



MATERIAL SAFETY DATA SHEET

LPS[®] KB88

the Ultimate Penetrant

Revision 3

Revision Date: 11/1/2009

Supersedes: 3/23/2006

Section 1 • Product and Company Identification

Product Name: KB88 – the Ultimate Penetrant

Part Number: 02316, 02322, 02301, 02305, 02355, C02316, C02322, C02301, C02305, C02355

Chemical Name: Petroleum Distillates

Product Use: A high performance penetrant designed to loosen metal parts.

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 will not 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, do not hesitate to call us at 770-243-8800.

Worker Toxicity

LPS KB 88 – The Ultimate Penetrant is a high performance penetrant designed to loosen metal parts that have bonded together due to rusting, oxidation, or other causes. It contains solvents that can be irritating to skin. Avoid extended exposure to unprotected skin. Don't get it in your eyes (it stings), or breath the vapor (if working on hot surfaces or heated tanks). Vapors from heated LPS KB 88 can make you dizzy and even sick. For more exposure and first aid information, refer to MSDS Sections 2, 8 and 11.

Flammability

LPS KB 88 – The Ultimate Penetrant 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

LPS KB 88 – The Ultimate Penetrant in non-aerosol form is not hazardous for disposal; however, if it becomes contaminated with another substance, the resulting mixture may fall under a hazardous classification. 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:** DANGER: FLAMMABLE. Contents under pressure.
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: Repeated exposure may cause skin dryness or cracking.

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

Mutagenic Effects: None

Teratogenic Effects: 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.

Section 3 • Composition / Information on Ingredients

Component	CASRN	Weight Percent
Solvent Naphtha	64742-94-5	25 – 35 %
Aliphatic Hydrocarbon	64742-47-8	15 – 25 %
Dipropylene Glycol Methyl Ether Acetate	88917-22-0	15 – 25 %
Dipropylene Glycol Mono Butyl Ether	29911-28-2	5 – 15%
Distillates Petroleum, Hydrotreated Middle	64742-46-7	5- 15 %
Carbon Dioxide (aerosol only)	124-38-9	1 – 4 %



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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. Rinse affected area thoroughly with water. Do not use ointments. Seek medical attention if irritation persists.
- Inhalation:** Not a likely route of exposure. Immediately move victim to fresh air. If breathing is difficult, seek medical attention immediately.
- Ingestion:** If ingested, induce vomiting, and contact a physician. 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: Do not use on energized metal equipment.

Firefighting media: Use CO₂, DRY chemical powder, 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.

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

Section 6 • Accidental Release Measures

- Containment Procedures** Contain and recover spilled liquid when possible.
- Clean-Up Procedures**
- Small Spill and Leak:** Absorb with an inert material and dispose of properly.
- Large Spill and Leak:** 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.
- 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. Be aware of spilled material on walking surfaces – this product is slippery.



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Section 7 • Handling and Storage

Handling: DO NOT spray into or around ignition sources. Do not allow material to come into contact with eyes or skin. Wear appropriate protective equipment during handling. Keep container closed. Do not breathe vapors or mists. Use only with adequate ventilation. Wash thoroughly after handling.

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 aerosols as Level 3 Aerosol (NFPA 30B). Store all materials in 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 REL
Solvent Naphtha	64742-94-5	Not Established	Not Established	Not Established	Not Established	100 mg/m ³ 17 ppm Supplier Recommendation
Aliphatic Hydrocarbon	64742-47-8	100 ppm* 525 mg/m ³ *	Not Established	Not Established	Not Established	Not Established
Distillates Petroleum, Hydrotreated Middle	64742-46-7	5 mg/m ³	Not Established	5mg/m ³	Not Established	Not Established
Dipropylene Glycol Mono Butyl Ether	29911-28-2	10 mg/m ³ *	Not Established	Not Established	Not Established	Not Established
Dipropylene Glycol Methyl Ether Acetate	88917-22-0	100 ppm	Not Established	Not Established	Not Established	Not Established
Carbon Dioxide (Aerosol only)	124-38-9	5000 ppm	30000 ppm	5000 ppm	30000 ppm	5000 ppm TWA 30000 ppm STEL

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

Personal Protection:

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 (i.e., nitrile, neoprene, PVC) 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.



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Section 9 • Physical and Chemical Properties

Appearance:	Liquid.	Color:	Clear red
Odor/Taste:	Characteristic	Evaporation Rate:	<0.1 (BuAc=1)
Solubility:	Not Soluble	Flash Point:	>65.5°C (150°F)
Boiling Point:	100°C (212 °F) at 760mmHg	Flash Point Method:	Tag-Closed Cup.
Specific Gravity (Water=1):	0.86-0.88 at 20 °C	Auto Ignition Temperature:	>228°C(442°F)
Vapor Density (air=1):	>1	Partition Coefficient (octanol/water):	<1
Flammable limits (estimated):	LOWER: 0.6% UPPER: 7.0%	VOC Content:	Aerosol:41.8%, 363 g/L, 3.0 #/gal Bulk: 43.0%, 373 g/L, 3.1 #/gal per CARB/OTC/EPA Regulations
Viscosity:	<3.8 cSt at 40°C	pH:	Not Applicable

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.

Section 11 • Toxicological Information

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
Solvent Naphtha	64742-94-5	>590 mg/m ³ /4H/rat	>2 mL/kg/rabbit
Aliphatic Hydrocarbon	64742-47-8	>6.8 mg/L *	>5000 mg/kg*
Distillates Petroleum, Hydrotreated Middle	64742-46-7	Not established	Not established
Dipropylene Glycol Mono Butyl Ether	29911-28-2	>2.04 mg/L aerosol rat*	3700 mg/kg female-4400mg/kg male/oral/rat* 5330 mg/kg female- 6490 mg/kg male/dermal/rabbit*



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Dipropylene Glycol Methyl Ether Acetate	88917-22-0	Not Established	>5000 mg/kg oral/ rat*
Carbon Dioxide	124-38-9	Not established	Not Applicable

* Supplier Data

Section 12 • Ecological Information

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

Bioaccumulative potential: Low bioaccumulation potential **Other adverse effects:** None known.

Ecotoxicology:

Effect on Organisms	Component	CASRN	Test	Species	Results
Acute Toxicity on Fishes*	Dipropylene Glycol Mono Butyl Ether	29911-28-2	96-hr LC ₅₀	Poecilia reticulata	841 mg/L
	Aliphatic Hydrocarbon	64742-47-8	96-hr LC ₅₀	Oncorhynchus mykiss	3200 ug/L
Acute Toxicity on Daphnia*	Dipropylene Glycol Mono Butyl Ether	29911-28-2	LC ₅₀	Daphnia	>1000 mg/L
Bacterial inhibition*	No Data Available				
Growth inhibition of algae					
Bioaccumulation in fish					

* Supplier Data

For the 64742-47-8 component, no toxicity has been observed in water due to extremely low water solubility. If material is spilled on soil, some potential toxic effects could occur before biodegradation could remove material.

If spilled, the 64742-46-7 constituent may kill grasses and small plants by interfering with transpiration. Spilled material may coat gill structures of fish resulting in suffocation if spilled in shallow, running water. This product may be toxic to amphibians by preventing dermal respiration. This product may also cause gastrointestinal distress to birds and mammals through ingestion. Biodegradation of this product is possible within 90 to 120 days in aerobic environments at temperatures above 21 °C.



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Section 13 • Disposal Considerations

Waste Status: Aerosol products, 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.)

Disposal: Waste must be disposed of in accordance with national, regional 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 Already on box
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		
<u>IMDG-IMO</u>	UN no:	1950	Class:	2.1
	Shipping Name:	AEROSOLS	Subsidiary Risk:	2.1
	Packing Instructions:	P003, LP02	Packing group:	NA
	Marine pollutant:	NO	EmS:	F-D, S-U
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		

Bulk versions of this product are not regulated by any mode of transportation.



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Section 15 • Regulatory information

U.S. Federal Regulations

RCRA Hazardous Waste No.: D003 (aerosol only)

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 (aerosols only), 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

New Jersey RTK:

Aerosol: Solvent Naphtha 64742-94-5 • Aliphatic Hydrocarbon 64742-47-8 • Dipropylene Glycol Methyl Ether Acetate 88917-22-0 • Dipropylene Glycol Monobutyl Ether 29911-28-2 • Distillates Petroleum, Hydrotreated Middle 64742-46-7 • Carbon Dioxide 124-38-9

Bulk: Solvent Naphtha 64742-94-5 • Aliphatic Hydrocarbon 64742-47-8 • Dipropylene Glycol Methyl Ether Acetate 88917-22-0 • Dipropylene Glycol Monobutyl Ether 29911-28-2 • Distillates Petroleum, Hydrotreated Middle 64742-46-7 •

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.

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



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.



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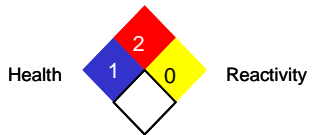
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Section 16 • Other Information

MSDS# 12316 Responsible Name: Clea Johnson Regulatory Affairs Coordinator	HMIS 1996		HMIS III		NFPA Flammability 
	Health:	1	Health:	[/]1	
	Flammability:	2	Flammability:	4	
	Reactivity	0	Physical Hazard: aerosol	2	
		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.