



MATERIAL SAFETY DATA SHEET

165-072

1. Product and Company Identification

Product identifier LPS® KB88 (Aerosol)
Version # 01
Issue date 08-19-2014
CAS # Mixture
Part Number 02316, C02316
Product use A high performance penetrant designed to loosen metal parts.
Manufacturer information LPS Laboratories, a division of Illinois Tool Works
4647 Hugh Howell Rd
Tucker, Georgia 30084
United States
www.lpslabs.com
1-800-241-8334/ 770-243-8800
Chemtrec 1-800-424-9300
Supplier Not available.

2. Hazards Identification

Emergency overview DANGER
Flammable aerosol. Contents under pressure. Pressurized container may explode when exposed to heat or flame. Will be easily ignited by heat, spark or flames.
HARMFUL OR FATAL IF SWALLOWED.
Irritating to eyes and skin. Vapors may cause drowsiness and dizziness.
Potential health effects
Routes of exposure Inhalation. Ingestion. Skin contact. Eye contact.
Eyes Avoid contact with eyes. Contact with eyes may cause irritation.
Skin Avoid contact with the skin. Causes skin irritation.
Inhalation Avoid breathing dust/fume/gas/mist/vapors/spray. Prolonged inhalation may be harmful.
Ingestion Do not ingest. Harmful: may cause lung damage if swallowed.
Signs and symptoms Skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Direct contact with eyes may cause temporary irritation. Exposed individuals may experience eye tearing, redness, and discomfort. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea.
Potential environmental effects Ecological injuries are not known or expected under normal use.

3. Composition / Information on Ingredients

Hazardous components	CAS #	Percent
CARBON DIOXIDE	124-38-9	1 - 5
Non-hazardous components	CAS #	Percent
Distillates Petroleum, Hydrotreated Light	64742-47-8	30 - 40
SOLVENT NAPHTHA (PETROLEUM), HEAVY AROM.	64742-94-5	20 - 30

4. First Aid Measures

First aid procedures
Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.
Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. For breathing difficulties, oxygen may be necessary. Call a physician if symptoms develop or persist.

Ingestion	Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Notes to physician	Provide general supportive measures and treat symptomatically.
General advice	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Call a POISON CENTER or doctor/physician if you feel unwell.
5. Fire Fighting Measures	
Flammable properties	Flammable by WHMIS criteria. Heat may cause the containers to explode. Ruptured cylinders may rocket. Vapors may travel considerable distance to a source of ignition and flash back.
Extinguishing media	
Suitable extinguishing media	Powder. Alcohol resistant foam. Water. Water spray. Dry chemicals. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Protection of firefighters	
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame.
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus. Structural firefighters protective clothing will only provide limited protection.
Fire fighting equipment/instructions	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. In the event of fire, cool tanks with water spray. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Some of these materials, if spilled, may evaporate leaving a flammable residue.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.
Explosion data	
Sensitivity to static discharge	Yes
Sensitivity to mechanical impact	None known.
Hazardous combustion products	May include oxides of carbon.

6. Accidental Release Measures

Personal precautions	Consider initial downwind evacuation for at least 500 meters (1/3 mile). Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. For personal protection, see section 8 of the MSDS.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
Methods for containment	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Use water spray to reduce vapors or divert vapor cloud drift. Prevent entry into waterways, sewer, basements or confined areas.
Methods for cleaning up	Should not be released into the environment. Following product recovery, flush area with water. Scrub the area with detergent and water. Never return spills to original containers for re-use. Clean up in accordance with all applicable regulations. For waste disposal, see section 13 of the MSDS.
Other information	Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling	Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get this material in contact with eyes. Do not get this material in contact with skin. Avoid prolonged or repeated contact with skin. Avoid prolonged exposure. Do not get this material on clothing. Do not use in areas without adequate ventilation. Wear positive pressure self-contained breathing apparatus (SCBA). Wear personal protective equipment. Wash thoroughly after handling. Avoid release to the environment.
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Storage

Contents under pressure. The pressure in sealed containers can increase under the influence of heat. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Store in a closed container away from incompatible materials. Store in a well-ventilated place. Keep container dry. Store away from incompatible materials (see Section 10 of the MSDS). Keep out of the reach of children. Keep in an area equipped with sprinklers.

8. Exposure Controls / Personal Protection**Occupational exposure limits****ACGIH****Components****Type****Value****Form**

Distillates Petroleum,
Hydrotreated Light (CAS
64742-47-8)

TWA

5 mg/m3

Oil mist

US. ACGIH Threshold Limit Values**Components****Type****Value**

CARBON DIOXIDE (CAS
124-38-9)

STEL

30000 ppm

TWA

5000 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)**Components****Type****Value**

CARBON DIOXIDE (CAS
124-38-9)

STEL

54000 mg/m3

TWA

30000 ppm

9000 mg/m3

5000 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)**Components****Type****Value****Form**

CARBON DIOXIDE (CAS
124-38-9)

STEL

15000 ppm

TWA

5000 ppm

Distillates Petroleum,
Hydrotreated Light (CAS
64742-47-8)

TWA

200 mg/m3

Non-aerosol.

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)**Components****Type****Value**

CARBON DIOXIDE (CAS
124-38-9)

STEL

30000 ppm

TWA

5000 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)**Components****Type****Value**

CARBON DIOXIDE (CAS
124-38-9)

STEL

30000 ppm

TWA

5000 ppm

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)**Components****Type****Value**

CARBON DIOXIDE (CAS
124-38-9)

STEL

54000 mg/m3

TWA

30000 ppm

9000 mg/m3

5000 ppm

U.S. - OSHA**Components****Type****Value****Form**

Distillates Petroleum,
Hydrotreated Light (CAS
64742-47-8)

PEL

5 mg/m3

Oil mist

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
CARBON DIOXIDE (CAS 124-38-9)	PEL	9000 mg/m ³
		5000 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Canada - British Columbia OELs: Skin designation

Distillates Petroleum, Hydrotreated Light (CAS 64742-47-8)

Can be absorbed through the skin.

Engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Avoid contact with the skin. Wear appropriate chemical resistant clothing.

Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

9. Physical & Chemical Properties

Appearance

Liquid.

Physical state

Gas.

Form

Aerosol.

Color

Clear Red

Odor

Hydrocarbon-like.

Odor threshold

Not available.

pH

Not applicable

Vapor pressure

< 1 mm Hg @ 20°C (est.)

Vapor density

> 1

Boiling point

Not available.

Melting point/Freezing point

Not available.

Solubility (water)

Not soluble

Specific gravity

0.88 @23°C

Relative density

Not available.

Flash point

159.8 °F (71.0 °C) Tag Closed Cup

Flammability limits in air, upper, % by volume

11.7 %

Flammability limits in air, lower, % by volume

0.6 %

Auto-ignition temperature

> 420 °F (> 215.56 °C)

VOC

24 % per U.S. State and Federal Consumer Product Regulations

Evaporation rate

< 0.1 BuAc

Viscosity

Low viscosity comparable to water (water = 1cST @ 20°C)

Percent volatile

92 %

Partition coefficient (n-octanol/water)

Not available

Other data

Density

7.30 lb/gal

Flammability (solid, gas)

Flammable gas

Heat of combustion

> 30 kJ/g

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Not available.
Hazardous decomposition products	Carbon oxides.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
Distillates Petroleum, Hydrotreated Light (CAS 64742-47-8)		
<i>Acute</i>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Cat	> 6.4 mg/l
	Rat	> 0.1 mg/l
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg
SOLVENT NAPHTHA (PETROLEUM), HEAVY AROM. (CAS 64742-94-5)		
<i>Acute</i>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
	Rat	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Cat	> 6.4 mg/l
	Rat	> 2.7 mg/m3
		> 1.86 mg/l
<i>Oral</i>		
LD100	Rat	5000 mg/kg
LD50	Rat	> 2000 mg/kg
Acute effects	May be fatal if swallowed and enters airways. Narcotic effects.	
Sensitization	Not classified.	
Local effects	Irritating to eyes. Irritating to skin. May cause sensitization by skin contact. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.	
Chronic effects	Prolonged inhalation may be harmful.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/irritation	Direct contact with eyes may cause temporary irritation.	
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Reproductive effects	This product is not expected to cause reproductive or developmental effects.	
Teratogenicity	Not available.	
Symptoms and target organs	Skin irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Direct contact with eyes may cause temporary irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Narcosis. Behavioral changes. Decrease in motor functions.	
Synergistic materials	Not available.	

12. Ecological Information

Ecotoxicological data

Components	Species	Test Results
Distillates Petroleum, Hydrotreated Light (CAS 64742-47-8)		
Aquatic		
Fish	LC50 Rainbow trout, donaldson trout (Oncorhynchus mykiss)	2.9 mg/l, 96 hours
Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.	
Environmental effects	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.	
Aquatic toxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.	
Persistence and degradability	Not inherently biodegradable.	
Mobility in environmental media	The product is immiscible with water and will spread on the water surface.	
Other adverse effects	None known.	

13. Disposal Considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

TDG

UN number	UN1950
UN proper shipping name	AEROSOLS, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	No
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

IATA

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	No
ERG Code	10L
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.
Other information	

Passenger and cargo aircraft Allowed.

Cargo aircraft only Allowed.

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS, Flammable
Transport hazard class(es)	
Class	2.1

Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No
EmS	F-D, S-U
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

IATA; IMDG; TDG



15. Regulatory Information

Canadian regulations	This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
WHMIS status	Controlled
WHMIS classification	A - Compressed Gas B5 - Flammable Aerosols D2B - Other Toxic Effects-TOXIC

WHMIS labeling



International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other Information

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Prepared by

Not available.