

**Technical Data Sheet****Pow-R-Wash™ PN New & Improved!  
Contact Cleaner****PRODUCT DESCRIPTION**

Pow-R-Wash™ PN New & Improved! Contact Cleaner is a highly effective solvent cleaner for electrical and electronic components and assemblies. This cleaning agent is both nonflammable and safe for use on plastics and metals.

- Same great features as original, without HCFC-141b
- Rapidly cleans dirt, oils, carbon, grease and other contaminants
- Nonflammable
- Excellent material compatibility
- Displaces moisture
- Evaporates fast
- Leaves no residues
- Enhances electrical signal
- Low toxicity
- Available with All-Way Spray valve
- Patent Pending

**TYPICAL APPLICATIONS**

Pow-R-Wash™ PN New & Improved! Contact Cleaner effectively cleans and degreases:

- Printed Circuit Boards
- Circuit Breakers
- Electrical Motors
- Potentiometers
- Contacts and Relays
- Motors and Generators
- Selector Switches
- Solenoids

**TYPICAL PRODUCT DATA AND  
PHYSICAL PROPERTIES**

<b>Boiling Point</b>	99°F (Initial)
<b>Evaporation Rate (butyl acetate=1)</b>	>1
<b>Flash Point (TCC)</b>	None
<b>Specific Gravity</b>	1.29
<b>Vapor Pressure @68°F</b>	165 mmHg
<b>Appearance</b>	Clear, colorless liquid
<b>Odor</b>	Ethereal Odor
<b>Solubility in Water</b>	Negligible
<b>Dielectric Breakdown (ASTM D-877)</b>	26 kV
<b>Shelflife</b>	5 years
<b>RoHS/WEEE Status</b>	

**COMPATIBILITY**

Pow-R-Wash™ PN New & Improved! Contact Cleaner has excellent compatibility with most materials used in the electronics industry. With any cleaning agent, compatibility with substrate should be determined on a non-critical area prior to use.

<u>Material</u>	<u>Compatibility</u>
ABS	Excellent
Buna-N	Excellent
EPDM	Excellent
Graphite	Excellent
HDPE	Excellent
Kynar™	Excellent
LDPE	Excellent
Lexan™	Good
Neoprene	Excellent
Noryl®	Excellent
Nylon™ 66	Excellent
Cross-Linked PE	Excellent
Polypropylene	Excellent
Polystyrene	Good
PVC	Excellent
Silicone Rubber	Excellent
Teflon™	Excellent
Viton™	Excellent

<b>Performance</b>	
<b>Grease Removal per gram solvent (mg)</b>	
Pow-R-Wash PN New & Improved!	<b>2.2</b>
HFC-based Cleaner	<b>0.5</b>
<b>Grease &amp; Lubricating Oil Removal per gram solvent (mg)</b>	
Pow-R-Wash PN New & Improved!	<b>7.4</b>
HFC-based Cleaner	<b>0.5</b>

## USAGE INSTRUCTIONS

For commercial use only.

Read MSDS carefully prior to use.

Spray 4-6 inches from surface to clean. Wash parts from top to bottom, allowing the liquid to flush away dirt and dissolved oil and grease.

For precise application use attached extension tube.

## AVAILABILITY

ES 1677 12 oz. Aerosol

## ENVIRONMENTAL IMPACT DATA

<b>ENVIRONMENTAL IMPACT DATA</b>			
CFC	0.0%	VOC	15.2%
HCFC-225	35.0%	HFC	47.9%
HCFC-141b	0.0%	nPB	0.0%

CFC, HCFC-225, HCFC-141b, VOC, HFC and nPB percentages shown are the content by weight.

### NOTE:

This information is believed to be accurate. It is intended for professional end users having the skills to evaluate and use the data properly. ITW CHEMTRONICS® does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.

**SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Product Information: 800-TECH-401

**Product Identification**

**Pow-R-Wash® PN**

Product Code: ES1677

**SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS#	Wt. % Range
Pentafluorobutane	406-58-6	20.0-50.0
HCFC-225ca	422-56-0	10.0-20.0
HCFC-225cb	507-55-1	10.0-20.0
Perfluorocarbons	86508-42-1	10.0-20.0
Trans-1,2-dichloroethylene	156-60-5	10.0-20.0
Isohexanes	8030-30-6	1.0-5.0
1,1,1,2-Tetrafluoroethane	811-97-2	5.0-30.0
Carbon Dioxide	124-38-9	1.0-5.0

**SECTION 3: HAZARD IDENTIFICATION**

**Emergency Overview:** Clear, colorless liquid with faint ethereal odor. This product is nonflammable. Liquid may irritate eyes and skin under repeated or prolonged exposure. Breathing high concentrations of product vapor may produce dizziness and nausea.

**Potential Health Effects:**

**Eyes:** Liquid, aerosols and vapors of this product may be irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation.

**Skin:** Prolonged contact can cause skin irritation, including redness, burning, drying and/or cracking of skin.

**Ingestion:** May be harmful if swallowed. Swallowing this material may result in nausea, vomiting and weakness followed by central nervous system depression.

**Inhalation:** Can be harmful if inhaled. High concentrations of vapors in immediate area can cause dizziness, nausea, vomiting, unconsciousness and death.

**SECTION 4: FIRST AID MEASURES**

**Eyes:** Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and tested by medical personnel if irritation develops or persists.

**Skin:** Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persist. Wash clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. If conscious, give 2 glasses of water. Never give anything by mouth to an unconscious person. Keep head below knees to minimize chance of aspirating material into the lungs. Get medical attention immediately.

**Inhalation:** Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention.

**SECTION 5: FIRE FIGHTING MEASURES**

**Flash Point:** None to boiling(TCC)

**Extinguishing Media:** Use water spray or fog, CO2, dry chemical or water stream when fighting fires involving this material.

**Fire Fighting Instructions:** As in any fire, wear self-contained breathing apparatus (pressure-demand, MSHA/NIOSH approved or equivalent) and full protective gear.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Spills:** Shut off leak if possible and safe to do so. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container for proper disposal. Do not flush to sewer. Avoid runoff into storm sewers and ditches which lead to waterways.

**SECTION 7: HANDLING AND STORAGE**

Avoid prolonged or repeated contact with eyes, skin, and clothing. Wash hands before eating. Use with adequate ventilation. Avoid breathing product vapor or mist. Do not reuse this container. Store in a cool dry place away from heat, sparks and flame. Do not store in direct sunlight.

**KEEP OUT OF REACH OF CHILDREN.**

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Guidelines:**

CHEMICAL NAME	ACGIH TLV	OSHA PEL	OTHER
HCFC-225ca	not established	not established	100 ppm*
HCFC-225cb	not established	not established	100 ppm*
Pentafluorobutane	not established	not established	
Perfluorocarbons	not established	not established	
trans-1,2-Dichloroethylene	200 ppm	200 ppm	
1,1,1,2-Tetrafluoroethane	not established	not established	1000 ppm*
Isohexanes	500 ppm	not established	1000 ppm

\* Supplier's Occupational Exposure Limit

**Work/Hygienic Practices:** Good general ventilation should be sufficient to control airborne levels. If vapor concentration exceeds TLV, use NIOSH approved organic vapor cartridge respirator. Wear safety glasses with side shields (or goggles) and rubber or other chemically resistant gloves.

**NFPA and HMIS Codes:**

	NFPA	HMIS
Health	1	1
Flammability	0	0
Reactivity	1	1
Personal Protection	-	B

