



# MATERIAL SAFETY DATA SHEET

## LPS<sup>®</sup> EM Citro (Aerosol)

Revision Date: April 15, 2011

Supersedes: June 16, 2009

### Section 1 • Product and Company Identification

**Product Name:** LPS<sup>®</sup> EM Citro (Aerosol)

**Part Number(s):** 02820, C02820

**Chemical Name:** Hydrocarbon / surfactant mixture

**Product Use:** A degreaser designed to remove grease, grime, oil and other oil-based contaminants from a variety of substrates.

**Manufacturer Information:** LPS Laboratories, 4647 Hugh Howell Rd., Tucker, GA, USA 30084

**TEL:** USA & Canada: 1 800 241-8334  
Outside USA and Canada: +1 770 243-8800

**FAX:** USA & Canada: 1 800 543-1563  
Outside USA and Canada: +1 770 243-8899

**Emergency Telephone Number:** Chemtrec: USA & Canada: 1 800 424-9300  
Outside USA and Canada: +1 703 527-3887

**Website:** <http://www.lpslabs.com>

#### PLAIN LANGUAGE HAZARD SUMMARY

Material Safety Data Sheets can be confusing. Federal and State laws require us to include a great deal of technical information that probably won't help the non-professional. LPS includes this "PLAIN LANGUAGE HAZARD SUMMARY" to address the questions and concerns of the average worker. If you have additional health, safety or product questions, don't hesitate to call us at 800/241-8334.

#### Worker Toxicity

LPS<sup>®</sup> EM Citro (Aerosol) is designed to remove grease, grime, oil and other oil-based contaminants from a variety of substrates, including automotive and miscellaneous metallic parts. It contains d-limonene and aliphatic hydrocarbons that can be irritating to skin. We suggest you wear gloves and avoid extended exposure to unprotected skin. Don't get it in your eyes (it stings) or breath large amounts of the vapor (it will dry out your nasal passages and if you breathe large amounts in poorly ventilated areas it can make you dizzy and even sick). Don't use LPS<sup>®</sup> EM Citro (Aerosol) for extended periods without adequate ventilation. For more exposure and first aid information, refer to MSDS Sections 2, 8 and 11.

#### Flammability

LPS<sup>®</sup> EM Citro (Aerosol) is a water-based emulsion and has reduced flammability under normal circumstances. However, because the aerosol uses an extremely flammable propellant (much like the propane gas used for a gas grill), you should be aware of what is going on around you. Do not spray a lot of product if welding, grinding, or other ignition sources are present in your immediate vicinity. Do NOT spray onto live electrical equipment.

#### Disposal

LPS<sup>®</sup> EM Citro (Aerosol) normally cannot be spilled. If an aerosol is dropped from several feet or crushed it may discharge its contents. Notify the proper environmental and safety personnel at your company right away. Collect any spilled material and dispose of properly. If an aerosol does not spray and has more than an inch of material inside, it will be considered hazardous waste under U.S. EPA guidelines. See section 13 for more details.



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### Section 2 • Hazards Identification

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*This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).  
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.*

#### Emergency Overview:

**Aerosol:** DANGER: Flammable. Contents under pressure. Harmful or fatal if swallowed.

**Bulk:** Not applicable

**Primary route(s) of entry:** Skin and eye contact. Inhalation.

#### Potential Acute Health Effects:

**Eyes:** Irritating to eyes

**Skin:** Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering. This product contains citrus d-limonene – a skin sensitizing agent.

**Inhalation:** Excessive inhalation of vapors can cause irritation of the respiratory tract, nausea, dizziness or headache.

**Ingestion:** Product has a low order of acute oral toxicity, but ingestion of large quantities may cause nausea, vomiting, and gastrointestinal irritation. May cause injury if aspirated into lungs.

#### Potential Chronic Health Effects:

**Carcinogenic Effects:** NTP: No    IARC: No    OSHA: No    ACGIH: No

**Mutagenic Effects:** None

**Teratogenic Effects:** None

**Target Organs:** None

#### Medical conditions aggravated by exposure:

Persons with pre-existing central nervous system (CNS) disease, neurological conditions, skin disorders, chronic respiratory diseases, or impaired liver or kidney function should avoid exposure.

#### Signs and Symptoms

Stinging in eyes. Repeated or prolonged skin contact can cause redness, irritation, and scaling of the skin (dermatitis). Breathing of high vapor concentrations may cause headaches, stupor, irritation of throat and eyes, and kidney effects.



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### Section 3 • Composition / Information on Ingredients

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Component	CASRN	Weight Percent
Distillates (Petroleum), Hydrotreated Light	64742-47-8	20 – 30%
Propane/Isobutane Blend	68476-85-7	1 – 10%
Dimethyl adipate	627-93-0	1 – 10%
Dimethyl glutarate	1119-40-0	1 – 5%
Dipropylene glycol monobutyl ether	29911-28-2	1 – 5%

*The remaining ingredients are not classified as hazardous per 29 CFR 1910.1200 Subpart Z or are present at concentrations below 1% (0.1% for carcinogens, mutagens, and teratogens).*

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### Section 4 • First Aid Measures

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- Eyes:** Check for and remove contact lenses. If irritation or redness develops, flush eyes with cool, clean, low pressure water for at least 15 minutes. Hold eyelids apart to ensure complete irrigation of the eye and eyelid tissue. Do not use eye ointment. Seek medical attention immediately.
- Skin:** Remove contaminated shoes and clothing. Clean affected area thoroughly with mild soap and water. Do not use ointments. Seek medical attention if irritation persists.
- Inhalation:** Immediately move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). If breathing is difficult, seek medical attention immediately.
- Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. Do not leave victim unattended. Seek medical attention immediately.

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### Section 5 • Fire Fighting Measures

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**Products of Combustion:** Carbon monoxide and carbon dioxide.

**General Fire Hazards:** High heat will cause product to boil, evolving vapor that could cause explosive rupture of closed containers.

**Firefighting media:** SMALL FIRE: Use DRY chemical powder.  
LARGE FIRE: Use CO<sub>2</sub>, water spray, fog or foam. Cool containing vessels with water jet in order to prevent pressure build-up, auto ignition or explosions.

**Sensitivity to Impact:** None

**Sensitivity to Static Discharge:** Yes

**Protection Clothing (Fire):** Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Evacuate area and fight the fire from a maximum distance or use unmanned hose holders or monitor nozzles.

**Special Remarks on Explosion Hazards:** Aerosols may explode upon heating, spread fire and overcome sprinkler systems.

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### Section 6 • Accidental Release Measures

<b>Containment Procedures</b>	<b>Small Spill and Leak:</b>	Eliminate ignition sources. Absorb with an inert material and dispose of properly.
	<b>Large Spill and Leak:</b>	Eliminate ignition sources, secure the area and control access. Dike far ahead of a liquid spill to ensure complete collection. Pick up free liquid for disposal using absorbent pads, sand, or other inert non-combustible absorbent materials. Place into appropriate waste containers for later disposal.
<b>Clean-Up Procedures</b>	Recover free product and place in suitable container for disposal.	
<b>Evacuation Procedures</b>	Ventilate area of leak or spill. Keep unnecessary and unprotected people away.	
<b>Special Procedures</b>	Remove all sources of ignition. Ventilate area. Wear appropriate protective equipment during cleanup.	

### Section 7 • Handling and Storage

**Handling:** DO NOT spray into or around ignition sources. After handling, always wash hands thoroughly with soap and water. Use only with adequate ventilation. Avoid breathing vapors or spray mists.

**Storage:** Keep container in a cool, well-ventilated area. Avoid all sources of ignition (spark or flame). Store between 40°F and 120°F (4.4°C and 49°C).

**Precautions to be taken in handling and storage:** Store aerosols as Level 1 Aerosol (NFPA 30B). Store all materials in a dry, well-ventilated area. Avoid breathing vapors.

### Section 8 • Exposure Controls / Personal Protection

**Exposure Guidelines:**

Component	CASRN	OSHA TWA-PEL	OSHA STEL	ACGIH-TLV	ACGIH-STEEL	NIOSH
Distillates (Petroleum), Hydrotreated Light	64742-47-8	Not established	Not established	100 ppm*	Not established	Not established
Propane/Isobutane Blend	68476-85-7	1000 ppm	Not Established	1000 ppm	Not Established	1000 ppm
Dimethyl adipate	627-93-0	Not Established	Not Established	Not established	Not established	Not established
Dimethyl glutarate	1119-40-0	Not Established	Not Established	Not established	Not established	Not established
Dipropylene glycol monobutyl ether	29911-28-2	Not Established	Not Established	Not established	Not established	Not established

\*Supplier recommendation



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**Engineering Controls:** Provide general and/or local exhaust ventilation to keep exposures below the exposure guidelines listed above.

### Personal protective equipment

**Eye protection:** Safety glasses with side shields conforming to appropriate regulations. Eye wash fountain and emergency shower facilities are recommended.

**Hand protection:** Normally no hand protection is required; however, if product will be sprayed for an extended period, "overspray" onto skin may occur. If so, use chemical resistant gloves conforming to appropriate regulations. Please observe the instructions regarding permeability and breakthrough time that are provided by the supplier of the gloves.

**Respiratory protection:** Typical use of this product under normal conditions does not require the use of respiratory protection. If airborne concentrations are above the applicable exposure limits (listed above), use NIOSH approved respiratory protection (i.e. organic vapor cartridge).

**General Hygiene Considerations:** Wash thoroughly after handling. Have eye-wash facilities immediately available.

### Section 9 • Physical and Chemical Properties

<b>Appearance:</b>	Liquid	<b>Color:</b>	White
<b>Odor:</b>	Mild orange	<b>Evaporation Rate:</b>	1 (Water=1)
<b>Solubility Description:</b>	100% emulsifiable in water	<b>Flash Point:</b>	90.6°C (195°F) – dispensed liquid
<b>Boiling Point:</b>	Not Established	<b>Flash Point Method:</b>	Tag-Closed Cup
<b>Specific Gravity (H<sub>2</sub>O=1):</b>	0.90 – 0.95 @ 20°C – dispensed liquid	<b>Decomposition Temperature:</b>	Not Established
<b>Vapor Density (air=1):</b>	>1	<b>Auto Ignition Temperature</b>	Not Established
<b>Vapor Pressure:</b>	>100 mmHg @ 20°C	<b>Flammable limits (estimated):</b>	LOWER: Not Established UPPER: Not Established
<b>Rule 1171 PPc:</b>	Not Established	<b>Partition Coefficient (octanol/water):</b>	<1
<b>V.O.C. Content:</b>	Aerosol: 9.9%, 92 g/L, 0.77 lb/gal per CARB/OTC/EPA Bulk: Not Applicable	<b>Odor Threshold:</b>	Not Established
<b>Melting Point:</b>	Not Established	<b>Viscosity:</b>	10 - 100 cPs @ 20°C
<b>pH:</b>	5.5 - 6.5	<b>Volatiles:</b>	97%
<b>Heat of combustion:</b>	Aerosol: <20 kJ/g Bulk: Not Applicable		



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### Section 10 • Stability and Reactivity

**Chemical Stability:** Product is stable under recommended storage conditions.

**Conditions to Avoid:** Keep away from ignition sources and extreme temperatures.

**Incompatibility:** Reactive or incompatible with oxidizing agents.

**Hazardous Decomposition:** These products are carbon oxides (CO, CO<sub>2</sub>).

**Hazardous Polymerization:** Will not occur.

### Section 11 • Toxicological Information

#### Acute and Chronic Toxicity

##### A: General Product Information

An acute toxicity study of this product has not been conducted. Information given in this section relates only to individual constituents contained in this preparation.

##### B: Component Analysis

Component	CASRN	LC-50	LD-50
Distillates (Petroleum), Hydrotreated Light	64742-47-8	>6.8 mg/L*	> 5 g/kg / oral / rat*
Propane/Isobutane Blend	68476-85-7	658 mg/L / rat / 4 hr*	Not Appropriate
Dimethyl adipate	627-93-0	Not Established	>5000 mg/kg / oral / rat* >5000 mg/kg / dermal / rabbit*
Dimethyl glutarate	1119-40-0	Not Established	>5000 mg/kg / oral / rat* >5000 mg/kg / dermal / rabbit*
Dipropylene glycol monobutyl ether	29911-28-2	> 2.04 mg/L / rat / 4 hr*	3,700 - 4,400 mg/kg / oral / rat* 5,330 - 6,490 mg/kg / dermal / rabbit*

\*Supplier Data

### Section 12 • Ecological Information

<b>Mobility:</b>	Semi-volatile. Readily absorbed into soil.	<b>Persistence and degradability:</b>	Only slightly biodegradable
<b>Bioaccumulative potential:</b>	Minimal bioaccumulation potential	<b>Other adverse effects:</b>	None known



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Ecological studies have not been conducted for this product. The following information is available for component(s) of this product.

### Ecotoxicity:

Effect on Organisms	Component	CASRN	Test	Species	Results
Acute Toxicity on Fishes	Distillates (Petroleum), Hydrotreated Light	64742-47-8	96-hr LC <sub>50</sub>	Oncorhynchus mykiss	2,900 µg/L
	Dimethyl glutarate	1119-40-0	96-hr LC <sub>50</sub>	Lepomis Macrochirus	30.9 mg/L*
	Dipropylene glycol monobutyl ether	29911-28-2	96-hr LC <sub>50</sub>	Poecilia reticulata	841 mg/L*
Acute Toxicity on Daphnia	Dibasic ester	1119-40-0 & 627-93-0	48-hr LC <sub>50</sub>	Daphnia magna	112 – 150 mg/L*
	Dipropylene glycol monobutyl ether	29911-28-2	LC <sub>50</sub>	Daphnia magna	> 1,000 mg/L*
Bacterial inhibition	No data available				
Growth inhibition of algae					
Bioaccumulation in fish					

\*Supplier Data

### Section 13 • Disposal Considerations

**Waste Status:** Aerosol cans, if depressurized and emptied to less than 1 inch (2.54 cm) of fluid contents, are classified as non-hazardous waste under 40 CFR 261.7 (U.S.). However, if disposed of in its received form, the aerosol carries waste code D001 and D003. (U.S.).

**Disposal:** Waste must be disposed of in accordance with federal, state, provincial and local environmental control regulations.

**Note:** Chemical additions to, processing of, or otherwise altering this material may make this waste management information inaccurate, incomplete, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive than federal laws and regulations.



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### Section 14 • Transport Information

D.O.T. Ground	Shipping Name:	Consumer Commodity	UN no:	NA
	Hazard Class:	ORM-D	Technical Name:	NA
	Subclass:	NA	Hazard Label:	ORM-D Already on box
	Packing group:	NA		
Road/Rail - ADR/RID	UN no:	1950	ADR Class:	2
	Packing group:	NA	Classification code:	5F
	Name and Description:	Aerosols, Flammable	Hazard ID no:	NA
	Labeling:	2.1	Technical Name:	NA
IMDG-IMO	UN no:	1950	Class:	2
	Shipping Name:	AEROSOLS	Subsidiary Risk:	2.1
	Labeling:	2	Packing group:	NA
	Packing Instruction:	P003, LP02	EmS:	F-D, S-U
	Marine pollutant:	No	Technical Name:	NA
IATA-ICAO	UN no:	1950	Class:	2.1
	Shipping Name:	Aerosols, Flammable	Subclass	NA
	Packing instructions:	203, Y203 (Ltd. Qty)	Packing group:	NA
	Labeling:	Flammable Gas	Technical Name:	NA

The preceding information is subject to change and must be verified prior to shipment. It is the responsibility of anyone offering hazardous materials for shipment to ensure compliance with all applicable regulations.

### Section 15 • Regulatory information

#### U.S. Federal Regulations

RCRA Hazardous Waste No.: D001, D003

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA): None

#### Toxic Substances Control Act (TSCA):

All components of this product are TSCA inventory listed and/or are exempt.

#### Superfund Amendments and Reauthorization Act (SARA) Title III

##### SARA Section 311/312 (40 CFR 370) Hazard Categories:

Sudden Release of Pressure, Fire Hazard, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372): No individual section 313 component is present at or above 1%.

Section 112 Hazardous Air Pollutants (HAPs): None



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### State Regulations

**California:** This product does not contain chemical(s) known to the State of California to cause cancer, birth defects or reproductive harm.

**California and OTC States:** This product conforms to consumer regulations

### New Jersey Right to Know:

**Aerosol:** Water 7732-18-5 • Distillates (Petroleum), Hydrotreated Light 64742-47-8 •  
Propane/Isobutane Blend 68476-85-7 • Dimethyl Adipate 627-93-0 • Dimethyl Glutarate 1119-40-0 •

Dipropylene Glycol Monobutyl Ether 29911-28-2

**Bulk:** Not Applicable

### International Regulations

**Canadian Environmental Protection Act:** All of the components of this product are included on the Canadian Domestic Substances list (DSL).

### Canadian Workplace Hazardous Materials Information System (WHMIS):

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

#### WHMIS Classification:

Aerosol: Class A, Class B5, Class D2B



### Other Regulations

Montreal Protocol listed ingredients: None

Stockholm Convention listed ingredients: None

Rotterdam Convention listed ingredients: None

RoHS Compliant: Yes



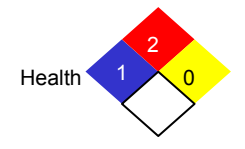
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### Section 16 • Other Information

MSDS# 12820 MSDS Preparation Responsible Name: Clea George Regulatory Affairs Coordinator Telephone: +1 770 243-8800	HMIS 1996	HMIS III	<b>NFPA</b> Flammability  Health      Reactivity Special		
	<b>Health:</b>	1		<b>Health:</b>	[ ] 1
	<b>Flammability:</b>	2		<b>Flammability aerosol:</b>	2
				<b>Flammability bulk:</b>	N/A
	<b>Reactivity:</b>	0		<b>Physical Hazard aerosol:</b>	2
<b>Physical Hazard bulk:</b>			N/A		

**Notice to Reader:**

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Clea L. George, Regulatory Affairs Coordinator  
 LPS Laboratories, A division of Illinois Tool Works