# SAFETY DATA SHEET

## 1. Identification

Product identifier LPS® Electro Contact Cleaner

Other means of identification

Part Number 00416

**Recommended use** A non-flammable solvent blend for the removal of dirt, moisture, dust, flux and oxides from the

internal components of electronic or precision equipment such as circuit boards and the internal

components of electronic devices used in factories and other industrial settings.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer Manufacturer

Company name ITW Pro Brands
Address 4647 Hugh Howell Rd.

Tucker, GA 30084

Country (U.S.A.)

Tel: +1 770-243-8800

In Case of Emergency 1-800-424-9300 (inside U.S.)

+001 703-527-3887 (outside U.S.)

Website www.lpslabs.com

E-mail lpssds@itwprobrands.com

2. Hazard(s) identification

Physical hazards Gases under pressure Liquefied gas

Health hazards Not classified.
Environmental hazards Not classified.
OSHA defined hazards Not classified.

Label elements



Signal word Warning

**Hazard statement** Contains gas under pressure; may explode if heated.

**Precautionary statement** 

**Prevention** Observe good industrial hygiene practices.

Response Wash hands after handling.

**Storage** Protect from sunlight. Store in a well-ventilated place.

**Disposal** Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise

classified (HNOC)

None known.

Supplemental information None known.

# 3. Composition/information on ingredients

#### **Mixtures**

Chemical name	Common name and synonyms	CAS number	%	
Ethane,		811-97-2	40 - 50	
1,1,1,2-tetrafluoro-(hfc-134a)				
Methyl Nonafluorobutyl ether		163702-07-6	10 - 20	

Material name: LPS® Electro Contact Cleaner 00416 Version #: 01 Issue date: 12-27-2016

Chemical name	Common name and synonyms	CAS number	%	
Methyl Nonafluoroisobutyl ether		163702-08-7	10 - 20	
Perfluoro Compounds, (Primarily compounds with 6 Carbons)		86508-42-1	10 - 20	
1,2-trans-dichloroethylene		156-60-5	5 - 10	
Cyclohexylmethane		108-87-2	1 - 5	
Isopropanol		67-63-0	1 - 5	

#### 4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

No adverse effects due to skin contact are expected. Skin contact

No specific first aid measures noted. Eye contact Ingestion Not likely, due to the form of the product.

Most important symptoms/effects, acute and

medical attention and special

delayed

treatment needed

Indication of immediate Provide general supportive measures and treat symptomatically.

**General information** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Direct contact with eyes may cause temporary irritation.

# 5. Fire-fighting measures

Suitable extinguishing media

Unsuitable extinguishing media

Specific hazards arising from the chemical

Special protective equipment and precautions for firefighters

Fire fighting

equipment/instructions

Specific methods General fire hazards Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Do not use water jet as an extinguisher, as this will spread the fire.

During fire, gases hazardous to health may be formed.

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. ALWAYS stay away from tanks engulfed in flame. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn

Cool containers exposed to flames with water until well after the fire is out.

Contents under pressure. Pressurized container may explode when exposed to heat or flame.

#### 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.

Methods and materials for containment and cleaning up **Environmental precautions** 

Isolate area until gas has dispersed. Stop the flow of material, if this is without risk. For waste disposal, see section 13 of the SDS.

Avoid discharge into drains, water courses or onto the ground.

#### 7. Handling and storage

Precautions for safe handling

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Level 1 Aerosol.

Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Stored containers should be periodically checked for general condition and leakage. Store away from incompatible materials (see Section 10 of the SDS). Level 1 Aerosol.

# 8. Exposure controls/personal protection

#### Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

116	OCHA Table 7	1 Limite for Ai	r Cantaminanta	(29 CFR 1910.1000)

Components	Тур	e	V	alue	
Cyclohexylmethane (CAS 108-87-2)	PEL		20	000 mg/m3	
			50	00 ppm	
Isopropanol (CAS 67-63-0)	PEL		98	80 mg/m3	
, , , , ,			4(	00 ppm	
US. ACGIH Threshold Lin					
Components	Тур	9	V	alue	
1,2-trans-dichloroethylene (CAS 156-60-5)	TWA	A	20	00 ppm	
Cyclohexylmethane (CAS 108-87-2)	TWA	4	40	00 ppm	
Isopropanol (CAS 67-63-0)	STE	L	40	00 ppm	
	TWA	Ą	20	00 ppm	
US. NIOSH: Pocket Guide					
Components	Тур	9	V	alue	
Cyclohexylmethane (CAS 108-87-2)	TWA	4	10	600 mg/m3	
			40	00 ppm	
Isopropanol (CAS 67-63-0)	STE	L	12	225 mg/m3	
			50	00 ppm	
	TWA	4	98	80 mg/m3	
			40	00 ppm	
US. Workplace Environme	•	•			_
Components	Тур	9	V	alue	Form
Ethane, 1,1,1,2-tetrafluoro-(hfc-134 ) (CAS 811-97-2)	TW.A a	A	10	000 ppm	8 hour
Methyl Nonafluorobutyl ether (CAS 163702-07-6)	TWA	Ą	7!	50 ppm	
Methyl Nonafluoroisobutyl ether (CAS 163702-08-7)	TWA	A	7!	50 ppm	
ogical limit values					
ACGIH Biological Exposu	re Indices				
Components	Value	Determinant	Specimen	Sampling	) Time
Isopropanol (CAS 67-63-0)	40 mg/l	Acetone	Urine	*	
	- · • · ·				

<sup>\* -</sup> For sampling details, please see the source document.

# Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

# Individual protection measures, such as personal protective equipment

**Eye/face protection** Wear safety glasses with side shields (or goggles).

Skin protection

**Hand protection** Wear appropriate chemical resistant gloves.

Other Wear suitable protective clothing.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective

equipment to remove contaminants.

## 9. Physical and chemical properties

**Appearance** 

Physical state Gas. **Form** Aerosol. Color Colorless. Odor Characteristic. Not established Odor threshold Not applicable pН Not established Melting point/freezing point Initial boiling point and boiling 118.4 °F (48 °C)

range

Flash point None (Tag-Closed Cup)
Evaporation rate < 1 (Ethyl Ether = 1)
Flammability (solid, gas) Non flammable gas.

Upper/lower flammability or explosive limits

Flammability limit - lower

Not established

(%)

Flammability limit - upper

Not established

(%)

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 3103 mm Hg @ 20°C

Vapor density > 1

Relative density Not available.

Solubility(ies)

Solubility (water) < 5 % by weight

Partition coefficient < 1

(n-octanol/water)

Auto-ignition temperature> 482 °F (> 250 °C)Decomposition temperatureNot establishedViscosity< 3 cSt @ 25°C</th>

Other information

Explosive propertiesNot explosive.Heat of combustion< 20 kJ/g</th>Oxidizing propertiesNot oxidizing.

Percent volatile 100 %

Specific gravity 1.38 - 1.4 @ 25°C

VOC 45 % per US State & Federal Consumer Product Regulations

#### 10. Stability and reactivity

**Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability

Material is stable under normal conditions.

Possibility of hazardous

Hazardous polymerization does not occur.

reactions

**Conditions to avoid** Heat. Contact with incompatible materials.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition

products

Combustion will generate smoke, possibly thick and choking, resulting in zero visibility and combustion products include hydrogen fluoride, hydrogen chloride, fluorine, chlorine, carbon

monoxide and carbon dioxide.

## 11. Toxicological information

Information on likely routes of exposure

Prolonged inhalation may be harmful. Inhalation

No adverse effects due to skin contact are expected. Skin contact Direct contact with eyes may cause temporary irritation. Eye contact

Expected to be a low ingestion hazard. Ingestion

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

**Acute toxicity** 

Components **Species Test Results** 

1,2-trans-dichloroethylene (CAS 156-60-5)

**Acute** Oral

LD50 Rat 1235 mg/kg

Cyclohexylmethane (CAS 108-87-2)

**Acute Dermal** 

LD50 Rabbit > 2000 mg/kg, 24 Hours

Inhalation

Vapor

Rat LC50 > 6564 ppm, 1 Hours

Isopropanol (CAS 67-63-0)

**Acute** 

**Dermal** 

LD50 Rabbit 16.4 ml/kg, 24 Hours

Oral

LD50 Rat 4.7 g/kg

Prolonged skin contact may cause temporary irritation. Skin corrosion/irritation Serious eye damage/eye Direct contact with eyes may cause temporary irritation.

irritation

Respiratory or skin sensitization

Not a respiratory sensitizer. Respiratory sensitization

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are

mutagenic or genotoxic.

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. Carcinogenicity

**ACGIH Carcinogens** 

Isopropanol (CAS 67-63-0) A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

**US. National Toxicology Program (NTP) Report on Carcinogens** 

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity -

single exposure

Not classified.

Specific target organ toxicity -

Not classified.

repeated exposure Aspiration hazard

Not likely, due to the form of the product.

Material name: LPS® Electro Contact Cleaner 00416 Version #: 01 Issue date: 12-27-2016 **Chronic effects** Prolonged inhalation may be harmful.

Further information None known.

# 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the

possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components Species Test Results

Cyclohexylmethane (CAS 108-87-2)

Aquatic

Fish LC50 Striped bass (Morone saxatilis) 5.8 mg/l, 96 hours

Isopropanol (CAS 67-63-0)

**Aquatic** 

Fish LC50 Bluegill (Lepomis macrochirus) > 1400 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

1,2-trans-dichloroethylene2.06Cyclohexylmethane3.61Ethane, 1,1,1,2-tetrafluoro-(hfc-134a)1.06Isopropanol0.05

Mobility in soil No data available.

Other adverse effects The product contains volatile organic compounds which have a photochemical ozone creation

potential.

#### 13. Disposal considerations

**Disposal instructions**Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of

contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste

disposal company.

D003: Waste Reactive material

Waste from residues / unused

products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see:

Disposal instructions).

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is

emptied. Empty containers should be taken to an approved waste handling site for recycling or

disposal.

#### 14. Transport information

DOT

UN number UN1950

UN proper shipping name Aerosols, non-flammable

Transport hazard class(es)

Class 2.2 Subsidiary risk -Label(s) 2.2

Packing group Not applicable.

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Packaging exceptions 306
Packaging non bulk None
Packaging bulk None

**IATA** 

UN number UN1950

**UN proper shipping name** Aerosols, non-flammable

Transport hazard class(es)

Class 2.2 Subsidiary risk -

Packing group Not applicable.

Environmental hazards No.

ERG Code 10L

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo

aircraft

Allowed with restrictions.

Not applicable.

Cargo aircraft only Allowed with restrictions.

**IMDG** 

UN number UN1950 UN proper shipping name AEROSOLS

Transport hazard class(es)

Class 2.2 Subsidiary risk -

Packing group Not applicable.

**Environmental hazards** 

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and

the IBC Code

DOT



IATA; IMDG



**General information** Ensure compliance with applicable regulations.

## 15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication

Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

1.2-trans-dichloroethylene (CAS 156-60-5) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

## Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No

Delayed Hazard - No Fire Hazard - No Pressure Hazard - Yes Reactivity Hazard - No

# SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous Yes

chemical

SARA 313 (TRI reporting)

Not regulated.

## Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

**Safe Drinking Water Act** 

Not regulated.

(SDWA)

#### FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Isopropanol (CAS 67-63-0)

Low priority

Inventory name

US state regulations WARNING: This product contains a chemical known to the State of California to cause birth

defects or other reproductive harm.

# US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

1,2-trans-dichloroethylene (CAS 156-60-5)

Isopropanol (CAS 67-63-0)

#### International Inventories

Country(s) or region

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Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

**Issue date** 12-27-2016

Version # 01

Material name: LPS® Electro Contact Cleaner 00416 Version #: 01 Issue date: 12-27-2016

Yes

On inventory (yes/no)\*

#### **Disclaimer**

ITW Pro Brands cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. 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.

**Revision information** 

This document has undergone significant changes and should be reviewed in its entirety.