



# MATERIAL SAFETY DATA SHEET

## LPS HDX Heavy-Duty Degreaser

### Section 1 • Product and Company Identification

**Manufacturer's Name:** LPS Laboratories

**Chemical Family:** Chlorinated Hydrocarbon  
(trichloroethylene)

**Trade Name:** LPS HDX HEAVY-DUTY DEGREASER

**Telephone Number:** 770-243-8800

**Part Numbers:** 01020, 01001, 01005, 01055

**Emergency Telephone Number:**  
1-800-424-9300 Chemtrec;  
Outside U.S.: (703) 527-3887

**Address:**

4647 Hugh Howell Road  
Tucker, GA USA 30085-5052

**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 HEAVY-DUTY DEGREASER is a fast drying industrial cleaning solvent designed to remove soil and other contaminants from metal surfaces during production and maintenance operations. It contains trichloroethylene, which can be irritating to skin at a minimum and if handled improperly can be dangerous. 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 spray LPS HDX HEAVY-DUTY DEGREASER for extended periods without adequate ventilation. If you're going to perform work involving a lot of product in a poorly ventilated area, use of a respirator or even a self-contained breathing apparatus if necessary. For more exposure and first aid information, refer to MSDS Sections 2, 8 and 11.

#### Flammability

LPS HDX HEAVY-DUTY DEGREASER has no flash point and can be used safely around live electrical systems and other ignition sources without any flammability issues, but if it is sprayed directly onto red-hot surfaces or into intense flames, it can be forced to burn. LPS HDX HEAVY-DUTY DEGREASER that is forced to burn in such a manner will produce a highly irritating and potentially dangerous smoke.

#### Disposal

If you spill LPS HDX HEAVY-DUTY DEGREASER, notify the proper environmental or safety department at your company right away. LPS HDX HEAVY-DUTY DEGREASER "as sold" is a chlorinated solvent waste under EPA definitions and has waste codes D003 (aerosol only), D040, and U228. Always dispose of spent material properly. See section 13 for more details.



# MATERIAL SAFETY DATA SHEET

## LPS HDX Heavy-Duty Degreaser

---

### Section 2 • Hazards Identification

---

From a worker safety standpoint, this material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Emergency Overview:** DANGER. Harmful if inhaled. Aerosol contents under pressure. Harmful or Fatal if Swallowed.

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

#### Potential Acute Health Effects:

**Eyes** Liquid in eyes produces pain and irritation with mild temporary damage possible. Vapor can irritate eyes.

**Skin** Prolonged or repeated contact of liquid can cause skin irritation, defatting of skin, and dermatitis. Absorption of liquid through intact skin is possible, causing systemic poisoning, but this is an unlikely route of significant toxic exposure.

**Inhalation:** Inhalation is the major potential route of exposure. Exposure to high concentrations of vapor or mist can cause central nervous system depression with symptoms of nausea, headache, dizziness, stupor, or loss of consciousness or death depending on concentration and duration of exposure. Exposure to high concentrations can cause irregular heartbeat, cardiac arrest and death. Overexposure has been shown to cause adverse effects on the liver, kidney, nervous system and other internal organs.

**Ingestion:** Single dose toxicity is low to moderate. If vomiting occurs, trichloroethylene can be aspirated into the lungs, which can cause chemical pneumonia and systemic effects. Ingestion can cause adverse health effects as described in the inhalation section above.

#### Potential Chronic Health Effects:

**Carcinogenic Effects:** NTP: Suspect Carcinogen; IARC: Group 2A; OSHA: No

**Mutagenic Effects:** Very slight.

**Teratogenic Effects:** None

**Medical conditions aggravated by exposure:** Alcoholism, acute and chronic kidney or liver disease, rhythm disorders of the heart, and neuritis and other disorders of the nervous system. Exposure can result in cardiac sensitization and increase the risk of cardiac arrest.

**Interactions with other chemicals which enhance toxicity:** Consumption of alcoholic beverages may increase potential for development of toxic effects resulting from exposure to this product.

#### 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

---

Component	CASRN	Percent by Weight
Trichloroethylene	79-01-6	95 – 98%
Carbon dioxide	124-38-9	2-5%



# MATERIAL SAFETY DATA SHEET

## LPS HDX Heavy-Duty Degreaser

---

### Section 4 • First Aid Measures

---

- Eyes:** Check for and remove contact lenses. 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 rinse with water for at least 15 minutes. 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.
- Notes to Physician:** Chlorinated hydrocarbons may sensitize the heart to epinephrine and other circulating catecholamines so that arrhythmias may occur. Careful consideration of this potential adverse effect should precede administration of epinephrine or other cardiac stimulants and the selection of bronchodilators.

---

### Section 5 • Fire Fighting Measures

---

- Flash point:** CLOSED CUP: None. (Tagliabue.)      **Autoignition Temperature:** >420°C (788°F)
- Flammable limits:** LOWER: 8.0% UPPER: 10.5%      **Special Remarks on Explosion Hazards:** None.
- Products of Combustion:** Carbon monoxide, carbon dioxide, hydrogen chloride, phosgene, chlorine.
- 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, autoignition 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.

---

### Section 6 • Accidental Release Measures

---

**Small Spill and Leak:** This product is a hermetically sealed pressurized aerosol unit and accidental spillage is unlikely. If the can is ruptured, allow contents to discharge while removing all ignition sources from the area and ensuring maximum ventilation. Absorb with an inert material and dispose of properly. For transportation accidents, call CHEMTREC at 800-424-9300.

**Large Spill and Leak:** For large spills, 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 absorbent materials. Place into appropriate waste containers for later disposal.



# MATERIAL SAFETY DATA SHEET

## LPS HDX Heavy-Duty Degreaser

### Section 7 • Handling and Storage

**Handling:** Avoid contact with skin and avoid breathing vapors. Do not eat, drink, or smoke in work area. Wash hands prior to eating, drinking, or using restroom. Any clothing or shoes that become contaminated with trichloroethylene, should be removed immediately and thoroughly laundered before wearing again. Follow protective controls set forth in Section 8 when handling this product. Do not use in poorly ventilated or confined spaces. Vapors are heavier than air and will collect in low areas. Do not enter confined spaces such as tanks or pits without following proper entry procedures as required by 29 CFR 1910.146.

**Precautions to be taken in handling and storage:** Store all materials in a cool, dry, well-ventilated area. Store below 120°F. Avoid breathing vapors.

### Section 8 • Exposure Controls / Personal Protection

Ingredients	CASRN	OSHA PEL-TWA	OSHA STEL	ACGIH-TLV	ACGIH – STEL
Trichloroethylene	79-01-6	100 ppm	200 ppm	50 ppm	100 ppm
Carbon Dioxide (aerosol only)	124-38-9	5,000 ppm	Not available	5,000 ppm	30,000 ppm

**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:** Splashproof goggles.

**Respiratory :** Use appropriate respirator if ventilation is inadequate.

**Hands:** Use solvent resistant gloves (such as Viton®, Silver Shield® and Polyvinyl alcohol)

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

### Section 9 • Physical and Chemical Properties

**Physical State and Appearance:** Clear liquid

**Vapor pressure:** 58 mmHg(at 20°C)

**Color:** Colorless

**Vapor density:** 4.5 (Air=1)

**Odor:** mildly sweet

**Volatility:** 100% (v/v)

**Boiling/Condensation point:** 188°F (86.7°C)

**Evaporation rate:** 0.1 (N-butylacetate = 1)

**Specific gravity:** 1.45 (Water=1)

**VOC\*:** 100%, 1450g/L, 12.1 #/gal. Per CARB / EPA

*\*for concentrate – propellant is non-VOC*

**Odor Threshold:** Not available.

**Solubility in water:** 0.1 gm/100 gm at 25°C.



# MATERIAL SAFETY DATA SHEET

## LPS HDX Heavy-Duty Degreaser

---

### Section 10 • Stability and Reactivity

---

**Stability and Reactivity:** The product is stable.

**Incompatibility with Various Substances:** Avoid contact with open flame and other hot surfaces that can cause thermal decomposition. Avoid strong alkalis, oxidizers, barium, lithium, magnesium and titanium.

**Hazardous decomposition products:** These products are carbon oxides (CO, CO<sub>2</sub>), hydrogen chloride and traces of phosgene.

**Hazardous polymerization:** Will not occur.

---

### Section 11 • Toxicological Information

---

#### Acute and Chronic Toxicity

##### Inhalation

200 ppm causes mild eye irritation. 400 ppm causes slight eye irritation and minimal light-headedness after 3 hours. 1,000 to 1,200 ppm after 6 minutes causes eye and nasal irritation, light-headedness and dizziness. 2,000 ppm cannot generally be tolerated, is irritating to the eyes and respiratory tract and causes drowsiness, dizziness and nausea within 5 minutes. Ventricular arrhythmias and very rapid respiration have been observed in individuals exposed to 15,000 ppm. High concentrations or prolonged overexposure can cause unconsciousness and death.

##### Chronic Toxicity

Chronic overexposure to trichloroethylene has caused toxic effects in the liver, lymphatic system (one species), kidney, and cardiovascular system of experimental animals. The finding of chronic toxic effects in laboratory animals may indicate toxicity to humans. Humans exposed to trichloroethylene can become intolerant to ethyl alcohol, with small quantities causing inebriation and skin blotches. Reports have been published associating increased incidences of systemic sclerosis with exposures of trichloroethylene. Overexposure should be avoided, failure to do so could result in illness, injury or even death depending on the level and duration of exposure.

##### Carcinogenicity

The International Agency for Research on Cancer (IARC) has concluded that with respect to trichloroethylene, there is sufficient evidence of carcinogenicity to experimental animals and limited evidence of carcinogenicity to humans, resulting in a classification in Group 2A as a substance probably carcinogenic to humans. NTP has classified trichloroethylene as reasonably anticipated to be a human carcinogen. The ACGIH has classified trichloroethylene in category A5 as an agent not suspect as a human carcinogen.

##### Mutagenicity

Some studies measuring DNA damage (strand breaks, unscheduled DNA synthesis, in-vitro and in-vivo micronucleus and chromosomal aberrations) have been positive.

##### Reproductive Toxicity

Trichloroethylene has been found to delay normal development of rats but this delay did not affect later life. Trichloroethylene exposure has not been shown to cause birth defects in experimental animals.



# MATERIAL SAFETY DATA SHEET

## LPS HDX Heavy-Duty Degreaser

Ingredients	CASRN	LC-50	LD-50
Trichloroethylene	79-01-6	8450 ppm/4 hrs/mouse	>2000 mg/kg rabbit
Carbon Dioxide (aerosol only)	124-38-9	Not available	Not appropriate

### Section 12 • Ecological Information

Component	Test	Species	Results
Trichloroethylene (79-01-6)	96-hour LC <sub>50</sub>	Sheepshead Minnow	52 mg/l
	96-hour LC <sub>50</sub>	Mysid Shrimp	14 mg/l
	96-hour EC <sub>50</sub>	Marine Alga	95 mg/l

### Section 13 • Disposal Considerations

**Waste Status:** This product, as sold in bulk, has the RCRA characteristic of toxicity and if discarded would have the hazardous waste code D040. TCE is a listed waste carrying waste code U228. Full aerosols carry waste code D003 because they can explode when heated.

**Disposal:** Contaminated sand, sawdust, vermiculite, soil or porous surface must be disposed of in a permitted hazardous waste management facility. Recovered liquids may be reprocessed or incinerated or must be treated in a permitted hazardous waste management facility. Waste material must be disposed of in accordance with federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

### Section 14 • Transport Information

Aerosols Only

Mode	Shipping Name	Hazard Class	Subclass	UN Number	Technical Name	Hazard Label	Packing Group	Emergency Response Guide
<b>D.O.T. Ground</b>	Consumer Commodity	ORM-D	NA	1950	NA	ORM-D	NA	NA
<b>IATA (US)</b>	Aerosols, non-flammable, toxic, containing substances in division 6.1, Packing Group III	2.2	6.1	1950	NA	Non-flammable Gas & Toxic	NA	NA
<b>IATA (non-US)</b>	Aerosols, non-flammable, toxic, containing substances in division 6.1, Packing Group III	2.2	6.1	1950	NA	Non-flammable Gas & Toxic	NA	NA
<b>IMDG (Regular)</b>	AEROSOL	2.2	NA	1950	NA	Non-flammable Gas	NA	NA
<b>IMDG (Special)</b>	Dangerous Goods in Limited quantities of Class 2	NA	NA	1950	NA	NA	NA	EMS: 2-13



# MATERIAL SAFETY DATA SHEET

## LPS HDX Heavy-Duty Degreaser

Bulk

Mode	Shipping Name	Hazard Class	Subclass	UN Number	Technical Name	Hazard Label	Packing Group	Emergency Response Guide
D.O.T. Ground	Trichloroethylene	6.1	NA	1710	NA	6.1	III	NA
IATA (US)	Trichloroethylene	6.1	NA	1710	NA	Toxic	III	NA
IATA (non-US)	Trichloroethylene	6.1	NA	1710	NA	Toxic	III	NA
IMDG (Regular)	Trichloroethylene	6.1	NA	1710	NA	Toxic	III	NA
IMDG (Special)	Trichloroethylene	NA	NA	1710	NA	NA	NA	EMS: <u>6.2-02</u>

### Section 15 • Regulatory information

U.S. Federal Regulations: **TSCA 8(b) inventory:** All of the ingredients are listed on the TSCA inventory or are exempt.

**RCRA Hazardous Waste No.:** D003 (aerosol only), D040, U228

**CERCLA Sections 102a/103 Hazardous Substances (40 CFR part 302) Reportable Quantity:** 100lbs.

**SARA TITLE III Sections 311/312 hazardous Categorization (40 CFR part 370):** HEALTH: Immediate Health, Delayed Health

**SARA TITLE III Section 313:** Trichloroethylene CASRN# 79-01-4

State Regulations: **New Jersey RTK:** Trichloroethylene (CASRN# 79-01-4), Carbon Dioxide (CASRN# 124-38-9)  
Butylene Oxide (CASRN# 106-88-7)

**California Proposition 65:** Trichloroethylene is listed under Proposition 65 as a chemical known to the State of California to cause cancer.

**California and OTC States:** This product does not conform to consumer regulations – not for retail sale.

### Section 16 • Other Information

MSDS# 11020 Responsible Name: Ed Williams <p style="text-align: right;"><b>Technical Manager</b></p>	<p style="text-align: center;"><b>HMIS-III</b></p> Health: [*] 2 Flammability: 1 Physical Hazard: 2 (aerosol) 0 (other)	<p style="text-align: center;"><b>NFPA</b></p> <p style="text-align: center;">flammability</p> <div style="text-align: center;"> </div> <p style="text-align: center;">health      reactivity</p>
--	--	---

**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.

Ed Williams, Technical Manager  
 PT Technologies  
 A division of Illinois Tool Works

Form #2602