



SAFETY DATA SHEET

1. Identification

Product identifier	LPS® EFX (Aerosol)
Other means of identification	
Part Number	01820, C01820
Recommended use	A solvent degreaser designed to remove or dissolve grease, grime, oil and other oil-based contaminants from a variety of substrates including automotive or miscellaneous metallic parts.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
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 1-703-527-3887
Website	www.lpslabs.com
E-mail	lpssds@itwprobrands.com
Supplier	ITW Permatex Canada 1-35 Brownridge Road Halton Hills, ON, L7G 0C6 Canada

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
	Gases under pressure	Compressed gas
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
Environmental hazards	Not classified.	
Label elements		



Signal word	Danger
Hazard statement	Extremely flammable aerosol. Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness.
Precautionary statement	
Prevention	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Avoid breathing gas. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear eye protection/face protection. Wear protective gloves.
Response	IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER/doctor if you feel unwell. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Store in a well-ventilated place. Do not expose to temperatures exceeding 50°C/122°F.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards	None known.
Supplemental information	None known.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
HEPTANE (N-HEPTANE)		142-82-5	70 - 80
ACETONE		67-64-1	1 - 10
ISOPROPANOL		67-63-0	1 - 10
CARBON DIOXIDE		124-38-9	1 - 5

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Not likely, due to the form of the product. Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	Extremely flammable aerosol. 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. Avoid breathing gas. 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. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Refer to attached safety data sheets and/or instructions for use. Stop leak if you can do so without risk. Isolate area until gas has dispersed. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent entry into waterways, sewer, basements or confined areas. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

Environmental precautions

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

7. Handling and storage

Precautions for safe handling

Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Avoid breathing gas. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. 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).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
ACETONE (CAS 67-64-1)	STEL	500 ppm
	TWA	250 ppm
CARBON DIOXIDE (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm
HEPTANE (N-HEPTANE) (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm
ISOPROPANOL (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
ACETONE (CAS 67-64-1)	STEL	1800 mg/m3
		750 ppm
	TWA	1200 mg/m3
CARBON DIOXIDE (CAS 124-38-9)	STEL	500 ppm
		54000 mg/m3
	TWA	30000 ppm
HEPTANE (N-HEPTANE) (CAS 142-82-5)	STEL	9000 mg/m3
		5000 ppm
	TWA	2050 mg/m3

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
ISOPROPANOL (CAS 67-63-0)	TWA	500 ppm
		1640 mg/m ³
	STEL	400 ppm
		984 mg/m ³
	TWA	400 ppm
		492 mg/m ³
		200 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
ACETONE (CAS 67-64-1)	STEL	500 ppm
	TWA	250 ppm
CARBON DIOXIDE (CAS 124-38-9)	STEL	15000 ppm
	TWA	5000 ppm
HEPTANE (N-HEPTANE) (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm
ISOPROPANOL (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
ACETONE (CAS 67-64-1)	STEL	500 ppm
	TWA	250 ppm
CARBON DIOXIDE (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm
HEPTANE (N-HEPTANE) (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm
ISOPROPANOL (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
ACETONE (CAS 67-64-1)	STEL	750 ppm
	TWA	500 ppm
CARBON DIOXIDE (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm
HEPTANE (N-HEPTANE) (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm
ISOPROPANOL (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
ACETONE (CAS 67-64-1)	STEL	2380 mg/m ³
		1000 ppm
	TWA	1190 mg/m ³
CARBON DIOXIDE (CAS 124-38-9)	STEL	500 ppm
		54000 mg/m ³

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
HEPTANE (N-HEPTANE) (CAS 142-82-5)	TWA	9000 mg/m3
	STEL	5000 ppm
		2050 mg/m3
ISOPROPANOL (CAS 67-63-0)	TWA	500 ppm
	STEL	1640 mg/m3
		400 ppm
	TWA	1230 mg/m3
		500 ppm
	TWA	983 mg/m3
		400 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
ACETONE (CAS 67-64-1)	25 mg/l	Acetone	Urine	*
ISOPROPANOL (CAS 67-63-0)	40 mg/l	Acetone	Urine	*

* - 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. Eye wash facilities and emergency shower must be available when handling this product.

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 appropriate chemical resistant clothing.
- Respiratory protection** If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.
- Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using do not smoke. 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.
- Odor threshold** Not established
- pH** Not applicable
- Melting point/freezing point** Not established
- Initial boiling point and boiling range** 140.9 °F (60.5 °C)
- Flash point** 21.2 °F (-6.0 °C) Tag Closed Cup -- dispensed liquid
- Evaporation rate** 1.6 (water = 1)
- Flammability (solid, gas)** Flammable gas.

Upper/lower flammability or explosive limits

- Flammability limit - lower (%)** 1.5 %

Flammability limit - upper (%)	9 %
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not established
Vapor density	2.8 estimated
Relative density	Not available.
Solubility(ies)	
Solubility (water)	< 10 %
Partition coefficient (n-octanol/water)	> 1
Auto-ignition temperature	582.8 °F (306 °C)
Decomposition temperature	Not established
Viscosity	< 3 cSt @ 25°C
Other information	
Explosive properties	Not explosive.
Heat of combustion	> 30 kJ/g
Oxidizing properties	Not oxidizing.
Percent volatile	100 %
Specific gravity	0.65 - 0.68 @ 20°C
VOC	86.9 % per US State and 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 reactions	Hazardous polymerization does not occur.
Conditions to avoid	Heat. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Isocyanates. Chlorine.
Hazardous decomposition products	Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways.

Components	Species	Test Results
ACETONE (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	> 20 ml/kg, 24 Hours
Inhalation		
<i>Vapor</i>		
LC50	Rat	50.1 mg/l, 4 Hours

Components	Species	Test Results
Oral LD50	Rat	9.1 ml/kg
HEPTANE (N-HEPTANE) (CAS 142-82-5)		
Acute		
Dermal LD50	Rabbit	> 2000 mg/kg, 24 Hours
Inhalation		
<i>Vapor</i>		
LC50	Rat	> 29.29 mg/l, 4 Hours
Oral LD50	Rat	> 5000 mg/kg
ISOPROPANOL (CAS 67-63-0)		
Acute		
Dermal LD50	Rabbit	16.4 ml/kg, 24 Hours
Oral LD50	Rat	4.7 g/kg
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Causes serious eye irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
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.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
ACGIH Carcinogens		
ACETONE (CAS 67-64-1)	A4 Not classifiable as a human carcinogen.	
ISOPROPANOL (CAS 67-63-0)	A4 Not classifiable as a human carcinogen.	
Canada - Manitoba OELs: carcinogenicity		
ACETONE (CAS 67-64-1)	Not classifiable as a human carcinogen.	
ISOPROPANOL (CAS 67-63-0)	Not classifiable as a human carcinogen.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	May cause drowsiness and dizziness.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	May be fatal if swallowed and enters airways.	
Chronic effects	Prolonged inhalation may be harmful.	
Further information	Symptoms may be delayed.	

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
ACETONE (CAS 67-64-1)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia magna)
Fish	LC50	Rainbow trout, donaldson trout (Oncorhynchus mykiss)

Components	Species	Test Results
HEPTANE (N-HEPTANE) (CAS 142-82-5)		
Aquatic		
Fish	LC50	Mozambique tilapia (Tilapia mossambica) 375 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)		
LPS® EFX (Aerosol)		> 1
ACETONE		-0.24
HEPTANE (N-HEPTANE)		4.66
ISOPROPANOL		0.05
Mobility in soil	No data available.	
Other adverse effects	None known.	

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. 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. D001: Waste Flammable material with a flash point <140 F 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. Do not re-use empty containers.

14. Transport information

TDG

UN number	UN1950
UN proper shipping name	AEROSOLS, flammable, MARINE POLLUTANT (LPS® EFX, IPA/ACETONE/n-HEPTANE BLEND)
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
LPS® EFX	
IPA/ACETONE/n-HEPTANE BLEND	

IATA

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	Yes
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.
Cargo aircraft only Allowed with restrictions.

IMDG

UN number UN1950
UN proper shipping name AEROSOLS, MARINE POLLUTANT
Transport hazard class(es)
Class 2.1
Subsidiary risk -
Packing group Not applicable.
Environmental hazards
Marine pollutant Yes
EmS F-D, S-U
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 Not applicable.

IATA; IMDG; TDG



Marine pollutant



General information

IMDG Regulated Marine Pollutant. Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: Ensure that containers are firmly secured. Ensure cylinder valve is closed and not leaking. Ensure valve outlet cap nut or plug (where provided) is correctly fitted. Ensure valve protection device (where provided) is correctly fitted. Ensure adequate ventilation. Ensure compliance with applicable regulations.

15. Regulatory information

Canadian regulations

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

CARBON DIOXIDE (CAS 124-38-9)

Ontario. Toxic Substances. Toxic Reduction Act, 2009. Regulation 455/09 (July 1, 2011)

ACETONE (CAS 67-64-1)

Precursor Control Regulations

ACETONE (CAS 67-64-1)

Class B

International regulations**Stockholm Convention**

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

CARBON DIOXIDE (CAS 124-38-9)

Listed.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
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)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*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**Issue date** 09-19-2016**Version #** 01

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 Product and Company Identification: Product Uses
 Composition / Information on Ingredients: Ingredients
 Physical & Chemical Properties: Multiple Properties
 Transport Information: Material Transportation Information
 Regulatory Information: United States
 HazReg Data: North America
 GHS: Classification