



MATERIAL SAFETY DATA SHEET

LPS HDX II Heavy-Duty Degreaser

Revision 6

Revision Date 7/25/08

Supersedes: 5/19/08

Section 1 • Product and Company Identification

Product Name:	LPS HDX II Heavy-Duty Degreaser
Part Number:	03020,03001,03005,03055, C03020,C03001,C03005,C03055
Chemical Name:	Petroleum Hydrocarbons
Product Use:	A spray degreaser designed for removing heavy residues from metal and other hard surfaces where reduced flammability, toxicity and environmental impact are concerns.
Manufacturer Information:	LPS Laboratories, 4647 Hugh Howell Rd., Tucker, GA, USA 30084
TEL:	1 770-243-8800
Emergency Telephone Number:	1-800-424-9300 Chemtrec; Outside U.S.: (703) 527-3887
FAX:	1 770-243-8899
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 HDX II HEAVY DUTY DEGREASER is an industrial chemical. It is a high strength cleaning solvent designed to remove oils, resins, grease and grime. It contains petroleum distillates and special "coating solvents" that can be irritating to skin. Avoid extended exposure to unprotected skin. If the product soaks clothing (and even shoes), remove the affected clothing and launder it before wearing it again. THROW AWAY SOAKED SHOES! Don't get the solvent in your eyes (it stings), or breath the vapor (especially if working on hot surfaces or with heated tanks). Vapors from heated LPS HDX II HEAVY DUTY DEGREASER can make you dizzy and even sick. For more exposure and first aid information, refer to MSDS Sections 2, 3, 8 and 11.

Flammability

LPS HDX II HEAVY DUTY DEGREASER is combustible having a flash point above 170°F and an auto ignition temperature over 375° 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

If you spill LPS HDX II HEAVY DUTY DEGREASER, notify the proper environmental or safety department at your company right away. If LPS HDX II HEAVY DUTY DEGREASER becomes contaminated with another substance and is rendered unusable for cleaning, the resulting mixture will fall under at least one hazardous classification. See section 13 for more details.

Notice to LPS customers

Due to phase-out of the Exxate® line of alkyl acetate solvents by Exxon/Mobil, we reformulated our product in 2004, LPS HDX II HEAVY DUTY DEGREASER effective August 18, 2004 (date stamp "4231"). The new formulation was evaluated by an independent aerospace materials testing facility and continues to conform to the Douglas CSD#1 and Boeing D6-17487P specifications. In addition, LPS HDX II HEAVY DUTY DEGREASER is now "V.O.C. compliant" for all cleaning and degreasing applications throughout the United States. This document is the Safety Data Sheet for the current formulation. If there is a need for a safety data sheet for the formulation dated before August 18, 2004 (date stamp "4231"), please contact us.



MATERIAL SAFETY DATA SHEET

LPS HDX II Heavy-Duty Degreaser

Revision 6

Revision Date 7/25/08

Supercedes: 5/19/08

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: DANGER: Flammable Aerosol. Aerosol contents under pressure. Harmful or Fatal if Swallowed.

Emergency Overview Bulk: CAUTION: Combustible liquid. Harmful or fatal if swallowed.

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

Potential Acute Health Effects:

Eyes: Irritating to eyes

Skin: Repeated exposure may cause skin dryness or cracking.

Inhalation: High vapor concentrations may cause headaches, stupor, irritation of throat and eyes, and kidney effects. Aspiration into lungs may cause pneumonia or death.

Ingestion: If swallowed, call a physician immediately. ONLY induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Potential Chronic Health Effects:

Carcinogenic Effects: NTP: No OSHA: No ACGIH: No

Mutagenic Effects: None

Teratogenic Effects: None

Target Organs: None

Medical conditions aggravated by exposure: None known at this time.

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.

Section 3 • Composition /Information on Ingredients

INGREDIENT NAME	CASRN	Weight Percent
Aliphatic Hydrocarbon	64742-47-8	60 – 70%
Dipropylene glycol methyl ether acetate	88917-22-0	10 – 20%
Dipropylene glycol mono butyl ether	29911-28-2	10 – 20%
Carbon Dioxide Propellant (Aerosol only)	124-38-9	1 - 5 %



MATERIAL SAFETY DATA SHEET

LPS HDX II Heavy-Duty Degreaser

Revision 6

Revision Date 7/25/08

Supercedes: 5/19/08

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

Flash point: TCC CLOSED CUP: 79.4° to 81°C (174.9°F to 177°F) bulk liquid

Flammable limits: LOWER: 0.6% UPPER: 20.4% **Auto ignition Temperature:** ≥ 194°C (381°F)

Products of Combustion: Carbon monoxide and carbon dioxide.

Firefighting media: SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use 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: Intense heat created by fire will cause aerosols to burst.

Section 6 • Accidental Release Measures

Containment Procedures

Small Spill and Leak:

Eliminate all ignition sources. Absorb with an inert material and dispose of properly.

Large Spill and Leak:

Ventilate area by opening windows and doors. Eliminate all ignition sources. Block the path of any flowing material using soil, gravel, or other readily available material. Absorb with dry earth, sand or other non-combustible material and dispose of properly.

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.



MATERIAL SAFETY DATA SHEET

LPS HDX II Heavy-Duty Degreaser

Revision 6

Revision Date 7/25/08

Supersedes: 5/19/08

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. Avoid contact with eyes, skin, and clothing.

Storage: Keep container in a cool, well-ventilated area. Avoid all sources of ignition (spark or flame). Store below 120°F.

Precautions to be taken in handling and storage: Store all materials in dry, well-ventilated area. Avoid breathing vapors. Ground and bond containers before transferring materials.

Section 8 • Exposure Controls / Personal Protection

Exposure Guidelines:

Component	CASRN	OSHA TWA-PEL	OSHA STEL	ACGIH TLV	ACGIH STEL	OTHER LIMITS
Aliphatic Hydrocarbon	64742-47-8	500 ppm	Not Established	100 ppm	Not Established	100 ppm*
Dipropylene glycol methyl ether acetate	88917-22-0	100 ppm	Not Established	Not Established	Not Established	Not Established
Dipropylene glycol mono butyl ether	29911-28-2	Not Established	Not Established	Not Established	Not Established	10mg/m ³ aerosol*
Carbon Dioxide	124-38-9	5000 ppm	Not Established	5000 pm	30000 ppm	5000 CANADA TWA

*Note: Exposure guidelines provided by supplier.

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits.

Personal Protection:

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

Respiratory: Typical use of this product under normal conditions does not require the use of respiratory protection. If extended spraying of product will be made under poor ventilation, use appropriate organic vapor filtering respirators.

Hands: Normally no hand protection is required; however, if product will be sprayed for an extended period, "overspray" onto skin may occur. If so, use nitrile gloves conforming to appropriate regulations. Please observe the instructions regarding permeability and breakthrough time that are provided by the supplier of the gloves. Take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion and the contact time.

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



MATERIAL SAFETY DATA SHEET

LPS HDX II Heavy-Duty Degreaser

Revision 6

Revision Date 7/25/08

Supersedes: 5/19/08

Section 9 • Physical and Chemical Properties

Appearance:	Liquid.	Color:	Clear, water-white
Odour/Taste:	Characteristic.	Vapor Pressure:	<0.5mmHg @ 20 °C
Solubility Description:	Not soluble in water.	Evaporation Rate:	<0.1(BuAc=1)
Boiling Point (°C):	195 @ 101 kPa	Flash Point (°C):	70°C (minimum)
Specific Gravity (Water=1):	0.84-0.86 @ 20 °C	Flash Point Method:	Tag-Closed Cup.
Vapor Density (air=1):	6.1	Auto Ignition Temperature (°C):	>194°C
V.O.C. Content:	0 g/L (per C.A.R.B. / O.T.C. definitions)	Partition Coefficient (octanol/water):	>1
	850 g/L per EPA method 24 /AQMD Rule 102	Viscosity:	<3 mm ² /second @ 25°C
Flammable limits (estimated):	LOWER: 0.6% UPPER: 20.4%	Odor threshold	Not Determined
pH:	Not applicable	Volatiles:	100% (at 100 °C/1 hr.)
Melting Point	<-50°C	Decomposition Temperature	Not Determined

Section 10 • Stability and Reactivity

Chemical Stability:	Product is stable under recommended storage conditions.
Conditions to Avoid:	Keep away from heat and ignition sources.
Incompatibility:	Reactive or incompatible with oxidizing agents.
Hazardous Decomposition:	Combustion will generate smoke, possibly thick and choking, resulting in zero visibility and combustion products include carbon monoxide and carbon dioxide.
Hazardous Polymerization:	Will not occur.



MATERIAL SAFETY DATA SHEET

LPS HDX II Heavy-Duty Degreaser

Revision 6

Revision Date 7/25/08

Supersedes: 5/19/08

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

Ingredients	CASRN	LC-50	LD-50	Carcinogenicity (IARC, NTP, OSHA)	Neurotoxicity	Reproductive Toxicity
Aliphatic Hydrocarbon	64742-47-8	>6.8 mg/L (Supplier Data)	>5 g/kg (Supplier Data)	Not listed.	No Data Available	No Data Available
Dipropylene glycol methyl ether acetate	88917-22-0	Not Established	>5 g/kg	Not listed.	No Data Available	No Data Available
Dipropylene glycol mono butyl ether	29911-28-2	>2.04 mg/L /4 hrs./rat	>3 g/kg	Not listed.	No Data Available	No Data Available
Carbon Dioxide	124-38-9	Not established	Not established	Not listed.	No Data Available	No Data Available

Section 12 • Ecological Information

Mobility: Semi-volatile. Readily absorbed into soil. **Persistence and degradability:** Only slightly biodegradable.

Bioaccumulative potential: No bioaccumulation potential **Other adverse effects:** None known.

Ecotoxicity:

Effect on Organisms	Component	CASRN	Test	Species	Results
Acute Toxicity on Fishes	Aliphatic Hydrocarbon	64742-47-8	LC ₅₀	Oncorhynchus mykiss	3200 ug/L
Acute Toxicity on Daphnia					No Data Available
Bacterial inhibition					
Growth inhibition of algae					
Bioaccumulation in fish					



MATERIAL SAFETY DATA SHEET

LPS HDX II Heavy-Duty Degreaser

Revision 6

Revision Date 7/25/08

Supersedes: 5/19/08

Section 13 • Disposal Considerations

Waste Status: **Aerosol product:** If depressurized and emptied to less than 2.5 cm of fluid contents are classified as non-hazardous waste under 40 CFR 261.7 (U.S.). If disposed of in its received form, this item carries waste code D003. (U.S.)

Bulk product: If discarded in its purchased form, this product is not a RCRA hazardous waste. Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations, and mixtures may change the classification.

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

Aerosol

D.O.T. Ground	Shipping Name:	Consumer Commodity	UN Number:	NA
	Hazard Class:	ORM-D	Technical Name:	NA
	Subclass:	NA	Hazard Label:	ORM-D
Road/Rail - ADR/RID :	UN no:	1950	ADR Class:	2
	Classification code:	5F	Shipping name:	AEROSOLS, flammable
	Labelling:	2.1	Packing Group:	NA
IMDG-IMO	UN no:	1950	Class:	2
	Shipping Name:	AEROSOLS	Packing Group:	NA
	EmS:	F-D, S-U	Packing Instructions:	P003
IATA-ICAO:	UN no:	1950	Class:	2.1
	Proper Shipping Name:	Aerosols, flammable	Labeling:	Flammable Gas
	Packing Group:	NA	Technical Name:	NA

Bulk

The bulk versions of this product are not regulated under any mode of transportation.



MATERIAL SAFETY DATA SHEET

LPS HDX II Heavy-Duty Degreaser

Revision 6

Revision Date 7/25/08

Supersedes: 5/19/08

Section 15 – Regulatory Information

U.S. Federal Regulations

RCRA Hazardous Waste No.: D003 (Aerosol only)

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA): This product contains no Reportable Quantity (RQ) Substances.

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 (aerosols only), Fire Hazard, Immediate (Acute) Health Hazard

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372): None

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.

New Jersey Right to Know:

Aerosol: Aliphatic Hydrocarbon 64742-47-8 • Dipropylene glycol methyl ether acetate 88917-22-0 • Dipropylene glycol mono butyl ether 29911-28-2 • Carbon Dioxide 124-38-9

Bulk: Aliphatic Hydrocarbon 64742-47-8 • Dipropylene glycol methyl ether acetate 88917-22-0 • Dipropylene glycol mono butyl ether 29911-28-2

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



Bulk: Class B3, Class D2B





MATERIAL SAFETY DATA SHEET

LPS HDX II Heavy-Duty Degreaser

Revision 6

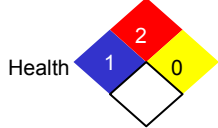
Revision Date 7/25/08

Supersedes: 5/19/08

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#13020 Responsible Name: Clea Johnson Regulatory Affairs Coordinator	HMIS 1996		HMIS III		NFPA Flammability  Health Reactivity
	Health:	1	Health:	[/]1	
	Flammability:	2	Flammability:	3	
	Reactivity:	0	Physical Hazard aerosol:	2	
			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 Johnson, Regulatory Affairs Coordinator
 LPS Laboratories
 A division of Illinois Tool Works