPORTATION INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
49CFR/DOT	UN1075	Petroleum gases, liquefied	2.1	none	
49CFR/DOT Additional information	None.				
TDG	UN1075	PETROLEUM GASES, LIQUEFIED	2.1	none	
TDG Additional information	None.				
ICAO/IATA	UN1075	Petroleum gases, liquefied	2.1	none	
ICAO/IATA Additional information	Refer to ICAO/IATA Packing Instruction 200. ICAO / IATA cargo aircraft only.				

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

OSHA: This material is classified as hazardous under OSHA regulations (29CFR 1910.1200).

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): See Section 6 .

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SARA TITLE III: Sec. 302, Extremely Hazardous Substances, 40 CFR 355: No Extremely Hazardous Substances are present in this material.

SARA TITLE III: Sec. 311 and 312, MSDS Requirements, 40 CFR 370 Hazard Classes: Immediate (Acute) health hazard; Chronic Health Hazard; Fire Hazard; Pressurized gas hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This product may be subject to SARA notification requirements, since it contains Toxic Chemical constituents above their de minimus concentrations. This product contains: Propylene.

US State Right to Know Laws:

California Proposition 65: To the best of our knowledge, this product does not contain any chemicals known to the State of California to cause cancer or reproductive harm.

International Information:

Canadian WHMIS Classification:

- Class A (Pressurized containers)
- Class B1 (Flammable Gases)
- Class D2B (Materials Causing Other Toxic Effects, Toxic Material)

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.


SECTION 16 - OTHER INFORMATION

HMIS Rating : * - Chronic hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe
*Health: *1 Flammability: 4 Reactivity: 0*

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
 CA: California
 CAS: Chemical Abstract Services
 CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
 CFR: Code of Federal Regulations
 DOT: Department of Transportation
 EPA: Environmental Protection Agency
 HMIS: Hazardous Materials Identification System
 HSDB: Hazardous Substances Data Bank
 IARC: International Agency for Research on Cancer
 Inh: Inhalation
 N/Ap: not applicable
 N/Av: not available
 NFPA: National Fire Protection Association
 NIOSH: National Institute of Occupational Safety and Health
 NTP
 OSHA: Occupational Safety and Health Administration
 PEL: Permissible exposure limit
 RCRA: Resource Conservation and Recovery Act
 RTECS: Registry of Toxic Effects of Chemical Substances
 SARA: Superfund Amendments & Reauthorization Act
 STEL: Short Term Exposure Limit
 TDG: Canadian Transportation of Dangerous Goods Act & Regulations
 TLV: Threshold Limit Values
 TPQ: Threshold Planning Quantity
 TSCA: Toxic Substance Control Act
 TWA: Time Weighted Average
 WHMIS: Workplace Hazardous Materials Identification System

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- References** :
1. ACGIH, Threshold Limit Values and Biological Exposure Indices for 2006.
 2. International Agency for Research on Cancer Monographs, searched 2007.
 3. Canadian Centre for Occupational Health and Safety, CInfoWeb databases, 2008 (Chempendium, HSDB, RTECs).
 4. Material Safety Data Sheet from manufacturer.
 5. US EPA Title III List of Lists - January 27, 2005 version.
 6. California Proposition 65 List - September 28, 2007 version.

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<p><u>Prepared by:</u> ICC The Compliance Center Inc. Canada: 1-888-977-4834 USA: 1-888-442-9628 http://www.thecompliancecenter.com</p>	

DISCLAIMER OF LIABILITY

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release 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 or in any process, unless specified in the text.

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