



SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture	LPS® LST (Aerosol)
Registration number	-
Synonyms	None.
Part Number	01916, M01916
Issue date	18-July-2014
Version number	02
Revision date	22-September-2015
Supersedes date	13-October-2014

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	An industrial penetrant designed to penetrate rust and loosen seized bolts and other equipment damaged by corrosion.
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Supplier	Alsco Ltd
Company name	Unit 13 Hillmead Industrial Estate
Address	Marshall Road Swindon, Wiltshire United Kingdom SN5 5FZ
Telephone	+44 1793 733 900
In Case of Emergency	+001 703-527-3887
Manufacturer	
Company name	ITW Pro Brands
Address	4647 Hugh Howell Rd., Tucker, GA 30084 (U.S.A.)
Website	http://www.lpslabs.com
e-mail	lpssds@itwprobrands.com

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Directive 67/548/EEC or 1999/45/EC as amended

Classification F+;R12, Xn;R65

The full text for all R-phrases is displayed in section 16.

Classification according to Regulation (EC) No 1272/2008 as amended

Physical hazards

Aerosols	Category 1	H222 - Extremely flammable aerosol. H229 - Pressurized container: May burst if heated.
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Health hazards

Aspiration hazard	Category 1	H304 - May be fatal if swallowed and enters airways.
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Hazard summary

Physical hazards	Extremely flammable.
Health hazards	Harmful: may cause lung damage if swallowed. Occupational exposure to the substance or mixture may cause adverse health effects.
Environmental hazards	Not classified for hazards to the environment.

Specific hazards Extremely flammable. Harmful: may cause lung damage if swallowed. May be irritating to eyes. Do not breathe dust/fume/gas/mist/vapors/spray.

Main symptoms Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Skin irritation. May cause redness and pain.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Carbon dioxide, Distillates Petroleum Hydrotreated Med, Distillates Petroleum, Hydrotreated Light

Hazard pictograms



Signal word Danger

Hazard statements

H222 Extremely flammable aerosol.
 H229 Pressurized container: May burst if heated.
 H304 May be fatal if swallowed and enters airways.

Precautionary statements

Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P211 Do not spray on an open flame or other ignition source.
 P251 Pressurised container: Do not pierce or burn, even after use.

Response

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
 P331 Do NOT induce vomiting.

Storage

P405 Store locked up.
 P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information None.

2.3. Other hazards None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Distillates Petroleum, Hydrotreated Light	80 - 90	64742-47-8 265-149-8	-	649-422-00-2	
Classification:		DSD: Xn;R65			
		CLP: Asp. Tox. 1;H304, Skin Irrit. 2;H315, STOT SE 3;H336			
Distillates Petroleum Hydrotreated Med	1 - 10	64742-46-7 265-148-2	-	649-221-00-X	Note N
Classification:		DSD: Carc. Cat. 2;R45			N
		CLP: Asp. Tox. 1;H304, Acute Tox. 4;H332, Carc. 1B;H350, Aquatic Chronic 2;H411			N
Carbon dioxide	1 - 5	124-38-9 204-696-9	-	-	#
Classification:		DSD: -			
		CLP: -			

List of abbreviations and symbols that may be used above

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

M: M-factor

vPvB: very persistent and very bioaccumulative substance.

PBT: persistent, bioaccumulative and toxic substance.

#: This substance has been assigned Community workplace exposure limit(s).

Composition comments The full text for all R- and H-phrases is displayed in section 16.

SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Call a POISON CENTRE or doctor/physician if you feel unwell.

4.1. Description of first aid measures

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.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

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.

Ingestion Call a physician or poison control centre 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.

4.2. Most important symptoms and effects, both acute and delayed Dermatitis. Rash. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Skin irritation. May cause redness and pain.

4.3. Indication of any immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards Extremely flammable aerosol.

5.1. 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.

5.2. Special hazards arising from the substance or mixture Contents under pressure. Pressurised container may explode when exposed to heat or flame.

5.3. Advice for firefighters

Special protective equipment for firefighters Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Special fire fighting procedures Move containers from fire area if you can do so without risk. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. In the event of fire and/or explosion do not breathe fumes.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.

For emergency responders Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Use water spray to reduce vapours or divert vapour cloud drift. Scoop up used absorbent into drums or other appropriate container. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

6.4. Reference to other sections

Use personal protection recommended in Section 8 of the SDS. For waste disposal, see section 13.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Pressurised container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Avoid prolonged or repeated contact with skin. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Keep out of the reach of children.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational exposure limits****Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001**

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	Ceiling	18000 mg/m ³
	MAK	10000 ppm 9000 mg/m ³ 5000 ppm

Belgium. Exposure Limit Values.

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	STEL	54784 mg/m ³
	TWA	30000 ppm 9131 mg/m ³ 5000 ppm

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m ³
		5000 ppm

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	MAC	9000 mg/m ³
		5000 ppm

Czech Republic. OELs. Government Decree 361

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	Ceiling	45000 mg/m ³
	TWA	9000 mg/m ³

Denmark. Exposure Limit Values

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TLV	9000 mg/m ³
		5000 ppm

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m ³

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

Components	Type	Value
		5000 ppm

Finland. Workplace Exposure Limits

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9100 mg/m ³
		5000 ppm

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	VME	9000 mg/m ³
		5000 ppm

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Type	Value	Form
Carbon dioxide (CAS 124-38-9)	TWA	9100 mg/m ³	
Distillates Petroleum, Hydrotreated Light (CAS 64742-47-8)	TWA	5000 ppm 140 mg/m ³	Vapor and aerosol.
		20 ppm	Vapor and aerosol.

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	AGW	9100 mg/m ³
		5000 ppm

Greece. OELs (Decree No. 90/1999, as amended)

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	STEL	54000 mg/m ³
	TWA	5000 ppm 9000 mg/m ³ 5000 ppm

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m ³

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m ³
		5000 ppm

Ireland. Occupational Exposure Limits

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	STEL	27000 mg/m ³
	TWA	15000 ppm 9000 mg/m ³ 5000 ppm

Italy. Occupational Exposure Limits

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m ³
		5000 ppm

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m ³
		5000 ppm

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m ³
		5000 ppm

Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m ³
		5000 ppm

Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m ³
		5000 ppm

Netherlands. OELs (binding)

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m ³

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TLV	9000 mg/m ³
		5000 ppm

Poland. MACs. Regulation regarding maximum permissible concentrations and intensities of harmful factors in the work environment, Annex 1

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	STEL	27000 mg/m ³
	TWA	9000 mg/m ³

Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m ³
		5000 ppm

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m ³
		5000 ppm

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m ³
		5000 ppm

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m ³
		5000 ppm

Spain. Occupational Exposure Limits

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9150 mg/m ³
		5000 ppm

Sweden. Occupational Exposure Limit Values

Components	Type	Value	
Carbon dioxide (CAS 124-38-9)	STEL	18000 mg/m ³	
		TWA	10000 ppm
			9000 mg/m ³
		5000 ppm	

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m ³
		5000 ppm

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value	
Carbon dioxide (CAS 124-38-9)	STEL	27400 mg/m ³	
		TWA	15000 ppm
			9150 mg/m ³
		5000 ppm	

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m ³
		5000 ppm

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

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no-effect level (DNEL) Not available.

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate 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. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

General information Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

- Hand protection Chemical resistant gloves are recommended.

- Other Wear suitable protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Not applicable.

Hygiene measures	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
Environmental exposure controls	Contain spills and prevent releases and observe national regulations on emissions. Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Physical state	Gas.
Form	Aerosol
Colour	Clear
Odour	Vanilla
Odour threshold	Not available.
pH	Not applicable
Melting point/freezing point	Not established
Initial boiling point and boiling range	195 °C (383 °F)
Flash point	79,0 °C (174,2 °F) Tag closed cup
Evaporation rate	< 0,7 BuAc
Flammability (solid, gas)	Flammable gas.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapour pressure	< 0,1 mm Hg @ 20°C
Vapour density	4,7
Relative density	Not available.
Solubility(ies)	
Solubility (water)	< 0,1 %
Solubility (other)	Not available.
Partition coefficient (n-octanol/water)	> 1
Auto-ignition temperature	Not established
Decomposition temperature	Not established
Viscosity	Not established
Explosive properties	Not available.
Oxidising properties	Not available.
9.2. Other information	
Heat of combustion	> 30 kJ/g
Percent volatile	96 - 99 %
Specific gravity	0,79 - 0,81 @ 20°C
VOC (Weight %)	0 % per US State and Federal Consumer Product Regulations

SECTION 10: Stability and reactivity

10.1. Reactivity	Strong oxidising agents.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
10.5. Incompatible materials	Strong oxidising agents.
10.6. Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information	Occupational exposure to the substance or mixture may cause adverse effects.
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Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Harmful if swallowed. May be fatal if swallowed and enters airways.
Symptoms	Irritating to eyes, respiratory system and skin. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Exposure may cause temporary irritation, redness, or discomfort.

11.1. Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

Components	Species	Test results
Distillates Petroleum Hydrotreated Med (CAS 64742-46-7)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
Inhalation		
LC50	Rat	7640 mg/m ³ , 4 Hours
<i>Aerosol</i>		
LC50	Rat	1,72 mg/l, 4 Hours
Oral		
LD50	Rat	> 5000 mg/kg
Distillates Petroleum, Hydrotreated Light (CAS 64742-47-8)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg > 2000 mg/kg, 24 Hours
Inhalation		
<i>Aerosol</i>		
LC50	Cat	> 6,4 mg/l, 6 Hours
	Rat	> 7,5 mg/l, 6 Hours > 4,3 mg/l, 4 Hours
<i>Vapour</i>		
LC50	Rat	> 0,1 mg/l, 8 Hours
Oral		
LD50	Rat	> 5000 mg/kg
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.	
Respiratory sensitisation	Not a respiratory sensitizer.	
Skin sensitisation	This product is not expected to cause skin sensitisation.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
Reproductive toxicity	Based on available data, the classification criteria are not met.	
Specific target organ toxicity - single exposure	Based on available data, the classification criteria are not met.	
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.	
Aspiration hazard	May be fatal if swallowed and enters airways.	
Mixture versus substance information	No information available.	
Other information	Not available.	

SECTION 12: Ecological information

12.1. Toxicity Ecological injuries are not known or expected under normal use.

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
12.2. Persistence and degradability	Not inherently biodegradable.	
12.3. Bioaccumulative potential	Not available.	
Partition coefficient n-octanol/water (log Kow)		
LPS® LST (Aerosol)	> 1	
Bioconcentration factor (BCF)	Not available.	
12.4. Mobility in soil	Readily absorbed into soil.	
12.5. Results of PBT and vPvB assessment	Not a PBT or vPvB substance or mixture.	
12.6. Other adverse effects	None known.	

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	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. Do not re-use empty containers.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number	UN1950
14.2. UN proper shipping name	Aerosols, flammable
14.3. Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Hazard No. (ADR)	Not available.
Tunnel restriction code	D
14.4. Packing group	Not applicable.
14.5. Environmental hazards	No
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

RID

14.1. UN number	UN1950
14.2. UN proper shipping name	Aerosols, flammable
14.3. Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
14.4. Packing group	Not applicable.
14.5. Environmental hazards	No
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

ADN

14.1. UN number	UN1950
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14.2. UN proper shipping name Aerosols, [flammable]
14.3. Transport hazard class(es)
Class 2.1
Subsidiary risk -
Label(s) 2.1
14.4. Packing group Not applicable.
14.5. Environmental hazards No
14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA

14.1. UN number UN1950
14.2. UN proper shipping name Aerosols, flammable
14.3. Transport hazard class(es)
Class 2.1
Subsidiary risk -
14.4. Packing group Not applicable.
14.5. Environmental hazards No
ERG Code 10L
14.6. Special precautions for user Not available.
Other information
Passenger and cargo aircraft Allowed.
Cargo aircraft only Allowed.

IMDG

14.1. UN number UN1950
14.2. UN proper shipping name AEROSOLS
14.3. Transport hazard class(es)
Class 2
Subsidiary risk -
14.4. Packing group Not applicable.
14.5. Environmental hazards
Marine pollutant No
EmS F-D, S-U
14.6. Special precautions for user Not available.
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

ADN; ADR; IATA; IMDG; RID



SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended
Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended
Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended
Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended
Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended
Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended
Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended
Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA
Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended
Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended
Distillates Petroleum Hydrotreated Med (CAS 64742-46-7)

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended

Distillates Petroleum Hydrotreated Med (CAS 64742-46-7)

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding, as amended

Distillates Petroleum Hydrotreated Med (CAS 64742-46-7)

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances
Not listed.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended

Distillates Petroleum Hydrotreated Med (CAS 64742-46-7)

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

Directive 94/33/EC on the protection of young people at work, as amended

Distillates Petroleum Hydrotreated Med (CAS 64742-46-7)

Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006. Pregnant women should not work with the product, if there is the least risk of exposure.

National regulations

Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work. Follow national regulation for work with chemical agents.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

Not available.

References

Not available.

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any statements or R-phrases and H-statements under Sections 2 to 15

R12 Extremely flammable.
R45 May cause cancer.
R65 Harmful: may cause lung damage if swallowed.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H350 May cause cancer.
H411 Toxic to aquatic life with long lasting effects.

Revision information

Composition / Information on Ingredients: Disclosure Overrides
SECTION 3: Composition/information on ingredients: Component information
GHS: Classification

Training information

Follow training instructions when handling this material.

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.



SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture LPS® LST
Registration number -
Synonyms None.
Part Number 01905, 01955, M19025, M19205
Issue date 02-July-2014
Version number 01

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses An industrial penetrant designed to penetrate rust and loosen seized bolts and other equipment damaged by corrosion.
Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

Supplier Geocel Limited
Company name Western Wood Way, Langage Science Park, Plympton,
Address Plymouth, PL7 5BG
United Kingdom
Telephone +44 (0)1752 202060 / +44 (0)1752 334384
In Case of Emergency +001 703-527-3887
Manufacturer
Company name LPS Laboratories, a division of Illinois Tool Works, Inc.
Address 4647 Hugh Howell Rd., Tucker, GA 30084 (U.S.A.)
Website <http://www.lpslabs.com>
e-mail sds@lpslabs.com

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Directive 67/548/EEC or 1999/45/EC as amended

Classification Xn;R65, R66

The full text for all R-phrases is displayed in section 16.

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards
Aspiration hazard Category 1 H304 - May be fatal if swallowed and enters airways.

Hazard summary

Physical hazards Not classified for physical hazards.
Health hazards Harmful: may cause lung damage if swallowed. Repeated exposure may cause skin dryness or cracking. Occupational exposure to the substance or mixture may cause adverse health effects.
Environmental hazards Not classified for hazards to the environment.
Specific hazards Combustible. Harmful: may cause lung damage if swallowed. May be irritating to eyes. Do not breathe dust/fume/gas/mist/vapors/spray.
Main symptoms Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Skin irritation. May cause redness and pain.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Distillates Petroleum, Hydroreated Light

Hazard pictograms



Signal word	Danger
Hazard statements	
H304	May be fatal if swallowed and enters airways.
Precautionary statements	
Prevention	Not available.
Response	
P301 + P310 P331	IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician. Do NOT induce vomiting.
Storage	
P405	Store locked up.
Disposal	
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
Supplemental label information	None.
2.3. Other hazards	None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Distillates Petroleum, Hydrotreated Light	90 - 100	64742-47-8 265-149-8	-	649-422-00-2	
Classification:	DSD: Xn;R65				
	CLP: Asp. Tox. 1;H304, Skin Irrit. 2;H315, STOT SE 3;H336, Aquatic Chronic 2;H411				
Distillates Petroleum Hydrotreated Heavy	< 0,3	64742-54-7 265-157-1	-	649-467-00-8	
Classification:	DSD: -				L
	CLP: Carc. 1B;H350				L

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

M: M-factor

vPvB: very persistent and very bioaccumulative substance.

PBT: persistent, bioaccumulative and toxic substance.

#: This substance has been assigned Community workplace exposure limit(s).

Composition comments The full text for all R- and H-phrases is displayed in section 16.

SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Call a POISON CENTRE or doctor/physician if you feel unwell.

4.1. Description of first aid measures

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.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
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.
Ingestion	Call a physician or poison control centre 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.

4.2. Most important symptoms and effects, both acute and delayed Dermatitis. Rash. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Skin irritation. May cause redness and pain.

4.3. Indication of any immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards No unusual fire or explosion hazards noted.

5.1. Extinguishing media	
Suitable extinguishing media	Alcohol resistant foam. Water spray. Water fog. Dry chemical powder. Dry chemicals. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
5.2. Special hazards arising from the substance or mixture	During fire, gases hazardous to health may be formed.
5.3. Advice for firefighters	
Special protective equipment for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Special fire fighting procedures	Cool containers exposed to heat with water spray and remove container, if no risk is involved.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapours or mists. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.
For emergency responders	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Use water spray to reduce vapours or divert vapour cloud drift. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

6.4. Reference to other sections Use personal protection recommended in Section 8 of the SDS. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Avoid breathing mist or vapour. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated contact with skin. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. Avoid release to the environment. Do not empty into drains.
7.2. Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat and sources of ignition. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).
7.3. Specific end use(s)	Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Type	Value
Distillates Petroleum, Hydrotreated Light (CAS 64742-47-8)	TWA	140 mg/m ³
		20 ppm

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

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no-effect level (DNEL) Not available.

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate 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. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

General information

Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

- Hand protection

Chemical resistant gloves are recommended.

- Other

Wear suitable protective clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards

Not applicable.

Hygiene measures

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Environmental exposure controls

Contain spills and prevent releases and observe national regulations on emissions. Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Physical state	Liquid.
Form	Liquid.
Colour	Clear
Odour	Vanilla
Odour threshold	Not available.
pH	Not applicable
Melting point/freezing point	Not established
Initial boiling point and boiling range	195 °C (383 °F)
Flash point	79,0 °C (174,2 °F) Tag closed cup
Evaporation rate	< 0,7 BuAc
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapour pressure	< 0,1 mm Hg @ 20°C
Vapour density	4,7
Relative density	Not available.
Solubility(ies)	
Solubility (water)	< 0,1 %
Solubility (other)	Not available.
Partition coefficient (n-octanol/water)	> 1
Auto-ignition temperature	Not established
Decomposition temperature	Not established
Viscosity	Not established
Explosive properties	Not available.
Oxidizing properties	Not available.
9.2. Other information	
Heat of combustion	> 30 kJ/g

Percent volatile	96 - 99 %
Specific gravity	0,79 - 0,81 @ 20°C
VOC (Weight %)	0 % per US State and Federal Consumer Product Regulations

SECTION 10: Stability and reactivity

10.1. Reactivity	Strong oxidising agents.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
10.5. Incompatible materials	Strong oxidising agents.
10.6. Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Ingestion	Harmful if swallowed. May be fatal if swallowed and enters airways.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Eye contact	Direct contact with eyes may cause temporary irritation.

Symptoms Irritating to eyes, respiratory system and skin. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Exposure may cause temporary irritation, redness, or discomfort.

11.1. Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

Components	Species	Test results
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Distillates Petroleum Hydrotreated Heavy (CAS 64742-54-7)

Acute

Dermal

LD50	Rabbit	> 2000 mg/kg
------	--------	--------------

Inhalation

LC50	Rat	> 2,5 mg/l
------	-----	------------

Oral

LD50	Rat	> 2000 mg/kg
------	-----	--------------

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

Acute

Dermal

LD50	Rabbit	> 2000 mg/kg
------	--------	--------------

Inhalation

LC50	Cat	> 6,4 mg/l
------	-----	------------

	Rat	> 0,1 mg/l
--	-----	------------

Oral

LD50	Rat	> 5000 mg/kg
------	-----	--------------

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory sensitisation Not a respiratory sensitizer.

Skin sensitisation This product is not expected to cause skin sensitisation.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive toxicity Based on available data, the classification criteria are not met.

Specific target organ toxicity - single exposure Based on available data, the classification criteria are not met.

Specific target organ toxicity - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard	May be fatal if swallowed and enters airways.
Mixture versus substance information	No information available.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity Ecological injuries are not known or expected under normal use.

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
12.2. Persistence and degradability	Not inherently biodegradable.	
12.3. Bioaccumulative potential	Not available.	
Partition coefficient n-octanol/water (log Kow)	LPS@ LST > 1	
Bioconcentration factor (BCF)	Not available.	
12.4. Mobility in soil	Readily absorbed into soil.	
12.5. Results of PBT and vPvB assessment	Not a PBT or vPvB substance or mixture.	
12.6. Other adverse effects	None known.	

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	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.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

ADN

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I

Not listed.

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(1) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work

Distillates Petroleum Hydrotreated Heavy (CAS 64742-54-7)

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding

Distillates Petroleum Hydrotreated Heavy (CAS 64742-54-7)

Other EU regulations

Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances

Not listed.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Distillates Petroleum Hydrotreated Heavy (CAS 64742-54-7)

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

Directive 94/33/EC on the protection of young people at work

Distillates Petroleum Hydrotreated Heavy (CAS 64742-54-7)

Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

National regulations

Follow national regulation for work with chemical agents.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

Not available.

References

Not available.

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any statements or R-phrases and H-statements under Sections 2 to 15

R65 Harmful: may cause lung damage if swallowed.
R66 Repeated exposure may cause skin dryness or cracking.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H350 May cause cancer.
H411 Toxic to aquatic life with long lasting effects.

Revision information

None.

Training information

Follow training instructions when handling this material.

Disclaimer

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