



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® EFX (Aerosol)
Registration number -
Synonyms None.
Part Number 01820, M01820
Issue date 16-August-2015
Version number 03
Revision date 19-September-2016
Supersedes date 27-October-2015

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

Identified uses A solvent degreaser designed to remove or dissolve grease, grime, oil and other oil-based contaminants from a variety of substrates including automotive or miscellaneous metallic parts.
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, Xi;R36/38, R67, N;R50/53

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

Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
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.

Environmental hazards

Hazardous to the aquatic environment, acute Category 1 aquatic hazard

Hazardous to the aquatic environment, long-term aquatic hazard Category 1

H410 - Very toxic to aquatic life with long lasting effects.

Hazard summary

Physical hazards

Extremely flammable.

Health hazards

Irritating to eyes and skin. 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

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Specific hazards

None known.

Main symptoms

Aspiration may cause pulmonary oedema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

2.2. Label elements

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

Contains:

Acetone, Heptane, Isopropanol

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.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	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.
P273	Avoid release to the environment.
P280	Wear eye protection/face protection.
P280	Wear protective gloves.

Response

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331	Do NOT induce vomiting.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P304 + P340	IF INHALED: Remove person to fresh air and keep 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 CENTER/doctor if you feel unwell.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

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.
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Supplemental label information None known.

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
Heptane	70 - 80	142-82-5 205-563-8	-	601-008-00-2	#
Classification:		DSD: F;R11, Xn;R65, Xi;R38, R67, N;R50/53			C
		CLP: Flam. Liq. 2;H225, Asp. Tox. 1;H304, Skin Irrit. 2;H315, STOT SE 3;H336, Aquatic Chronic 1;H410			C
Acetone	1 - 10	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			
Isopropanol	1 - 10	67-63-0 200-661-7	-	603-117-00-0	
Classification:		DSD: F;R11, Xi;R36, R67			
		CLP: Flam. Liq. 2;H225, Eye Irrit. 2;H319, STOT SE 3;H336			
Carbon dioxide	1 - 5	124-38-9 204-696-9	-	-	#
Classification:		DSD: -			
		CLP: -			

List of abbreviations and symbols that may be used above

DSD: Directive 67/548/EEC.

CLP: Regulation No. 1272/2008.

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

M: M-factor

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Note C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

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.

4.1. Description of first aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTRE or doctor/physician if you feel unwell.

Skin contact Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

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. Rinse mouth. Do not induce vomiting. 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 Aspiration may cause pulmonary oedema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. 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. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards Extremely flammable aerosol.

5.1. Extinguishing media	
Suitable extinguishing media	Foam. Powder. 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	Contents under pressure. Pressurised container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.
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. 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. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. 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. Stop leak if you can do so without risk. Isolate area until gas has dispersed. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Prevent entry into waterways, sewer, basements or confined areas. Absorb in vermiculite, dry sand or earth and place into containers. 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.

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. Wash hands thoroughly after handling. Avoid release to the environment. 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. 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

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

Components	Type	Value
Acetone (CAS 67-64-1)	MAK	1200 mg/m ³
		500 ppm
	STEL	4800 mg/m ³
Carbon dioxide (CAS 124-38-9)		2000 ppm
	Ceiling	18000 mg/m ³

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

Components	Type	Value
Isopropanol (CAS 67-63-0)	MAK	10000 ppm
		9000 mg/m ³
	MAK	5000 ppm
		500 mg/m ³
	STEL	200 ppm
		2000 mg/m ³
		800 ppm

Belgium. Exposure Limit Values.

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	2420 mg/m ³
		1000 ppm
	TWA	1210 mg/m ³
Carbon dioxide (CAS 124-38-9)	STEL	500 ppm
		54784 mg/m ³
	TWA	30000 ppm
Heptane (CAS 142-82-5)	STEL	9131 mg/m ³
		5000 ppm
	TWA	2085 mg/m ³
		500 ppm
Isopropanol (CAS 67-63-0)	STEL	1664 mg/m ³
		400 ppm
	TWA	1000 mg/m ³
		400 ppm
		500 mg/m ³
		200 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/m ³
	TWA	600 mg/m ³
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m ³
		5000 ppm
Heptane (CAS 142-82-5)	TWA	1600 mg/m ³
Isopropanol (CAS 67-63-0)	STEL	1225 mg/m ³
	TWA	980 mg/m ³

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/m ³
		500 ppm
	STEL	3620 mg/m ³
Carbon dioxide (CAS 124-38-9)	MAC	1500 ppm
		9000 mg/m ³
Heptane (CAS 142-82-5)	MAC	5000 ppm
		2085 mg/m ³
Isopropanol (CAS 67-63-0)	MAC	500 ppm
		999 mg/m ³
	STEL	400 ppm
		1250 mg/m ³
		500 ppm

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

Components	Type	Value
Isopropanol (CAS 67-63-0)	TWA	980 mg/m ³
		400 ppm

Czech Republic. OELs. Government Decree 361

Components	Type	Value
Acetone (CAS 67-64-1)	Ceiling	1500 mg/m ³

Czech Republic. OELs. Government Decree 361

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	TWA	800 mg/m3
	Ceiling	45000 mg/m3
Heptane (CAS 142-82-5)	TWA	9000 mg/m3
	Ceiling	2000 mg/m3
Isopropanol (CAS 67-63-0)	TWA	1000 mg/m3
	Ceiling	1000 mg/m3
	TWA	500 mg/m3

Denmark. Exposure Limit Values

Components	Type	Value
Acetone (CAS 67-64-1)	TLV	600 mg/m3
Carbon dioxide (CAS 124-38-9)	TLV	250 ppm
		9000 mg/m3
Heptane (CAS 142-82-5)	TLV	5000 ppm
		820 mg/m3
Isopropanol (CAS 67-63-0)	TLV	200 ppm
		490 mg/m3
		200 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
Heptane (CAS 142-82-5)	TWA	2085 mg/m3
		500 ppm
Isopropanol (CAS 67-63-0)	STEL	600 mg/m3
	TWA	250 ppm
		350 mg/m3
		150 ppm

Finland. Workplace Exposure Limits

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	1500 mg/m3
		630 ppm
	TWA	1200 mg/m3
		500 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9100 mg/m3
		5000 ppm
Heptane (CAS 142-82-5)	STEL	2100 mg/m3
		500 ppm
	TWA	1200 mg/m3
		300 ppm
Isopropanol (CAS 67-63-0)	STEL	620 mg/m3
		250 ppm
	TWA	500 mg/m3
		200 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
Heptane (CAS 142-82-5)	VLE	2085 mg/m3

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

Components	Type	Value
Isopropanol (CAS 67-63-0)	VME	500 ppm
		1668 mg/m3
	VLE	400 ppm
		980 mg/m3
		400 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
Acetone (CAS 67-64-1)	TWA	1200 mg/m3
Carbon dioxide (CAS 124-38-9)	TWA	500 ppm
		9100 mg/m3
Heptane (CAS 142-82-5)	TWA	5000 ppm
		2100 mg/m3
Isopropanol (CAS 67-63-0)	TWA	500 ppm
		500 mg/m3
		200 ppm

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

Components	Type	Value
Acetone (CAS 67-64-1)	AGW	1200 mg/m3
		500 ppm
Carbon dioxide (CAS 124-38-9)	AGW	9100 mg/m3
		5000 ppm
Isopropanol (CAS 67-63-0)	AGW	500 mg/m3
		500 ppm
		200 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
Heptane (CAS 142-82-5)	STEL	9000 mg/m3
		5000 ppm
		2000 mg/m3
Isopropanol (CAS 67-63-0)	STEL	500 ppm
		1225 mg/m3
		TWA
		980 mg/m3
		400 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
		8000 mg/m3
Heptane (CAS 142-82-5)	STEL	2000 mg/m3
		2000 mg/m3
Isopropanol (CAS 67-63-0)	STEL	2000 mg/m3
	TWA	500 mg/m3

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

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	600 mg/m3
		250 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3

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

Components	Type	Value
Heptane (CAS 142-82-5)	TWA	5000 ppm
		820 mg/m3
Isopropanol (CAS 67-63-0)	TWA	200 ppm
		490 mg/m3
		200 ppm

Ireland. Occupational Exposure Limits

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3
Carbon dioxide (CAS 124-38-9)	STEL	500 ppm
		27000 mg/m3
	TWA	15000 ppm
		9000 mg/m3
Heptane (CAS 142-82-5)	TWA	5000 ppm
		2085 mg/m3
Isopropanol (CAS 67-63-0)	STEL	500 ppm
		400 ppm
	TWA	200 ppm

Italy. Occupational Exposure Limits

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3
Carbon dioxide (CAS 124-38-9)	TWA	500 ppm
		9000 mg/m3
Heptane (CAS 142-82-5)	TWA	5000 ppm
		2085 mg/m3
Isopropanol (CAS 67-63-0)	STEL	500 ppm
		400 ppm
	TWA	200 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
Carbon dioxide (CAS 124-38-9)	TWA	500 ppm
		9000 mg/m3
Heptane (CAS 142-82-5)	STEL	5000 ppm
		2085 mg/m3
	TWA	500 ppm
		350 mg/m3
Isopropanol (CAS 67-63-0)	STEL	85 ppm
		600 mg/m3
	TWA	350 mg/m3

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
Heptane (CAS 142-82-5)	STEL	3128 mg/m3
		750 ppm
	TWA	2085 mg/m3
		500 ppm
Isopropanol (CAS 67-63-0)	STEL	600 mg/m3
		250 ppm
	TWA	350 mg/m3
		150 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
Heptane (CAS 142-82-5)	TWA	2085 mg/m3 500 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
Heptane (CAS 142-82-5)	TWA	2085 mg/m3 500 ppm

Netherlands. OELs (binding)

Components	Type	Value
Acetone (CAS 67-64-1)	STEL TWA	2420 mg/m3 1210 mg/m3
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3
Heptane (CAS 142-82-5)	STEL TWA	1600 mg/m3 1200 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 5000 ppm
Heptane (CAS 142-82-5)	TLV	800 mg/m3 200 ppm
Isopropanol (CAS 67-63-0)	TLV	245 mg/m3 100 ppm

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

Components	Type	Value
Acetone (CAS 67-64-1)	STEL TWA	1800 mg/m3 600 mg/m3
Carbon dioxide (CAS 124-38-9)	STEL TWA	27000 mg/m3 9000 mg/m3
Heptane (CAS 142-82-5)	STEL TWA	2000 mg/m3 1200 mg/m3
Isopropanol (CAS 67-63-0)	STEL TWA	1200 mg/m3 900 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 5000 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m3 500 ppm

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

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	750 ppm
	TWA	500 ppm
Carbon dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm
Heptane (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm
Isopropanol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 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
	TWA	9000 mg/m3
Heptane (CAS 142-82-5)	TWA	5000 ppm 2085 mg/m3 500 ppm
	STEL	500 mg/m3 203 ppm
TWA		200 mg/m3 81 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
	TWA	9000 mg/m3
Heptane (CAS 142-82-5)	TWA	5000 ppm 2085 mg/m3 500 ppm
	STEL	1000 mg/m3 400 ppm
TWA		500 mg/m3 200 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
Acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm
	TWA	9000 mg/m3
Heptane (CAS 142-82-5)	TWA	5000 ppm 2085 mg/m3 500 ppm
	TWA	500 mg/m3 200 ppm

Spain. Occupational Exposure Limits

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm
	TWA	9150 mg/m3
Heptane (CAS 142-82-5)	TWA	5000 ppm 2085 mg/m3 500 ppm
	STEL	1000 mg/m3 400 ppm
TWA		500 mg/m3 200 ppm

Sweden. Occupational Exposure Limit Values

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	1200 mg/m3 500 ppm
	TWA	600 mg/m3 250 ppm
Carbon dioxide (CAS 124-38-9)	STEL	18000 mg/m3 10000 ppm
	TWA	9000 mg/m3 5000 ppm
Isopropanol (CAS 67-63-0)	STEL	600 mg/m3 250 ppm
	TWA	350 mg/m3 150 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	2400 mg/m3 1000 ppm
	TWA	1200 mg/m3 500 ppm
Carbon dioxide (CAS 124-38-9)	TWA	9000 mg/m3 5000 ppm
Isopropanol (CAS 67-63-0)	STEL	1000 mg/m3 400 ppm
	TWA	500 mg/m3 200 ppm

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	3620 mg/m3 1500 ppm
	TWA	1210 mg/m3 500 ppm
Carbon dioxide (CAS 124-38-9)	STEL	27400 mg/m3 15000 ppm
Heptane (CAS 142-82-5)	TWA	9150 mg/m3 5000 ppm
	TWA	2085 mg/m3 500 ppm
Isopropanol (CAS 67-63-0)	STEL	1250 mg/m3 500 ppm
	TWA	999 mg/m3 400 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
Heptane (CAS 142-82-5)	TWA	2085 mg/m3 500 ppm

Biological limit values**Croatia. BLV. Dangerous Substance Exposure Limit Values at Workplace, Annexes 4 (as amended)**

Components	Value	Determinant	Specimen	Sampling time
Acetone (CAS 67-64-1)	20 mg/g	Acetone	Creatinine in urine	*
	20 mg/l	Acetone	Blood	*
	0,34 mmol/l	Acetone	Blood	*

Croatia. BLV. Dangerous Substance Exposure Limit Values at Workplace, Annexes 4 (as amended)

Components	Value	Determinant	Specimen	Sampling time
	38,95 mmol/mol	Acetone	Creatinine in urine	*
Isopropanol (CAS 67-63-0)	50 mg/l	Acetone	Urine	*
	50 mg/l	Acetone	Blood	*

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

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	*
Isopropanol (CAS 67-63-0)	25 mg/l	Aceton	Urine	*
	25 mg/l	Aceton	Blood	*

* - 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	*
Isopropanol (CAS 67-63-0)	40 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	*
Isopropanol (CAS 67-63-0)	25 mg/l	Aceton	Urine	*
	25 mg/l	Aceton	Blood	*

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

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs) 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 Wear appropriate chemical resistant gloves.

- Other Wear appropriate chemical resistant clothing.

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

Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
Hygiene measures	When using do not 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	Inform appropriate managerial or supervisory personnel of all environmental releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state	Gas.
Form	Aerosol
Colour	Colourless.
Odour	Characteristic.
Odour threshold	Not established
pH	Not applicable
Melting point/freezing point	Not established
Initial boiling point and boiling range	60,5 °C (140,9 °F)
Flash point	-6,0 °C (21,2 °F) Tag closed cup -- dispensed liquid
Evaporation rate	1,6 (Water = 1)
Flammability (solid, gas)	Flammable gas.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1,5 %
Flammability limit - upper (%)	9 %
Vapour pressure	Not established
Vapour density	2,8 estimated
Relative density	Not available.
Solubility(ies)	
Solubility (water)	< 10 %
Solubility (other)	Not available.
Partition coefficient (n-octanol/water)	> 1
Auto-ignition temperature	306 °C (582,8 °F)
Decomposition temperature	Not established
Viscosity	< 3 cSt @ 25°C
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.

9.2. Other information

Heat of combustion	> 30 kJ/g
Percent volatile	100 %
Specific gravity	0,65 - 0,68 @ 20°C
VOC	86,9 % per US State and 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	Acids. Strong oxidising agents. Isocyanates. Chlorine.
10.6. Hazardous decomposition products	Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition.

SECTION 11: Toxicological information

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

Information on likely routes of exposure

Inhalation	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Symptoms Aspiration may cause pulmonary oedema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

11.1. Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways.

Components	Species	Test results
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Acetone (CAS 67-64-1)

Acute

Dermal

LD50	Rabbit	> 20 ml/kg, 24 Hours
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Inhalation

Vapour

LC50	Rat	50,1 mg/l, 4 Hours
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Oral

LD50	Rat	9,1 ml/kg
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Heptane (CAS 142-82-5)

Acute

Dermal

LD50	Rabbit	> 2000 mg/kg, 24 Hours
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Inhalation

Vapour

LC50	Rat	> 29,29 mg/l, 4 Hours
------	-----	-----------------------

Oral

LD50	Rat	> 5000 mg/kg
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Isopropanol (CAS 67-63-0)

Acute

Dermal

LD50	Rabbit	16,4 ml/kg, 24 Hours
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Oral

LD50	Rat	4,7 g/kg
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Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes serious eye 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.

ACGIH Carcinogens

Acetone (CAS 67-64-1) Not classifiable as a human carcinogen. A4

Isopropanol (CAS 67-63-0) Not classifiable as a human carcinogen. A4

Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	May be fatal if swallowed and enters airways.
Mixture versus substance information	No information available.
Other information	Symptoms may be delayed.

SECTION 12: Ecological information

12.1. Toxicity Very 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
Heptane (CAS 142-82-5)			
Aquatic			
Fish	LC50	Mozambique tilapia (Tilapia mossambica)	375 mg/l, 96 hours
Isopropanol (CAS 67-63-0)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	> 1400 mg/l, 96 hours

12.2. Persistence and degradability No data is available on the degradability of this product.

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

LPS® EFX (Aerosol)	> 1
Acetone	-0,24
Heptane	4,66
Isopropanol	0,05

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment Not available.

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 Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. 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 Yes

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 Yes

14.6. Special precautions for user 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 Yes

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 -
Label(s) 2.1

14.4. Packing group Not applicable.

14.5. Environmental hazards Yes

ERG Code 10L

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

Other information

Passenger and cargo aircraft Allowed with restrictions.
Cargo aircraft only Allowed with restrictions.

IMDG

14.1. UN number UN1950

14.2. UN proper shipping name AEROSOLS, MARINE POLLUTANT

14.3. Transport hazard class(es)

Class 2.1
Subsidiary risk -

14.4. Packing group Not applicable.

14.5. Environmental hazards

Marine pollutant Yes

EmS F-D, S-U

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

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

ADN; ADR; IATA; IMDG; RID



Marine pollutant



General information

IMDG Regulated Marine Pollutant.

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

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, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Acetone (CAS 67-64-1)

Heptane (CAS 142-82-5)

Isopropanol (CAS 67-63-0)

Other regulations	The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.
National regulations	Follow national regulation for work with chemical agents. 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, as amended.

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	<p>R11 Highly flammable. R12 Extremely flammable. R36 Irritating to eyes. R36/38 Irritating to eyes and skin. R38 Irritating to skin. R50/53 Very 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. H336 May cause drowsiness or dizziness. H410 Very toxic to aquatic life with long lasting effects.</p>
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