



MATERIAL SAFETY DATA SHEET

LPS[®] EM Citro (Concentrate)

Revision Date: April 15, 2011

Supersedes: March 3, 2008

Section 1 • Product and Company Identification

Product Name: LPS[®] EM Citro (Concentrate)

Part Number(s): 02801, 02805, 02855, C02801, C02805, C02855

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[®] EM Citro (Concentrate) 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[®] EM Citro (Concentrate) for extended periods without adequate ventilation. For more exposure and first aid information, refer to MSDS Sections 2, 8 and 11.

Flammability

LPS[®] EM Citro (Concentrate) is combustible having a flash point above 140°F and an auto ignition temperature over 400°F. Under normal use conditions flammability isn't a concern, but don't apply the product onto red-hot metal surfaces or near sparks.

Disposal

Spent or spilled LPS[®] EM Citro (Concentrate) should not be dumped down a drain. Collect any spilled material and dispose of properly. See section 13 for more details.



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Section 2 • Hazards Identification

*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: Not applicable

Bulk: DANGER: Combustible. Harmful or fatal if swallowed.

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

Component	CASRN	Weight Percent
Distillates (Petroleum), Hydrotreated Light	64742-47-8	65 – 75%
d-limonene	5989-27-5	10 – 20%
Diisopropylbenzene	25321-09-9	10 – 20%
Sodium dioctyl sulfosuccinate	577-11-7	1 – 5%
Dipropylene glycol monobutyl ether	29911-28-2	0 – 3%
Tripropylene glycol monomethyl ether	25498-49-1	0 – 3%

Section 4 • First Aid Measures

- 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.

Section 5 • Fire Fighting Measures

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 CO₂, 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: None

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: None.



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Section 6 • Accidental Release Measures

Containment Procedures	Small Spill and Leak:	Eliminate ignition sources. Absorb with an inert material and dispose of properly.
	Large Spill and Leak:	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.
Clean-Up Procedures	Recover free product and place in suitable container for disposal.	
Evacuation Procedures	Ventilate area of leak or spill. Keep unnecessary and unprotected people away.	
Special Procedures	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 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
d-limonene	5989-27-5	Not Established	Not Established	Not established	Not established	Not established
Diisopropylbenzene	25321-09-9	Not Established	Not Established	Not established	Not established	Not established
Sodium dioctyl sulfosuccinate	577-11-7	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
Tripropylene glycol monomethyl ether	25498-49-1	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

Appearance:	Liquid	Color:	Colorless / water-white
Odor:	Orange	Evaporation Rate:	0.15 (BuAc=1)
Solubility Description:	100% emulsifiable in water	Flash Point:	62°C (144°F)
Boiling Point:	>150°C (302°F)	Flash Point Method:	Tag-Closed Cup
Specific Gravity (H₂O=1):	0.83-0.84 @ 20°C	Decomposition Temperature:	Not Established
Vapor Density (air=1):	4.8	Auto Ignition Temperature	>228°C(442°F)
Vapor Pressure:	<5 mmHg at 20°C	Flammable limits (estimated):	LOWER: 0.7% UPPER: 6.0%
Rule 1171 PPc:	<5 mmHg at 20°C	Partition Coefficient (octanol/water):	<1
V.O.C. Content:	Aerosol: Not Applicable Bulk: 22%, 180 g/L, 1.5 lb/gal per CARB/OTC/EPA; 2.9%, 24.5 g/L, 0.20 lb/gal per SCAQMD (1:32 water dilution)	Odor Threshold:	Not Established
Melting Point:	Not Established	Viscosity:	<3 cSt @ 25°C
pH:	Not Applicable	Volatiles:	97%
Heat of combustion:	Aerosol: Not Applicable Bulk: <20 kJ/g		



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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, CO₂).

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*
d-limonene	5989-27-5	Not established	4400 mg/kg / oral / rat >5000 mg/kg / dermal / rabbit
Diisopropylbenzene	25321-09-9	>2.1 mg/L / rat / 6 hr	3900 mg/kg / oral / rat >3160 mg/kg / dermal / rabbit
Sodium dioctyl sulfosuccinate	577-11-7	>20 mg/L / rat / 4 hr*	3.1 g/kg / oral / rat* >10 g/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*
Tripropylene glycol monomethyl ether	25498-49-1	Not established	3200 mg/kg / oral / rat*

*Supplier Data

Section 12 • Ecological Information

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

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



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Ecotoxicity:

Effect on Organisms	Component	CASRN	Test	Species	Results
Acute Toxicity on Fishes	Distillates (Petroleum), Hydrotreated Light	64742-47-8	96-hr LC ₅₀	Oncorhynchus mykiss	2,900 µg/L
	d-limonene	5989-27-5	4-day LC ₅₀	Oncorhynchus mykiss	35,000 µg/L
			96-hr EC ₅₀	Pimephales promelas	1,490,000 µg/L
	Diisopropylbenzene	25321-09-9	Toxicity results are above the water solubility limit for this substance.		
	Sodium dioctyl sulfosuccinate	577-11-7	96-hr LC ₅₀	Oncorhynchus mykiss	24,000 µg/L
	Dipropylene glycol monobutyl ether	29911-28-2	96-hr LC ₅₀	Poecilia reticulata	841 mg/L*
	Tripropylene glycol monomethyl ether	25498-49-1	96-hr LC ₅₀	Fish (unidentified species)	11,619 mg/L*
Acute Toxicity on Daphnia	Dipropylene glycol monobutyl ether	29911-28-2	LC ₅₀	Daphnia magna	> 1,000 mg/L*
	Tripropylene glycol monomethyl ether	25498-49-1	48-hr EC ₅₀	Daphnia magna	>10 mg/L*
Bacterial inhibition	No data available				
Growth inhibition of algae					
Bioaccumulation in fish					

*Supplier Data

Section 13 • Disposal Considerations

Waste Status: In its purchased form, this material does not meet the definition of a RCRA hazardous waste (40 CFR 261).

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.

Section 14 • Transport Information

This product is not regulated by any mode of transportation.

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.



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Section 15 • Regulatory information

U.S. Federal Regulations

RCRA Hazardous Waste No.: None

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:

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

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: Not Applicable

Bulk: Distillates (Petroleum), Hydrotreated Light 64742-47-8 • d-limonene 5989-27-5 • Diisopropylbenzene 25321-09-9 • Sodium Dioctyl Sulfosuccinate 577-11-7 • Dipropylene Glycol Monobutyl Ether 29911-28-2 • Tripropylene Glycol Monomethyl Ether 25498-49-1



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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:

Bulk: Class B3, Class D2B



Other Regulations

Montreal Protocol listed ingredients: None
 Stockholm Convention listed ingredients: None
 Rotterdam Convention listed ingredients: None
 RoHS Compliant: Yes

Section 16 • Other Information

MSDS# 12801 MSDS Preparation Responsible Name: Clea George Regulatory Affairs Coordinator Telephone: +1 770 243-8800	HMIS 1996		HMIS III		NFPA Flammability Health Reactivity Special
	Health:	1	Health:	[1] 1	
	Flammability:	2	Flammability aerosol:	N/A	
			Flammability bulk:	2	
	Reactivity:	0	Physical Hazard aerosol:	N/A	
		Physical Hazard bulk:	0		

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