



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® U-10
Registration number	-
Synonyms	None.
Part Number	06220, M06220
Issue date	17-April-2014
Version number	02
Revision date	18-April-2014
Supersedes date	17-April-2014

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

Identified uses	A spray brake cleaner designed to remove oil, grease, brake fluid, brake pad material or dirt from motor vehicle brake mechanisms.
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 F+;R12, Xn;R65, Xi;R36, R67

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.
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Health hazards

Serious eye damage/eye irritation	Category 2	H319 - Causes serious eye irritation.
Specific target organ toxicity - single exposure	Category 3 narcotic effects	H336 - May cause drowsiness or dizziness.
Aspiration hazard	Category 1	H304 - May be fatal if swallowed and enters airways.

Hazard summary

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

Specific hazards Flammable. Risk of serious damage to eyes. May cause central nervous system effects. Do not breathe dust/fume/gas/mist/vapors/spray.

Main symptoms Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Vapours have a narcotic effect and may cause headache, fatigue, dizziness and nausea.

2.2. Label elements

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

Contains: Acetone, Cyclohexylmethane

Hazard pictograms



Signal word Danger

Hazard statements

H222 Extremely flammable aerosol.
H304 May be fatal if swallowed and enters airways.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

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.
P261 Avoid breathing gas.
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear eye/face protection.

Response

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTRE or doctor/physician if you feel unwell.
P331 Do NOT induce vomiting.
P337 + P313 If eye irritation persists: Get medical advice/attention.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
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
Acetone	80 - 90	67-64-1 200-662-2	-	606-001-00-8	#
Classification:	DSD: F;R11, Xi;R36, R66-67				
	CLP: Flam. Liq. 2;H225, Eye Irrit. 2;H319, STOT SE 3;H336				
Carbon dioxide	5 - 10	124-38-9 204-696-9	-	-	#
Classification:	DSD: -				
	CLP: -				

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
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Cyclohexylmethane	1 - 10	108-87-2 203-624-3	-	601-018-00-7	
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Classification: **DSD:** F;R11, Xn;R65, Xi;R38, R67, N;R51/53
CLP: Flam. Liq. 2;H225, Asp. Tox. 1;H304, Skin Irrit. 2;H315, Acute Tox. 4;H332, STOT SE 3;H336, Aquatic Chronic 2;H411

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 IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTRE or doctor/physician if you feel unwell.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if symptoms occur.

Eye contact Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention immediately.

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 Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Direct contact with eyes may cause temporary irritation. Vapours have a narcotic effect and may cause headache, fatigue, dizziness and nausea. 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. 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. 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. Avoid breathing gas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. 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 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 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. This product is miscible in water. 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. Collect spillage. 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 breathing gas. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. 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. 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
2-Methyl Butyl Acetate (CAS 624-41-9)	MAK	270 mg/m ³
		50 ppm
	STEL	540 mg/m ³
Acetone (CAS 67-64-1)		100 ppm
	MAK	1200 mg/m ³
	STEL	500 ppm
Carbon dioxide (CAS 124-38-9)		4800 mg/m ³
	Ceiling	2000 ppm
		18000 mg/m ³
Cyclohexylmethane (CAS 108-87-2)	MAK	10000 ppm
		9000 mg/m ³
		5000 ppm
Primary Amyl Acetate (CAS 628-63-7)	MAK	1600 mg/m ³
		400 ppm
	STEL	6400 mg/m ³
	1600 ppm	
	MAK	270 mg/m ³
		50 ppm

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Components	Type	Value
	STEL	540 mg/m3 100 ppm

Belgium. Exposure Limit Values.

Components	Type	Value
2-Methyl Butyl Acetate (CAS 624-41-9)	STEL	540 mg/m3 100 ppm
	TWA	270 mg/m3 50 ppm
Acetone (CAS 67-64-1)	STEL	2420 mg/m3 1000 ppm
	TWA	1210 mg/m3 500 ppm
Carbon dioxide (CAS 124-38-9)	STEL	54784 mg/m3 30000 ppm
	TWA	9131 mg/m3 5000 ppm
Cyclohexylmethane (CAS 108-87-2)	TWA	1633 mg/m3 400 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	540 mg/m3 100 ppm
	TWA	270 mg/m3 50 ppm

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

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	1400 mg/m3
	TWA	600 mg/m3
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
Cyclohexylmethane (CAS 108-87-2)	TWA	5000 ppm 500 mg/m3
Primary Amyl Acetate (CAS 628-63-7)	STEL	540 mg/m3 100 ppm
	TWA	270 mg/m3 50 ppm

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

Components	Type	Value
Acetone (CAS 67-64-1)	MAC	1210 mg/m3 500 ppm
Carbon dioxide (CAS 124-38-9)	MAC	9000 mg/m3
Primary Amyl Acetate (CAS 628-63-7)	MAC	5000 ppm 270 mg/m3
	STEL	50 ppm 540 mg/m3 100 ppm

Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	2400 mg/m3 1000 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3 5000 ppm

Czech Republic. OELs. Government Decree 361

Components	Type	Value
2-Methyl Butyl Acetate (CAS 624-41-9)	Ceiling	540 mg/m3
Acetone (CAS 67-64-1)	TWA	270 mg/m3
	Ceiling	1500 mg/m3
Carbon dioxide (CAS 124-38-9)	TWA	800 mg/m3
	Ceiling	45000 mg/m3
Cyclohexylmethane (CAS 108-87-2)	TWA	9000 mg/m3
	Ceiling	2000 mg/m3
Primary Amyl Acetate (CAS 628-63-7)	TWA	1500 mg/m3
	Ceiling	540 mg/m3
	TWA	270 mg/m3

Denmark. Exposure Limit Values

Components	Type	Value
2-Methyl Butyl Acetate (CAS 624-41-9)	TLV	271 mg/m3
Acetone (CAS 67-64-1)	TLV	50 ppm
		600 mg/m3
Carbon dioxide (CAS 124-38-9)	TLV	250 ppm
		9000 mg/m3
Cyclohexylmethane (CAS 108-87-2)	TLV	5000 ppm
		805 mg/m3
Primary Amyl Acetate (CAS 628-63-7)	TLV	200 ppm
		271 mg/m3
		50 ppm

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

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3
		500 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
		5000 ppm
Cyclohexylmethane (CAS 108-87-2)	TWA	1600 mg/m3
		400 ppm

Finland. Workplace Exposure Limits

Components	Type	Value
2-Methyl Butyl Acetate (CAS 624-41-9)	STEL	540 mg/m3
		100 ppm
Acetone (CAS 67-64-1)	TWA	270 mg/m3
		50 ppm
Acetone (CAS 67-64-1)	STEL	1500 mg/m3
		630 ppm
Carbon dioxide (CAS 124-38-9)	TWA	1200 mg/m3
		500 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9100 mg/m3
		5000 ppm
Cyclohexylmethane (CAS 108-87-2)	STEL	2000 mg/m3
		500 ppm
Cyclohexylmethane (CAS 108-87-2)	TWA	1600 mg/m3
		400 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	540 mg/m3
		100 ppm

Finland. Workplace Exposure Limits

Components	Type	Value
	TWA	270 mg/m3 50 ppm

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

Components	Type	Value
Acetone (CAS 67-64-1)	VLE	2420 mg/m3 1000 ppm
	VME	1210 mg/m3 500 ppm
Carbon dioxide (CAS 124-38-9)	VME	9000 mg/m3 5000 ppm
Cyclohexylmethane (CAS 108-87-2)	VME	1600 mg/m3 400 ppm
Primary Amyl Acetate (CAS 628-63-7)	VLE	540 mg/m3 100 ppm
	VME	270 mg/m3 50 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
2-Methyl Butyl Acetate (CAS 624-41-9)	TWA	270 mg/m3 50 ppm
Acetone (CAS 67-64-1)	TWA	1200 mg/m3 500 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9100 mg/m3 5000 ppm
Cyclohexylmethane (CAS 108-87-2)	TWA	810 mg/m3 200 ppm
Primary Amyl Acetate (CAS 628-63-7)	TWA	270 mg/m3 50 ppm

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

Components	Type	Value
2-Methyl Butyl Acetate (CAS 624-41-9)	AGW	270 mg/m3 50 ppm
Acetone (CAS 67-64-1)	AGW	1200 mg/m3 500 ppm
Carbon dioxide (CAS 124-38-9)	AGW	9100 mg/m3 5000 ppm
Cyclohexylmethane (CAS 108-87-2)	AGW	810 mg/m3 200 ppm
Primary Amyl Acetate (CAS 628-63-7)	AGW	270 mg/m3 50 ppm

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

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	3560 mg/m3
	TWA	1780 mg/m3
Carbon dioxide (CAS 124-38-9)	STEL	54000 mg/m3
	TWA	5000 ppm 9000 mg/m3 5000 ppm

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

Components	Type	Value
Cyclohexylmethane (CAS 108-87-2)	STEL	2000 mg/m3
	TWA	500 ppm 2000 mg/m3
Primary Amyl Acetate (CAS 628-63-7)	STEL	500 ppm 800 mg/m3
	TWA	150 ppm 530 mg/m3 100 ppm

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	2420 mg/m3
	TWA	1210 mg/m3
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
Primary Amyl Acetate (CAS 628-63-7)	STEL	540 mg/m3
	TWA	270 mg/m3

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

Components	Type	Value
2-Methyl Butyl Acetate (CAS 624-41-9)	STEL	540 mg/m3
	TWA	100 ppm 266 mg/m3 50 ppm
Acetone (CAS 67-64-1)	TWA	600 mg/m3 250 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
Cyclohexylmethane (CAS 108-87-2)	TWA	5000 ppm 805 mg/m3
	STEL	200 ppm 540 mg/m3
Primary Amyl Acetate (CAS 628-63-7)	TWA	100 ppm 266 mg/m3 50 ppm

Ireland. Occupational Exposure Limits

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm
	STEL	27000 mg/m3
Carbon dioxide (CAS 124-38-9)	TWA	15000 ppm 9000 mg/m3 5000 ppm
	TWA	1600 mg/m3
Cyclohexylmethane (CAS 108-87-2)	TWA	400 ppm 540 mg/m3
	STEL	540 mg/m3
Primary Amyl Acetate (CAS 628-63-7)	TWA	100 ppm 270 mg/m3 50 ppm

Italy. Occupational Exposure Limits

Components	Type	Value
2-Methyl Butyl Acetate (CAS 624-41-9)	STEL	100 ppm
	TWA	50 ppm
Acetone (CAS 67-64-1)	TWA	1210 mg/m3

Italy. Occupational Exposure Limits

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	500 ppm
		9000 mg/m3
Cyclohexylmethane (CAS 108-87-2)	TWA	5000 ppm
		400 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	540 mg/m3
	TWA	100 ppm 270 mg/m3 50 ppm

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

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3 5000 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	540 mg/m3
	TWA	100 ppm 270 mg/m3 50 ppm

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

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	2420 mg/m3 1000 ppm
	TWA	1210 mg/m3 500 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3 5000 ppm
Cyclohexylmethane (CAS 108-87-2)	TWA	50 mg/m3
Primary Amyl Acetate (CAS 628-63-7)	STEL	540 mg/m3
	TWA	100 ppm 270 mg/m3 50 ppm

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

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3 5000 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	540 mg/m3
	TWA	100 ppm 270 mg/m3 50 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
Acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3 5000 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	540 mg/m3
		100 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
	TWA	270 mg/m3 50 ppm

Netherlands. OELs (binding)

Components	Type	Value
2-Methyl Butyl Acetate (CAS 624-41-9)	STEL	530 mg/m3
Acetone (CAS 67-64-1)	STEL	2420 mg/m3
	TWA	1210 mg/m3
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
Primary Amyl Acetate (CAS 628-63-7)	STEL	530 mg/m3

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value
Acetone (CAS 67-64-1)	TLV	295 mg/m3 125 ppm
Carbon dioxide (CAS 124-38-9)	TLV	9000 mg/m3
Cyclohexylmethane (CAS 108-87-2)	TLV	5000 ppm 800 mg/m3
Primary Amyl Acetate (CAS 628-63-7)	TLV	200 ppm 260 mg/m3 50 ppm

Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	1800 mg/m3
	TWA	600 mg/m3
Carbon dioxide (CAS 124-38-9)	STEL	27000 mg/m3
	TWA	9000 mg/m3
Cyclohexylmethane (CAS 108-87-2)	STEL	3000 mg/m3
	TWA	1600 mg/m3
Primary Amyl Acetate (CAS 628-63-7)	STEL	500 mg/m3
	TWA	250 mg/m3

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

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
Primary Amyl Acetate (CAS 628-63-7)	STEL	5000 ppm 540 mg/m3
	TWA	100 ppm 270 mg/m3 50 ppm

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

Components	Type	Value
2-Methyl Butyl Acetate (CAS 624-41-9)	STEL	100 ppm
	TWA	50 ppm
Acetone (CAS 67-64-1)	STEL	750 ppm
	TWA	500 ppm
Carbon dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm

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

Components	Type	Value
Cyclohexylmethane (CAS 108-87-2)	TWA	400 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	100 ppm
	TWA	50 ppm

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

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3 5000 ppm
Cyclohexylmethane (CAS 108-87-2)	STEL	1500 mg/m3 375 ppm
	TWA	1200 mg/m3 211 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	500 mg/m3 100 ppm
	TWA	270 mg/m3 50 ppm

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

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3 5000 ppm
Cyclohexylmethane (CAS 108-87-2)	STEL	1620 mg/m3 400 ppm
	TWA	810 mg/m3 200 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	540 mg/m3 100 ppm
	TWA	270 mg/m3 50 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
2-Methyl Butyl Acetate (CAS 624-41-9)	TWA	270 mg/m3 50 ppm
Acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3 5000 ppm
Cyclohexylmethane (CAS 108-87-2)	TWA	2000 mg/m3 500 ppm
Primary Amyl Acetate (CAS 628-63-7)	TWA	270 mg/m3 50 ppm

Spain. Occupational Exposure Limits

Components	Type	Value
2-Methyl Butyl Acetate (CAS 624-41-9)	STEL	540 mg/m3
	TWA	100 ppm 270 mg/m3

Spain. Occupational Exposure Limits Components

Type	Value
Acetone (CAS 67-64-1)	50 ppm 1210 mg/m3
Carbon dioxide (CAS 124-38-9)	500 ppm 9150 mg/m3
Cyclohexylmethane (CAS 108-87-2)	5000 ppm 1630 mg/m3
Primary Amyl Acetate (CAS 628-63-7)	400 ppm 540 mg/m3
	100 ppm 270 mg/m3 50 ppm

Sweden. Occupational Exposure Limit Values Components

Type	Value
2-Methyl Butyl Acetate (CAS 624-41-9)	540 mg/m3
	100 ppm 270 mg/m3 50 ppm
Acetone (CAS 67-64-1)	1200 mg/m3 500 ppm
	600 mg/m3 250 ppm
Carbon dioxide (CAS 124-38-9)	18000 mg/m3
	10000 ppm 9000 mg/m3 5000 ppm
Primary Amyl Acetate (CAS 628-63-7)	540 mg/m3
	100 ppm 270 mg/m3 50 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz Components

Type	Value
Acetone (CAS 67-64-1)	2400 mg/m3 1000 ppm
	1200 mg/m3 500 ppm
Carbon dioxide (CAS 124-38-9)	9000 mg/m3
	5000 ppm
Cyclohexylmethane (CAS 108-87-2)	3200 mg/m3
	800 ppm 1600 mg/m3 400 ppm

UK. EH40 Workplace Exposure Limits (WELs) Components

Type	Value
Acetone (CAS 67-64-1)	3620 mg/m3 1500 ppm
	1210 mg/m3 500 ppm
Carbon dioxide (CAS 124-38-9)	27400 mg/m3
	15000 ppm 9150 mg/m3 5000 ppm

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

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3 5000 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	540 mg/m3
	TWA	100 ppm 270 mg/m3 50 ppm

Biological limit values**France. Biological indicators of exposure (IBE) (National Institute for Research and Security (INRS, ND 2065))**

Components	Value	Determinant	Specimen	Sampling time
Acetone (CAS 67-64-1)	100 mg/l	Acétone	Urine	*

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

Germany. TRGS 903, BAT List (Biological Limit Values)

Components	Value	Determinant	Specimen	Sampling time
Acetone (CAS 67-64-1)	80 mg/l	Aceton	Urine	*

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

Slovakia. BLVs (Biological Limit Value). Regulation no. 355/2006 concerning protection of workers exposed to chemical agents, Annex 2

Components	Value	Determinant	Specimen	Sampling time
Acetone (CAS 67-64-1)	53,36 mg/g	Acetone	Creatinine in urine	*
	80 mg/l	Acetone	Urine	*

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

Spain. Biological Limit Values (VLBs), Occupational Exposure Limits for Chemical Agents, Table 4

Components	Value	Determinant	Specimen	Sampling time
Acetone (CAS 67-64-1)	50 mg/l	Acetona	Urine	*

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

Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)

Components	Value	Determinant	Specimen	Sampling time
Acetone (CAS 67-64-1)	80 mg/l	Aceton	Urine	*

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

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 Provide adequate general and local exhaust ventilation. Provide eyewash station.

Individual protection measures, such as personal protective equipment

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

Eye/face protection Do not get in eyes. Wear safety glasses with side shields (or goggles). Eye wash fountain is recommended.

Skin protection

- Hand protection Chemical resistant gloves are recommended.

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

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

Thermal hazards None known.

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 water-white
Odour	Ether-like. Fruity.
Odour threshold	Not established
pH	Not applicable
Melting point/freezing point	Not established
Initial boiling point and boiling range	56 °C (132,8 °F)
Flash point	< -17,0 °C (< 1,4 °F) Tag closed cup
Evaporation rate	> 1 BuAc
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	2,6 %
Flammability limit - upper (%)	12,8 %
Vapour pressure	> 75 mm Hg @ 20 °C
Vapour density	> 2
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Soluble
Solubility (other)	Not available.
Partition coefficient (n-octanol/water)	> 1
Auto-ignition temperature	465 °C (869 °F)
Decomposition temperature	Not established
Viscosity	< 3 cSt @ 25 °C
Explosive properties	Not available.
Oxidizing properties	Not available.
9.2. Other information	
Heat of combustion	25 - 30 kJ/g
Percent volatile	100 %
Specific gravity	0,75 - 0,77 @ 20 °C
VOC (Weight %)	9,4 % per US State & Federal Consumer Product Regulations

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
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	Carbon oxides.

SECTION 11: Toxicological information

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

Information on likely routes of exposure

Ingestion May cause discomfort if swallowed. May be fatal if swallowed and enters airways. However, ingestion is not likely to be a primary route of occupational exposure.

Inhalation	Vapours have a narcotic effect and may cause headache, fatigue, dizziness and nausea.
Skin contact	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Eye contact	Causes serious eye irritation.
Symptoms	Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Vapours have a narcotic effect and may cause headache, fatigue, dizziness and nausea.

11.1. Information on toxicological effects

Acute toxicity Narcotic effects.

Components	Species	Test results
Acetone (CAS 67-64-1)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 15800 mg/kg 20 ml/kg
<i>Inhalation</i>		
LC50	Rat	55700 ppm 76 mg/l, 4 Hours 50,1 mg/l 50,1 mg/l, 8 Hours
<i>Oral</i>		
LD50	Mouse	3000 mg/kg
	Rabbit	5340 mg/kg
	Rat	5800 mg/kg 2,2 ml/kg
<i>Other</i>		
LD50	Mouse	1297 mg/kg
	Rat	5500 mg/kg
Cyclohexylmethane (CAS 108-87-2)		
Acute		
<i>Dermal</i>		
LD50	Rat	>= 4 ml/kg
<i>Inhalation</i>		
LC25	Rabbit	7300 mg/l
LC50	Rat	16 mg/l
<i>Oral</i>		
LD50	Rat	> 8 ml/kg
Skin corrosion/irritation	Based on available data, the classification criteria are not met.	
Serious eye damage/eye irritation	Causes serious eye irritation.	
Respiratory sensitisation	Based on available data, the classification criteria are not met.	
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.	
ACGIH Carcinogens		
Acetone (CAS 67-64-1)	Not classifiable as a human carcinogen. A4	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	May cause drowsiness or dizziness.	
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
Acetone (CAS 67-64-1)			
Aquatic			
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	10294 - 17704 mg/l, 48 hours
Fish	LC50	Rainbow trout, donaldson trout (<i>Oncorhynchus mykiss</i>)	4740 - 6330 mg/l, 96 hours
Cyclohexylmethane (CAS 108-87-2)			
Aquatic			
Fish	LC50	Striped bass (<i>Morone saxatilis</i>)	5,8 mg/l, 96 hours
Primary Amyl Acetate (CAS 628-63-7)			
Aquatic			
Fish	LC50	Western mosquitofish (<i>Gambusia affinis</i>)	65 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® U-10	> 1
Acetone	-0,24
Cyclohexylmethane	3,61
Primary Amyl Acetate	2,3

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.

assessment

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. 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

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. 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. Read safety instructions, SDS and emergency procedures before handling.

ADN

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. 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 Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.
Other information
 Passenger and cargo aircraft Allowed.
 Cargo aircraft only Allowed.

IMDG

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
 Marine pollutant No
EmS F-D, S-U
14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.
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

Acetone (CAS 67-64-1)

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

Not listed.

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

Not listed.

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

Acetone (CAS 67-64-1)

Cyclohexylmethane (CAS 108-87-2)

Primary Amyl Acetate (CAS 628-63-7)

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

Not listed.

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

R11 Highly flammable.
R12 Extremely flammable.
R36 Irritating to eyes.
R38 Irritating to skin.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65 Harmful: may cause lung damage if swallowed.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.
H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

Revision information

Composition / Information on Ingredients: Ingredients
Transport Information: Material Transportation Information
Regulatory Information: Risk Phrases - Labeling
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.