LPS°

SAFETY DATA SHEET

1. Identification

Product identifier LPS® TriFree®

Other means of identification

Part Number 03620

Recommended use A spray brake cleaner designed to remove oil, grease, brake fluid, brake pad material or dirt from

motor vehicle brake mechanisms.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Manufacturer

Company name LPS Laboratories, a division of Illinois Tool Works, Inc.

Address 4647 Hugh Howell Rd.

Tucker, GA 30084

Country (U.S.A.)

Tel: +1 770-243-8800

In Case of Emergency 1-800-424-9300 (inside U.S.)

+001 703-527-3887 (outside U.S.)

Website www.lpslabs.com E-mail sds@lpslabs.com

2. Hazard(s) identification

Physical hazards Flammable aerosols Category 1

Gases under pressure Compressed gas

Health hazards Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 2A

Specific target organ toxicity, single exposure Category 3 narcotic effects

Aspiration hazard Category 1

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Pressurized container: May burst if heated. Extremely flammable aerosol. Contains gas under

pressure; may explode if heated. Causes skin irritation. Causes serious eye irritation. May cause

drowsiness or dizziness. May be fatal if swallowed and enters airways.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open

flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing gas. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area.

Wear protective gloves. Wear eye/face protection.

Response If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin: Wash

with plenty of water. Take off contaminated clothing and wash before reuse. Specific treatment (see this label). If skin irritation occurs: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If inhaled: Remove person to fresh

air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.

Storage Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from

sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Disposal

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

Hazard(s) not otherwise classified (HNOC)

None known.

Supplemental information

None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%	
Acetone		67-64-1	50 - 60	
Heptane		142-82-5	20 - 30	
Cyclohexylmethane		108-87-2	10 - 20	
Carbon Dioxide		124-38-9	1 - 5	
Primary Amyl Acetate		628-63-7	1 - 5	

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).

4. First-aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON

CENTER or doctor/physician if you feel unwell.

Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get Skin contact

medical advice/attention. Wash contaminated clothing before reuse.

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if Eye contact

present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If Ingestion

vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may

cause pulmonary edema and pneumonitis.

Most important symptoms/effects, acute and

delayed

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Indication of immediate medical attention and special

treatment needed

General information

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media

Unsuitable extinguishing

media

Powder. Alcohol resistant foam. Water. Water spray. Dry chemicals. Carbon dioxide (CO2).

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from

the chemical

Contents under pressure. Pressurized container may explode when exposed to heat or flame.

Special protective equipment and precautions for firefighters

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

Fire fighting equipment/instructions In case of fire: Stop leak if safe to do so. 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. Cool containers exposed to flames with water until well after the fire is out. In the event of fire and/or explosion do not breathe fumes.

General fire hazards

Extremely flammable aerosol.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. 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.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Use water spray to reduce vapors or divert vapor cloud drift. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

Environmental precautions

7. Handling and storage

Precautions for safe handling

Pressurized 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. Avoid breathing gas. 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.

Conditions for safe storage, including any incompatibilities

Level 3 Aerosol.

Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122°F. Do not puncture, incinerate or crush. Keep away from heat and sources of ignition. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep out of the reach of children.

8. Exposure controls/personal protection

Occupational exposure limits

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

Components	Туре	Value	
Acetone (CAS 67-64-1)	PEL	2400 mg/m3	
		1000 ppm	
Carbon Dioxide (CAS 124-38-9)	PEL	9000 mg/m3	
,		5000 ppm	
Cyclohexylmethane (CAS 108-87-2)	PEL	2000 mg/m3	
,		500 ppm	
Heptane (CAS 142-82-5)	PEL	2000 mg/m3	
		500 ppm	
Primary Amyl Acetate (CAS 628-63-7)	PEL	525 mg/m3	
,		100 ppm	
US. ACGIH Threshold Limit Value	s		
Components	Туре	Value	
Acetone (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 ppm	
Carbon Dioxide (CAS 124-38-9)	STEL	30000 ppm	
,	TWA	5000 ppm	

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US. ACGIH Threshold Limit Values Components	s Type	Value	
Cyclohexylmethane (CAS	TWA	400 ppm	
108-87-2)		100 рр	
Heptane (CAS 142-82-5)	STEL	500 ppm	
	TWA	400 ppm	
Primary Amyl Acetate (CAS 628-63-7)	STEL	100 ppm	
	TWA	50 ppm	
US. NIOSH: Pocket Guide to Chem	nical Hazards		
Components	Туре	Value	
Acetone (CAS 67-64-1)	TWA	590 mg/m3	
		250 ppm	
Carbon Dioxide (CAS 124-38-9)	STEL	54000 mg/m3	
,		30000 ppm	
	TWA	9000 mg/m3	
		5000 ppm	
Cyclohexylmethane (CAS 108-87-2)	TWA	1600 mg/m3	
,		400 ppm	
Heptane (CAS 142-82-5)	Ceiling	1800 mg/m3	
		440 ppm	
	TWA	350 mg/m3	
		85 ppm	
Primary Amyl Acetate (CAS 628-63-7)	TWA	525 mg/m3	
,		100 ppm	

Biological limit values

ACGIH Bid	ological	Exposure	Indices
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Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*

^{* -} For sampling details, please see the source document.

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.

Individual protection measures, such as personal protective equipment

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

Skin protection

Hand protection Chemical resistant gloves are recommended.

Other 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.

Thermal hazards Not applicable.

General hygiene considerations

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.

9. Physical and chemical properties

Appearance Liquid.
Physical state Gas.
Form Aerosol.

Color Clear, Colorless.

Odor Ether-like. Fruity.

Odor threshold Not established

Material name: LPS® TriFree® sps us

pH Not applicable

Melting point/freezing point Not established

Initial boiling point and boiling

range

> 132.8 °F (> 56 °C)

Flash point 1.4 °F (-17.0 °C) Tag Closed Cup

Evaporation rate > 1 (BuAc = 1)
Flammability (solid, gas) Not available.
Upper/lower flammability or explosive limits

Flammability limit - lower

1.2 %

(%)

Flammability limit - upper

12.8 %

(%)

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure > 75 mm Hg @ 20°C

Vapor density $\sim 3 \text{ (air = 1)}$

Relative density 0.75 - 0.77 @ 20°C

Solubility(ies)

Solubility (water) 55 % w/w
Partition coefficient Not available.

(n-octanol/water)

Auto-ignition temperatureNot establishedDecomposition temperatureNot establishedViscosityNot established

Other information

VOC (Weight %) 45 % per U.S. State and Federal Consumer Product Regulations

10. Stability and reactivity

ReactivityThe product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous Hazardous polymerization does not occur.

reactions

Conditions to avoidAvoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the

flash point. Contact with incompatible materials.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition

products

Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea.

Skin contact Causes skin irritation.

Eye contact Causes serious eye irritation.

Ingestion May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. Exposure may cause temporary irritation, redness, or discomfort. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Decrease in motor functions.

Behavioral changes.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways. Narcotic effects.

Components	Species	Test Results	
Acetone (CAS 67-64-1)			
Acute			
Dermal			
LD50	Guinea pig	> 7426 mg/kg, 24 Hours	
		> 9.4 ml/kg, 24 Hours	
	Rabbit	> 7426 mg/kg, 24 Hours	
		> 9.4 ml/kg, 24 Hours	
Inhalation			
LC50	Rat	55700 ppm, 3 Hours	
		132 mg/l, 3 Hours	
		76 mg/l, 4 Hours	
		50.1 mg/l	
		50.1 mg/l, 8 Hours	
Oral			
LD50	Mouse	5.2 g/kg	
	Rat	5800 mg/kg	
		2.2 ml/kg	
Cyclohexylmethane (CAS 108-87	7-2)	•	
Acute	,		
Dermal			
LD50	Rat	2800 - 3100 mg/kg, 24 Hours	
		>= 4 ml/kg, 24 Hours	
Inhalation			
LC25	Rabbit	7300 ppm	
LC50	Rat	16 mg/l, 4 Hours	
Oral			
LD50	Rat	> 8 ml/kg	
leptane (CAS 142-82-5)			
Acute			
Dermal			
LD50	Rabbit	> 2000 mg/kg, 24 Hours	
Inhalation			
LC50	Rat	> 29.29 mg/l, 4 Hours	
LD50	Mouse	75 mg/l, 2 Hours	
Other			
LD50	Mouse	222 mg/kg	
Skin corrosion/irritation	Causes skin irritation.		
Serious eye damage/eye rritation	Causes serious eye irritation.		
Respiratory or skin sensitization	on		
Respiratory sensitization	Not a respiratory sensitizer.		
Skin sensitization	This product is not expected to cause skin sensitization.		
Germ cell mutagenicity No data available to indicate product or a mutagenic or genotoxic.		or any components present at greater than 0.1% are	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.		
ACGIH Carcinogens			
• • •	A4 Not classifiable as a human carcinogen. ated Substances (29 CFR 1910.1001-1050)		
Not listed.			
Reproductive toxicity	This product is not expected to cause	e reproductive or developmental effects.	

Material name: LPS® TriFree®

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Specific target organ toxicity -

single exposure

Narcotic effects.

Specific target organ toxicity -

repeated exposure

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

May be fatal if swallowed and enters airways. **Aspiration hazard**

Prolonged inhalation may be harmful. **Chronic effects**

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Acetone (CAS 67-64-	1)		
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	10294 - 17704 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4740 - 6330 mg/l, 96 hours
Cyclohexylmethane (CAS 108-87-2)		
Aquatic			
Fish	LC50	Striped bass (Morone saxatilis)	5.8 mg/l, 96 hours
Heptane (CAS 142-82	2-5)		
Aquatic			
Fish	LC50	Mozambique tilapia (Tilapia mossambica)	375 mg/l, 96 hours
Primary Amyl Acetate	e (CAS 628-63-7)		
Aquatic	•		
Fish	LC50	Western mosquitofish (Gambusia af	ffinis) 65 mg/l, 96 hours

Persistence and degradability Expected to biodegrade.

Bioaccumulative potential No data available for this product.

Partition coefficient n-octanol / water (log Kow)

LPS® TriFree® < 1 Acetone -0.24Cyclohexylmethane 3.61 Heptane 4.66 Primary Amyl Acetate 2.3

Mobility in soil No data available. Other adverse effects None known.

13. Disposal considerations

Consult authorities before disposal. Contents under pressure. Do not puncture, incinerate or crush. **Disposal instructions**

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.

Local disposal regulations

Dispose in accordance with all applicable regulations. Hazardous waste code

D001: Waste Flammable material with a flash point <140 F

D003: Waste Reactive material

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. Do not re-use empty containers.

14. Transport information

DOT

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

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Special provisionsN82Packaging exceptions306Packaging non bulkNonePackaging bulkNone

IATA

UN number UN1950

UN proper shipping name Aerosols, flammable (Heptane)

Transport hazard class(es)

Class 2.1 Subsidiary risk -

Packing group Not applicable.

Environmental hazards Yes **ERG Code** 10L

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo Allowed.

aircraft

Cargo aircraft only Allowed.

IMDG

UN number UN1950

UN proper shipping name AEROSOLS, Flammable (Heptane), MARINE POLLUTANT

Transport hazard class(es)

Class 2.1 Subsidiary risk -Label(s) 2.1

Packing group Not applicable.

Environmental hazards

Marine pollutant Yes ImS F-D, S-U

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to This substance/mixture is not intended to be transported in bulk.

Annex II of MARPOL 73/78 and

Annex II of MARPOL 73/78 an

the IBC Code

DOT



Material name: LPS® TriFree® sps us

IATA; IMDG



Marine pollutant



15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication

Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1) Listed.
Primary Amyl Acetate (CAS 628-63-7) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes

Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous Yes

chemical

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act Not regulated.

(SDWA)

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Acetone (CAS 67-64-1) 6532

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Acetone (CAS 67-64-1) 35 %WV

DEA Exempt Chemical Mixtures Code Number

Acetone (CAS 67-64-1) 6532

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Acetone (CAS 67-64-1)

Carbon Dioxide (CAS 124-38-9) Cyclohexylmethane (CAS 108-87-2)

Heptane (CAS 142-82-5)

Primary Amyl Acetate (CAS 628-63-7)

US. New Jersey Worker and Community Right-to-Know Act

Acetone (CAS 67-64-1)

Carbon Dioxide (CAS 124-38-9) Cyclohexylmethane (CAS 108-87-2)

Heptane (CAS 142-82-5)

Primary Amyl Acetate (CAS 628-63-7)

US. Pennsylvania Worker and Community Right-to-Know Law

Acetone (CAS 67-64-1)

Carbon Dioxide (CAS 124-38-9) Cyclohexylmethane (CAS 108-87-2)

Heptane (CAS 142-82-5)

Primary Amyl Acetate (CAS 628-63-7)

US. Rhode Island RTK

Acetone (CAS 67-64-1)

Primary Amyl Acetate (CAS 628-63-7)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
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)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
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, including date of preparation or last revision

Issue date 09-04-2014

Version # 01

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.

Material name: LPS® TriFree® sps us