



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® ZeroTri®
Registration number -
Synonyms None.
Part Number M03528, M03505, M03555
Issue date 16-September-2015
Version number 01

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

Identified uses An industrial degreaser designed to remove oil, grease, wax, moisture, dirt or other contaminants from parts and equipments.
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;R11, 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

Flammable liquids	Category 2	H225 - Highly flammable liquid and vapour.
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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 aquatic hazard	Category 1	H400 - Very toxic to aquatic life.
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	Highly 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	Highly flammable. Irritating to eyes and skin. Harmful: may cause lung damage if swallowed. Do not breathe dust/fume/gas/mist/vapors/spray.
Main symptoms	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Skin irritation. May cause redness and pain. 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, Heptane, Primary Amyl Acetate

Hazard pictograms



Signal word

Danger

Hazard statements

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.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing mist or vapour.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/eye protection/face protection.

Response

P370 + P378	In case of fire: Use appropriate media for extinction.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
P321	Specific treatment (see this label).
P331	Do NOT induce vomiting.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P391	Collect spillage.

Storage

P235	Keep cool.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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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	30 - 40	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			
Heptane	30 - 40	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 Acute 1;H400, Aquatic Chronic 1;H410			C
Cyclohexylmethane	20 - 30	108-87-2 203-624-3	-	601-018-00-7	
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			
Primary Amyl Acetate	1 - 5	628-63-7 211-047-3	-	607-130-00-2	#
Classification:		DSD: R10, R66			C
		CLP: Flam. Liq. 3;H226, Aquatic Chronic 3;H412			C

List of abbreviations and symbols that may be used above

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

M: M-factor

vPvB: very persistent and very bioaccumulative substance.

PBT: persistent, bioaccumulative and toxic substance.

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

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

Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

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 Take off immediately all contaminated clothing. Rinse skin with water/shower. 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. Aspiration may cause pulmonary oedema and pneumonitis.

4.2. Most important symptoms and effects, both 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.

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	Highly flammable liquid and vapour.
5.1. Extinguishing media	
Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical 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	Vapours may form explosive mixtures with air. Vapours may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
5.3. Advice for firefighters	
Special protective equipment for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Special fire fighting procedures	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures	
For non-emergency personnel	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapours or mists. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. 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. Wear appropriate protective equipment and clothing during clean-up. 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	<p>Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil etc) away from spilled material.</p> <p>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. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.</p> <p>Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use.</p>
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	Vapours may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapour. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. Avoid release to the environment. Do not empty into drains.
7.2. Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Refrigeration recommended. Store away from incompatible materials (see Section 10 of the SDS). Keep in an area equipped with sprinklers.
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/m3 500 ppm
	STEL	4800 mg/m3 2000 ppm
Cyclohexylmethane (CAS 108-87-2)	MAK	1600 mg/m3 400 ppm
	STEL	6400 mg/m3 1600 ppm
Primary Amyl Acetate (CAS 628-63-7)	MAK	270 mg/m3 50 ppm
	STEL	540 mg/m3 100 ppm

Belgium. Exposure Limit Values.

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	2420 mg/m3 1000 ppm
	TWA	1210 mg/m3 500 ppm
Cyclohexylmethane (CAS 108-87-2)	TWA	1633 mg/m3 400 ppm
	STEL	2085 mg/m3 500 ppm
Heptane (CAS 142-82-5)	TWA	1664 mg/m3 400 ppm
	STEL	540 mg/m3 100 ppm
Primary Amyl Acetate (CAS 628-63-7)	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
Cyclohexylmethane (CAS 108-87-2)	TWA	500 mg/m3
Heptane (CAS 142-82-5)	TWA	1600 mg/m3
Primary Amyl Acetate (CAS 628-63-7)	STEL	540 mg/m3
	TWA	100 ppm 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
	STEL	3620 mg/m3 1500 ppm
Heptane (CAS 142-82-5)	MAC	2085 mg/m3 500 ppm
Primary Amyl Acetate (CAS 628-63-7)	MAC	270 mg/m3
	STEL	50 ppm 540 mg/m3 100 ppm

Czech Republic. OELs. Government Decree 361

Components	Type	Value
Acetone (CAS 67-64-1)	Ceiling	1500 mg/m3
	TWA	800 mg/m3
Cyclohexylmethane (CAS 108-87-2)	Ceiling	2000 mg/m3
	TWA	1500 mg/m3
Heptane (CAS 142-82-5)	Ceiling	2000 mg/m3
	TWA	1000 mg/m3
Primary Amyl Acetate (CAS 628-63-7)	Ceiling	540 mg/m3
	TWA	270 mg/m3

Denmark. Exposure Limit Values

Components	Type	Value
Acetone (CAS 67-64-1)	TLV	600 mg/m3
		250 ppm
Cyclohexylmethane (CAS 108-87-2)	TLV	805 mg/m3
		200 ppm
Heptane (CAS 142-82-5)	TLV	820 mg/m3
		200 ppm
Primary Amyl Acetate (CAS 628-63-7)	TLV	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
Cyclohexylmethane (CAS 108-87-2)	TWA	1600 mg/m3
		400 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m3
		500 ppm

Finland. Workplace Exposure Limits

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	1500 mg/m3
		630 ppm
	TWA	1200 mg/m3
Cyclohexylmethane (CAS 108-87-2)	STEL	500 ppm
		2000 mg/m3
	TWA	1600 mg/m3
Heptane (CAS 142-82-5)	STEL	400 ppm
		2100 mg/m3
	TWA	500 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	1200 mg/m3
		300 ppm
	TWA	540 mg/m3
	TWA	100 ppm
		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
Cyclohexylmethane (CAS 108-87-2)	VME	500 ppm
		1600 mg/m3
		400 ppm

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

Components	Type	Value
Heptane (CAS 142-82-5)	VLE	2085 mg/m3 500 ppm
	VME	1668 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
Acetone (CAS 67-64-1)	TWA	1200 mg/m3 500 ppm
Cyclohexylmethane (CAS 108-87-2)	TWA	810 mg/m3 200 ppm
Heptane (CAS 142-82-5)	TWA	2100 mg/m3 500 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
Acetone (CAS 67-64-1)	AGW	1200 mg/m3 500 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
Cyclohexylmethane (CAS 108-87-2)	STEL	2000 mg/m3
	TWA	500 ppm 2000 mg/m3
Heptane (CAS 142-82-5)	STEL	500 ppm 2000 mg/m3
	TWA	2000 mg/m3 500 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	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
Heptane (CAS 142-82-5)	STEL	8000 mg/m3
	TWA	2000 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
Acetone (CAS 67-64-1)	TWA	600 mg/m3 250 ppm
Cyclohexylmethane (CAS 108-87-2)	TWA	805 mg/m3 200 ppm
Heptane (CAS 142-82-5)	TWA	820 mg/m3 200 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	540 mg/m3 100 ppm
	TWA	266 mg/m3 50 ppm

Ireland. Occupational Exposure Limits

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm
Cyclohexylmethane (CAS 108-87-2)	TWA	1600 mg/m3 400 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m3 500 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	540 mg/m3 100 ppm
	TWA	270 mg/m3 50 ppm

Italy. Occupational Exposure Limits

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3 500 ppm
Cyclohexylmethane (CAS 108-87-2)	TWA	400 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m3 500 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	540 mg/m3 100 ppm
	TWA	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
Heptane (CAS 142-82-5)	STEL	2085 mg/m3 500 ppm
	TWA	350 mg/m3 85 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	540 mg/m3 100 ppm
	TWA	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
Cyclohexylmethane (CAS 108-87-2)	TWA	50 mg/m3
Heptane (CAS 142-82-5)	STEL	3128 mg/m3

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

Components	Type	Value
Primary Amyl Acetate (CAS 628-63-7)	TWA	750 ppm
		2085 mg/m ³
	STEL	500 ppm
		540 mg/m ³
	TWA	100 ppm
		270 mg/m ³
50 ppm		

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

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m ³
Heptane (CAS 142-82-5)	TWA	500 ppm
		2085 mg/m ³
Primary Amyl Acetate (CAS 628-63-7)	STEL	500 ppm
		540 mg/m ³
TWA	100 ppm	
	270 mg/m ³	
	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/m ³
Heptane (CAS 142-82-5)	TWA	500 ppm
		2085 mg/m ³
Primary Amyl Acetate (CAS 628-63-7)	STEL	500 ppm
		540 mg/m ³
TWA	100 ppm	
	270 mg/m ³	
	50 ppm	

Netherlands. OELs (binding)

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	2420 mg/m ³
	TWA	1210 mg/m ³
Heptane (CAS 142-82-5)	STEL	1600 mg/m ³
	TWA	1200 mg/m ³
Primary Amyl Acetate (CAS 628-63-7)	STEL	530 mg/m ³

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value
Acetone (CAS 67-64-1)	TLV	295 mg/m ³
Cyclohexylmethane (CAS 108-87-2)	TLV	125 ppm
		800 mg/m ³
Heptane (CAS 142-82-5)	TLV	200 ppm
		800 mg/m ³
Primary Amyl Acetate (CAS 628-63-7)	TLV	200 ppm
		260 mg/m ³
		50 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	1800 mg/m ³
	TWA	600 mg/m ³
Cyclohexylmethane (CAS 108-87-2)	STEL	3000 mg/m ³
	TWA	1600 mg/m ³
Heptane (CAS 142-82-5)	STEL	2000 mg/m ³

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

Components	Type	Value
Primary Amyl Acetate (CAS 628-63-7)	TWA	1200 mg/m ³
	STEL	500 mg/m ³
	TWA	250 mg/m ³

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/m ³ 500 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m ³ 500 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	540 mg/m ³
		100 ppm
	TWA	270 mg/m ³ 50 ppm

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

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	750 ppm
Cyclohexylmethane (CAS 108-87-2)	TWA	500 ppm
	TWA	400 ppm
Heptane (CAS 142-82-5)	STEL	500 ppm
	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/m ³ 500 ppm
Cyclohexylmethane (CAS 108-87-2)	STEL	1500 mg/m ³
	TWA	375 ppm 1200 mg/m ³
Heptane (CAS 142-82-5)	TWA	211 ppm 2085 mg/m ³
	TWA	500 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	500 mg/m ³
		100 ppm
	TWA	270 mg/m ³ 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/m ³ 500 ppm
Cyclohexylmethane (CAS 108-87-2)	STEL	1620 mg/m ³
	TWA	400 ppm 810 mg/m ³ 200 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m ³ 500 ppm
	TWA	500 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	540 mg/m ³
		100 ppm
	TWA	270 mg/m ³ 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
Acetone (CAS 67-64-1)	TWA	1210 mg/m ³ 500 ppm
Cyclohexylmethane (CAS 108-87-2)	TWA	2000 mg/m ³ 500 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m ³ 500 ppm
Primary Amyl Acetate (CAS 628-63-7)	TWA	270 mg/m ³ 50 ppm

Spain. Occupational Exposure Limits

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m ³ 500 ppm
Cyclohexylmethane (CAS 108-87-2)	TWA	1630 mg/m ³ 400 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m ³ 500 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	540 mg/m ³ 100 ppm
	TWA	270 mg/m ³ 50 ppm

Sweden. Occupational Exposure Limit Values

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	1200 mg/m ³ 500 ppm
	TWA	600 mg/m ³ 250 ppm
Primary Amyl Acetate (CAS 628-63-7)	STEL	540 mg/m ³ 100 ppm
	TWA	270 mg/m ³ 50 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	2400 mg/m ³ 1000 ppm
	TWA	1200 mg/m ³ 500 ppm
Cyclohexylmethane (CAS 108-87-2)	STEL	3200 mg/m ³ 800 ppm
	TWA	1600 mg/m ³ 400 ppm

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	3620 mg/m ³ 1500 ppm
	TWA	1210 mg/m ³ 500 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m ³ 500 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/m ³ 500 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m ³

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

Components	Type	Value
Primary Amyl Acetate (CAS 628-63-7)	STEL	500 ppm
		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 Explosion-proof general and local exhaust ventilation. 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

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 wash fountain and emergency showers are recommended.

Eye/face protection Wear safety glasses with side shields (or goggles). Eye wash fountain and emergency showers are recommended.

Skin protection

- Hand protection Wear appropriate chemical resistant gloves.

- Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

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	Liquid.
Form	Liquid.
Colour	Clear, Colorless.
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 = 1)
Flammability (solid, gas)	Highly flammable liquid
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1,2 %
Flammability limit - upper (%)	12,8 %
Vapour pressure	> 75 mm Hg @ 20°C
Vapour density	~ 3 (air = 1)
Relative density	Not available.
Solubility(ies)	
Solubility (water)	35 % w/w
Solubility (other)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not established
Decomposition temperature	Not established
Viscosity	Not established
Explosive properties	Not available.
Oxidising properties	Not available.
9.2. Other information	
Heat of combustion	> 30 kJ/g
Percent volatile	100 %
Specific gravity	0,74 - 0,76 @ 20°C
VOC (Weight %)	65 % per U.S 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 heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
10.5. Incompatible materials	Acids. 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.
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Information on likely routes of exposure

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

11.1. 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
	Rabbit	> 9,4 ml/kg, 24 Hours
		> 7426 mg/kg, 24 Hours
		> 9,4 ml/kg, 24 Hours
Inhalation		
<i>Vapour</i>		
LC50	Rat	55700 ppm, 3 Hours
		132 mg/l, 3 Hours
LC50	Rat	76 mg/l, 4 Hours
<i>Vapour</i>		
LC50	Rat	50,1 mg/l
LC50	Rat	50,1 mg/l, 8 Hours
Oral		
LD50	Mouse	3000 mg/kg
	Rabbit	5340 mg/kg
	Rat	5800 mg/kg
		2,2 ml/kg
Cyclohexylmethane (CAS 108-87-2)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
Inhalation		
<i>Vapour</i>		
LC100	Rabbit	59,9 mg/l
LC25	Rabbit	7300 ppm
<i>Vapour</i>		
LC50	Dog	> 4071 ppm, 1 Hours
		> 16,3 mg/l, 1 Hours
	Mouse	> 6564 ppm, 1 Hours
		> 26,3 mg/l, 1 Hours
	Rat	> 6564 ppm, 1 Hours
		> 26,3 mg/l, 1 Hours
Heptane (CAS 142-82-5)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours

Components	Species	Test results
Inhalation		
<i>Vapour</i>		
LC50	Rat	> 29,29 mg/l, 4 Hours
LD50	Mouse	75 mg/l, 2 Hours
Oral		
LD50	Rat	> 5000 mg/kg
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	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Narcotic effects.	
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 Very toxic to aquatic life with long lasting effects.

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
Heptane (CAS 142-82-5)		
Aquatic		
Fish	LC50	Mozambique tilapia (<i>Tilapia mossambica</i>) 375 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 Expected to biodegrade.

12.3. Bioaccumulative potential No data available.

Partition coefficient n-octanol/water (log Kow)

Acetone	-0,24
Cyclohexylmethane	3,61
Heptane	4,66
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 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 Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

EU waste code The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Disposal methods/information Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Special precautions Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number UN1993

14.2. UN proper shipping name FLAMMABLE LIQUID, N.O.S. (Heptanes, Acetone)

14.3. Transport hazard class(es)

- Class 3
- Subsidiary risk -
- Label(s) 3
- Hazard No. (ADR) 33
- Tunnel restriction code D/E

14.4. Packing group II

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 UN1993

14.2. UN proper shipping name FLAMMABLE LIQUID, N.O.S. (Heptanes, Acetone)

14.3. Transport hazard class(es)

- Class 3
- Subsidiary risk -
- Label(s) 3

14.4. Packing group II

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 UN1993

14.2. UN proper shipping name Flammable liquid, n.o.s. (Heptanes, Acetone)

14.3. Transport hazard class(es)

- Class 3
- Subsidiary risk -
- Label(s) 3

14.4. Packing group II

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 UN1993

14.2. UN proper shipping name Flammable liquid, n.o.s. (Heptanes, Acetone)

14.3. Transport hazard class(es)

Class 3

Subsidiary risk -

14.4. Packing group II

14.5. Environmental hazards Yes

ERG Code 3H

14.6. Special precautions Not available.

for user

Other information

Passenger and cargo aircraft Allowed.

Cargo aircraft only Allowed.

IMDG

14.1. UN number UN1993

14.2. UN proper shipping name FLAMMABLE LIQUID, N.O.S. (Heptanes, Acetone), MARINE POLLUTANT

14.3. Transport hazard class(es)

Class 3

Subsidiary risk -

14.4. Packing group II

14.5. Environmental hazards

Marine pollutant Yes

EmS F-E, S-E

14.6. Special precautions Not available.

for user

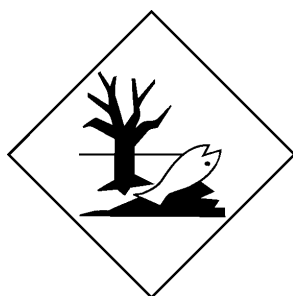
14.7. Transport in bulk Not available.

according to Annex II of MARPOL 73/78 and the IBC Code

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.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding, as amended
Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances
Acetone (CAS 67-64-1)
Cyclohexylmethane (CAS 108-87-2)
Heptane (CAS 142-82-5)
Primary Amyl Acetate (CAS 628-63-7)

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended
Acetone (CAS 67-64-1)
Cyclohexylmethane (CAS 108-87-2)
Heptane (CAS 142-82-5)
Primary Amyl Acetate (CAS 628-63-7)

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

R10 Flammable.
R11 Highly 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.
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.

H226 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.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

Revision information

Training information

Disclaimer

None.

Follow training instructions when handling this material.

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.