



FOOD GRADE SILICONE LUBRICANT

Food Grade Silicone Lubricant is a non-staining, high quality, lubricant designed especially for the food industry for use as an anti-stick agent for chutes and slides. Aerosol can features DETEX™ metal & x-ray detectable plastic components.



FEATURES

- NSF® Certified: H1 Registration # 113815
- Meets FDA regulation for incidental food contact
- Provides excellent lubrication
- Ideal for releasing molded parts
- Dry film will not attract dust or dirt
- Metal & x-ray detectable plastic components (see back for more details)



SPECIFICATIONS AND APPROVALS

- Meets FDA Regulation 21 C.F.R. 178.3570 for incidental food contact
- NSF® Certified: H1 Registration # 113815
- Acceptable for use in Canadian food processing establishments

APPLICATIONS

- Castors
- Chutes
- Conveyors
- Food Racks
- Guards
- Guide Rails
- Plastic Gears
- Plastic Rollers
- Pins
- Rings
- Rubber Mountings
- Seals
- Slides

PACKAGE SIZE

Net Contents

10 wt. oz. / 284 g / 454 mL

Part No.

01716



FOOD GRADE SILICONE LUBRICANT

PROPERTIES

Appearance	Liquid	Vapor pressure	352 mm Hg @ 38°C
Physical state	Gas	Vapor density	~3
Form	Aerosol	Solubility(ies)	Not soluble in water
Color	Clear, colorless	Auto-ignition temperature	582.4°F (306°C)
Odor	Mild, ether-like	Viscosity	<14 cSt @ 25°C
Initial boiling point and boiling range	141.8°F (61°C)	Heat of combustion	> 30 kJ/g
Flash point	<1.40 °F (-17.00°C) TCC	Percent volatile	96%
Evaporation rate	<1 BuAc	Specific gravity	0.64 – 0.66 @ 20°C
Flammability: lower upper	1% (estimated) 6% (estimated)	VOC (weight %)	96.1% per State and Federal Consumer Products Regulations

MATERIAL SAFETY DATA SHEETS AVAILABLE UPON REQUEST OR VISIT OUR WEB SITE : WWW.LPSLABS.COM



Scan to see DETEX™ in action!



METAL & X-RAY DETECTABLE PLASTIC AEROSOL COMPONENTS (PATENT PENDING)

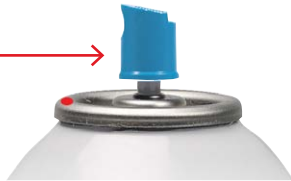
LPS® is a leading food-grade MRO chemical manufacturer that developed the innovative technology, DETEX™, to help reduce the risk of foreign object contamination during food and beverage processing. All DETEX™ components on LPS® food industry products are metal and x-ray detectable.

Universal blue color for all metal and x-ray detectable plastic components easily identifies them as a non-food object.

Cap →



Actuator →



ADDITIONAL AEROSOL FEATURES:

- Certified food safe container
- Dual language labeling: English and Spanish
- 2-piece aerosol can; 10% – 15% lighter than a 3-piece aerosol can

FEATURES		BENEFITS
All plastic components are metal and x-ray detectable and are capable of detection by most metal detection equipment.		Reduce concerns of food product contamination and assist with HACCP requirements.
All DETEX™ plastic component ingredients are GRAS listed (Generally Recognized As Safe - FDA 21 C.F.R. Sections 177 and 178).		Meets FDA requirements as an acceptable material for use in food processing plants.
LPS® food safe maintenance chemicals have prominently displayed NSF® category labeling. This ensures only food safe products are used for maintenance during processing.		Distinct labeling helps to prevent use of non NSF® approved LPS® products in the food processing area.
Aerosol can is in compliance with the Food Safety Net Services (FSNS). FDA 21 C.F.R.175.300, 1935/2004/EC.		Aerosol can does not contain: Heavy metals, BADGE, BFDGE, NOGE, and Bisphenol-A (BPA).
COMPONENT	DRY MODE	WET MODE
Actuator	2.2 mm	2.5 mm
Cap	3.0 mm	> 3.0 mm

NOTE

1. Detection limits for a particular machine depend on a variety of factors including line speed, contaminant placement and orientation, iron fortification (i.e.; flour), wet mode vs. dry mode, fragment size, aperture size, etc. It is the responsibility of the end-user to determine the detection limits of the appropriate DETEX™ component for the individual line set up and for the particular food product being inspected.
2. Metal and x-ray detection limits for plastic components (above) are based on whole components. Partial components may not be detectable due to detector limitations, partial component size, malfunctioning equipment and/or the type of food product undergoing processing.
3. LPS® Laboratories recommends that all components be tested prior to implementation (separately and included in the processed food product) and/or consult your specific metal detector equipment manufacturer directly.
4. Product shelf life, warranty, and material safety data sheets are available at www.lpslabs.com. LPS® Laboratories is not responsible for use of this product inconsistent with its instructions and warnings.
5. LPS® Laboratories is not responsible for failure to detect components due to detector limitations and/or detector malfunctions. Refer to the metal detector manufacturer's design limitations, instructions, and warnings regarding the use, limitations, and proper maintenance of the equipment.



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® Food Grade Silicone
Registration number	-
Synonyms	None.
Part Number	01716
Issue date	10-December-2012
Version number	02
Revision date	07-February-2013
Supersedes date	07-February-2013

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

Identified uses	Not available.
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, Xi;R38, R67, N;R51/53

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 aerosols	Category 1	H222 - Extremely flammable aerosol.
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Health hazards

Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Reproductive toxicity	Category 2	H361 - Suspected of damaging fertility or the unborn child.
Specific target organ toxicity - single exposure	Category 3 narcotic effects	H336 - May cause drowsiness or dizziness.

Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard	Category 2	H411 - Toxic to aquatic life with long lasting effects.
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Hazard summary

Physical hazards	Extremely flammable.
Health hazards	Irritating to skin. Vapours may cause drowsiness and dizziness. Occupational exposure to the substance or mixture may cause adverse health effects.
Environmental hazards	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Specific hazards	May cause central nervous system effects.
Main symptoms	Irritant effects. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Symptoms may include redness, oedema, drying, defatting and cracking of the skin. Vapours have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Narcosis. Decrease in motor functions. Behavioural changes. Prolonged exposure may cause chronic effects.

2.2. Label elements

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

Contains: 2,2-Dimethylbutane, 2,3-Dimethylbutane, 2-Methylpentane, 3-Methylpentane, N-HEXANE

Hazard pictograms



Signal word Danger

Hazard statements

H222	Extremely flammable aerosol.
H361	Suspected of damaging fertility or the unborn child.
H336	May cause drowsiness or dizziness.
H315	Causes skin irritation.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P211	Do not spray on an open flame or other ignition source.
P271	Use only outdoors or in a well-ventilated area.
P251	Pressurised container: Do not pierce or burn, even after use.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P280	Wear protective gloves/eye protection/face protection.
P264	Wash thoroughly after handling.
P273	Avoid release to the environment.

Response

P308 + P313	IF exposed or concerned: Get medical advice/attention.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P321	Specific treatment (see this label).
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P312	Call a POISON CENTRE or doctor/physician if you feel unwell.
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 25% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment. 94.67% of the mixture consists of component(s) of unknown acute oral toxicity.

2.3. Other hazards Not assigned.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
2-Methylpentane	30 - < 40	107-83-5 203-523-4	-	601-007-00-7	
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, STOT SE 3;H336, Aquatic Chronic 2;H411			

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
2,3-Dimethylbutane	10 - < 20	79-29-8 201-193-6	-	601-007-00-7	
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, STOT SE 3;H336, Aquatic Chronic 2;H411			
3-Methylpentane	10 - < 20	96-14-0 202-481-4	-	601-007-00-7	
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, STOT SE 3;H336, Aquatic Chronic 2;H411			
2,2-Dimethylbutane	5 - < 10	75-83-2 200-906-8	-	601-007-00-7	
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, STOT SE 3;H336, Aquatic Chronic 2;H411			
N-HEXANE	1 - < 3	110-54-3 203-777-6	-	601-037-00-0	#
Classification:		DSD: F;R11, Repr. Cat. 3;R62, Xn;R65-48/20, Xi;R38, R67, N;R51/53			
		CLP: Flam. Liq. 2;H225, Asp. Tox. 1;H304, Skin Irrit. 2;H315, STOT SE 3;H336, Repr. 2;H361f, STOT RE 2;H373, Aquatic Chronic 2;H411			

Other components below reportable levels 30 - < 40

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

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

M: M-factor

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. Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

4.1. Description of first aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control centre immediately.

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

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 IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician. Never give anything by mouth to a victim who is unconscious or is having convulsions. Rinse mouth thoroughly. Do not induce vomiting without medical advice. 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 Narcosis. Irritation of eyes and mucous membranes. Skin irritation. Decrease in motor functions. Behavioural changes. Vapours have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged exposure may cause chronic effects.

4.3. Indication of any immediate medical attention and special treatment needed In case of shortness of breath, give oxygen. Symptoms may be delayed. Keep victim under observation.

SECTION 5: Firefighting measures

General fire hazards Extremely flammable aerosol.

5.1. Extinguishing media

Suitable extinguishing media

Extinguishing media - small fires: Dry chemical powder.

Extinguishing media - large fires: Carbon dioxide (CO₂). Dry chemical powder. Foam. Water fog.

Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Contents under pressure. Pressurised container may explode when exposed to heat or flame. Fire may produce irritating, corrosive and/or toxic gases.

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. Water runoff can cause environmental damage.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Immediately evacuate personnel to safe areas. Local authorities should be advised if significant spillages cannot be contained. Do not touch or walk through spilled material. Keep people away from and upwind of spill/leak. Keep upwind. Ventilate closed spaces before entering them.

For emergency responders

Keep unnecessary personnel away.

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.

6.3. Methods and material for containment and cleaning up

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. The product is immiscible with water and will spread on the water surface. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Absorb spillage with non-combustible, absorbent material. Scoop up used absorbent into drums or other appropriate container. Following product recovery, flush area with water. Prevent entry into waterways, sewer, basements or confined areas.

6.4. Reference to other sections

Not applicable.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Pressurised container: Do not pierce or burn, even after use. 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. Ground and bond containers when transferring material. Do not use if spray button is missing or defective. Do not re-use empty containers. Do not taste or swallow. Avoid contact with skin. Avoid contact with eyes. Use only in well-ventilated areas. Avoid prolonged exposure. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Avoid release to the environment.

7.2. Conditions for safe storage, including any incompatibilities

Level 3 Aerosol.

Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C. Do not handle or store near an open flame, heat or other sources of ignition. Do not puncture, incinerate or crush. This material can accumulate static charge which may cause spark and become an ignition source. 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
2,2-Dimethylbutane (CAS 75-83-2)	MAK	715 mg/m ³
		200 ppm
	STEL	2860 mg/m ³ 800 ppm
2,3-Dimethylbutane (CAS 79-29-8)	MAK	715 mg/m ³
		200 ppm
	STEL	2860 mg/m ³ 800 ppm

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

Components	Type	Value
2-Methylpentane (CAS 107-83-5)	MAK	715 mg/m ³
	STEL	200 ppm 2860 mg/m ³ 800 ppm
3-Methylpentane (CAS 96-14-0)	MAK	715 mg/m ³
	STEL	200 ppm 2860 mg/m ³ 800 ppm
Isobutane (CAS 75-28-5)	Ceiling	3800 mg/m ³ 1600 ppm
	MAK	1900 mg/m ³ 800 ppm
N-Butane (CAS 106-97-8)	Ceiling	3800 mg/m ³ 1600 ppm
	MAK	1900 mg/m ³ 800 ppm
N-HEXANE (CAS 110-54-3)	MAK	72 mg/m ³ 20 ppm
	STEL	288 mg/m ³ 80 ppm
Propane (CAS 74-98-6)	Ceiling	3600 mg/m ³ 2000 ppm
	MAK	1800 mg/m ³ 1000 ppm

Belgium. Exposure Limit Values.

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	STEL	3551 mg/m ³
	TWA	1000 ppm 1786 mg/m ³ 500 ppm
2,3-Dimethylbutane (CAS 79-29-8)	STEL	3551 mg/m ³
	TWA	1000 ppm 1786 mg/m ³ 500 ppm
2-Methylpentane (CAS 107-83-5)	STEL	3551 mg/m ³
	TWA	1000 ppm 1786 mg/m ³ 500 ppm
3-Methylpentane (CAS 96-14-0)	STEL	3551 mg/m ³
	TWA	1000 ppm 1786 mg/m ³ 500 ppm
N-HEXANE (CAS 110-54-3)	TWA	72 mg/m ³ 20 ppm

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

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	TWA	50 mg/m ³
N-Butane (CAS 106-97-8)	TWA	1800 mg/m ³
N-HEXANE (CAS 110-54-3)	TWA	72 mg/m ³
Propane (CAS 74-98-6)	TWA	1800 mg/m ³

Czech Republic. OELs. Government Decree 361

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	Ceiling	2000 mg/m ³
	TWA	1000 mg/m ³

Czech Republic. OELs. Government Decree 361

Components	Type	Value
2,3-Dimethylbutane (CAS 79-29-8)	Ceiling	2000 mg/m3
	TWA	1000 mg/m3
2-Methylpentane (CAS 107-83-5)	Ceiling	2000 mg/m3
	TWA	1000 mg/m3
3-Methylpentane (CAS 96-14-0)	Ceiling	2000 mg/m3
	TWA	1000 mg/m3
N-HEXANE (CAS 110-54-3)	Ceiling	200 mg/m3
	TWA	70 mg/m3

Denmark. Exposure Limit Values

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	TLV	700 mg/m3
		200 ppm
2,3-Dimethylbutane (CAS 79-29-8)	TLV	700 mg/m3
		200 ppm
2-Methylpentane (CAS 107-83-5)	TLV	700 mg/m3
		200 ppm
3-Methylpentane (CAS 96-14-0)	TLV	700 mg/m3
		200 ppm
N-Butane (CAS 106-97-8)	TLV	1200 mg/m3
		500 ppm
N-HEXANE (CAS 110-54-3)	TLV	72 mg/m3
		20 ppm
Propane (CAS 74-98-6)	TLV	1800 mg/m3
		1000 ppm

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

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	STEL	1100 mg/m3
		300 ppm
2,3-Dimethylbutane (CAS 79-29-8)	TWA	700 mg/m3
		200 ppm
2,3-Dimethylbutane (CAS 79-29-8)	STEL	1100 mg/m3
		300 ppm
2-Methylpentane (CAS 107-83-5)	TWA	700 mg/m3
		200 ppm
2-Methylpentane (CAS 107-83-5)	STEL	1100 mg/m3
		300 ppm
3-Methylpentane (CAS 96-14-0)	TWA	700 mg/m3
		200 ppm
3-Methylpentane (CAS 96-14-0)	STEL	1100 mg/m3
		300 ppm
Isobutane (CAS 75-28-5)	TWA	700 mg/m3
		200 ppm
Isobutane (CAS 75-28-5)	TWA	1900 mg/m3
		800 ppm
N-Butane (CAS 106-97-8)	TWA	1500 mg/m3
		800 ppm
N-HEXANE (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3
		1000 ppm

Finland. Workplace Exposure Limits

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	STEL	2300 mg/m3
	TWA	630 ppm 1800 mg/m3 500 ppm
2,3-Dimethylbutane (CAS 79-29-8)	STEL	2300 mg/m3
	TWA	630 ppm 1800 mg/m3 500 ppm
2-Methylpentane (CAS 107-83-5)	STEL	2300 mg/m3
	TWA	630 ppm 1800 mg/m3 500 ppm
3-Methylpentane (CAS 96-14-0)	STEL	2300 mg/m3
	TWA	630 ppm 1800 mg/m3 500 ppm
Isobutane (CAS 75-28-5)	STEL	2400 mg/m3 1000 ppm
	TWA	1900 mg/m3 800 ppm
N-Butane (CAS 106-97-8)	STEL	2400 mg/m3 1000 ppm
	TWA	1900 mg/m3 800 ppm
N-HEXANE (CAS 110-54-3)	STEL	2300 mg/m3 630 ppm
	TWA	72 mg/m3 20 ppm
Propane (CAS 74-98-6)	STEL	2000 mg/m3 1100 ppm
	TWA	1500 mg/m3 800 ppm

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

Components	Type	Value	Form
2,2-Dimethylbutane (CAS 75-83-2)	VLE	1500 mg/m3	Vapor.
	VME	1800 mg/m3 1000 mg/m3 500 ppm	Vapor.
2,3-Dimethylbutane (CAS 79-29-8)	VLE	1500 mg/m3	Vapor.
	VME	1800 mg/m3 1000 mg/m3 500 ppm	Vapor.
2-Methylpentane (CAS 107-83-5)	VLE	1500 mg/m3	Vapor.
	VME	1800 mg/m3 1000 mg/m3 500 ppm	Vapor.
3-Methylpentane (CAS 96-14-0)	VLE	1500 mg/m3	Vapor.
	VME	1800 mg/m3 1000 mg/m3 500 ppm	Vapor.
N-Butane (CAS 106-97-8)	VME	1900 mg/m3 800 ppm	
	VLE	1500 mg/m3	Vapor.
N-HEXANE (CAS 110-54-3)	VLE	1500 mg/m3	Vapor.
	VME	72 mg/m3 1000 mg/m3	Vapor.
		20 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
2,2-Dimethylbutane (CAS 75-83-2)	TWA	1800 mg/m3 500 ppm
2,3-Dimethylbutane (CAS 79-29-8)	TWA	1800 mg/m3 500 ppm
2-Methylpentane (CAS 107-83-5)	TWA	1800 mg/m3 500 ppm
3-Methylpentane (CAS 96-14-0)	TWA	1800 mg/m3 500 ppm
Isobutane (CAS 75-28-5)	TWA	2400 mg/m3 1000 ppm
N-Butane (CAS 106-97-8)	TWA	2400 mg/m3 1000 ppm
N-HEXANE (CAS 110-54-3)	TWA	180 mg/m3 50 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm

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

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	AGW	1800 mg/m3 500 ppm
2,3-Dimethylbutane (CAS 79-29-8)	AGW	1800 mg/m3 500 ppm
2-Methylpentane (CAS 107-83-5)	AGW	1800 mg/m3 500 ppm
3-Methylpentane (CAS 96-14-0)	AGW	1800 mg/m3 500 ppm
Isobutane (CAS 75-28-5)	AGW	2400 mg/m3 1000 ppm
N-Butane (CAS 106-97-8)	AGW	2400 mg/m3 1000 ppm
N-HEXANE (CAS 110-54-3)	AGW	180 mg/m3 50 ppm
Propane (CAS 74-98-6)	AGW	1800 mg/m3 1000 ppm

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

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	STEL	3600 mg/m3 1000 ppm
	TWA	1800 mg/m3 500 ppm
2,3-Dimethylbutane (CAS 79-29-8)	STEL	3600 mg/m3 1000 ppm
	TWA	1800 mg/m3 500 ppm
2-Methylpentane (CAS 107-83-5)	STEL	3600 mg/m3 1000 ppm
	TWA	1800 mg/m3 500 ppm
3-Methylpentane (CAS 96-14-0)	STEL	3600 mg/m3 1000 ppm
	TWA	1800 mg/m3

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

Components	Type	Value
N-Butane (CAS 106-97-8)	TWA	500 ppm 2350 mg/m3
N-HEXANE (CAS 110-54-3)	TWA	1000 ppm 180 mg/m3
Propane (CAS 74-98-6)	TWA	50 ppm 1800 mg/m3 1000 ppm

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value
N-Butane (CAS 106-97-8)	STEL	9400 mg/m3
	TWA	2350 mg/m3
N-HEXANE (CAS 110-54-3)	TWA	72 mg/m3

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

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	TWA	700 mg/m3
2,3-Dimethylbutane (CAS 79-29-8)	TWA	200 ppm 700 mg/m3
2-Methylpentane (CAS 107-83-5)	TWA	200 ppm 700 mg/m3
3-Methylpentane (CAS 96-14-0)	TWA	200 ppm 700 mg/m3
N-Butane (CAS 106-97-8)	TWA	200 ppm 1200 mg/m3
N-HEXANE (CAS 110-54-3)	TWA	500 ppm 90 mg/m3
Propane (CAS 74-98-6)	TWA	25 ppm 1800 mg/m3 1000 ppm

Ireland. Occupational Exposure Limits

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	STEL	3600 mg/m3
	TWA	1000 ppm 1800 mg/m3
2,3-Dimethylbutane (CAS 79-29-8)	STEL	500 ppm 3600 mg/m3
	TWA	1000 ppm 1800 mg/m3
2-Methylpentane (CAS 107-83-5)	STEL	500 ppm 3600 mg/m3
	TWA	1000 ppm 1800 mg/m3
3-Methylpentane (CAS 96-14-0)	STEL	500 ppm 3600 mg/m3
	TWA	1000 ppm 1800 mg/m3
N-Butane (CAS 106-97-8)	TWA	500 ppm 1000 ppm
N-HEXANE (CAS 110-54-3)	TWA	72 mg/m3 20 ppm
Propane (CAS 74-98-6)	TWA	1000 ppm

Italy. Occupational Exposure Limits

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	STEL	1000 ppm
	TWA	500 ppm

Italy. Occupational Exposure Limits

Components	Type	Value
2,3-Dimethylbutane (CAS 79-29-8)	STEL	1000 ppm
	TWA	500 ppm
2-Methylpentane (CAS 107-83-5)	STEL	1000 ppm
	TWA	500 ppm
3-Methylpentane (CAS 96-14-0)	STEL	1000 ppm
	TWA	500 ppm
Isobutane (CAS 75-28-5)	TWA	1000 ppm
N-Butane (CAS 106-97-8)	TWA	1000 ppm
N-HEXANE (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm
Propane (CAS 74-98-6)	TWA	1000 ppm

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

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	STEL	300 mg/m3
	TWA	100 mg/m3
2,3-Dimethylbutane (CAS 79-29-8)	STEL	300 mg/m3
	TWA	100 mg/m3
2-Methylpentane (CAS 107-83-5)	STEL	300 mg/m3
	TWA	100 mg/m3
3-Methylpentane (CAS 96-14-0)	STEL	300 mg/m3
	TWA	100 mg/m3
Isobutane (CAS 75-28-5)	STEL	300 mg/m3
N-Butane (CAS 106-97-8)	TWA	100 mg/m3
	STEL	300 mg/m3
N-HEXANE (CAS 110-54-3)	TWA	300 mg/m3
	STEL	300 mg/m3
Propane (CAS 74-98-6)	TWA	72 mg/m3
	STEL	20 ppm
	STEL	300 mg/m3
	TWA	100 mg/m3

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

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	STEL	1100 mg/m3
	TWA	300 ppm
2,3-Dimethylbutane (CAS 79-29-8)		700 mg/m3
		200 ppm
	STEL	1100 mg/m3
2-Methylpentane (CAS 107-83-5)		300 ppm
	TWA	700 mg/m3
	STEL	200 ppm
3-Methylpentane (CAS 96-14-0)		1100 mg/m3
	TWA	300 ppm
	STEL	700 mg/m3
N-HEXANE (CAS 110-54-3)		200 ppm
	TWA	72 mg/m3
		20 ppm

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

Components	Type	Value
N-HEXANE (CAS 110-54-3)	TWA	72 mg/m3

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

Components	Type	Value
		20 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
N-HEXANE (CAS 110-54-3)	TWA	72 mg/m3 20 ppm

Netherlands. OELs (binding)

Components	Type	Value
N-HEXANE (CAS 110-54-3)	STEL TWA	144 mg/m3 72 mg/m3

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	TLV	1050 mg/m3 250 ppm
2,3-Dimethylbutane (CAS 79-29-8)	TLV	1050 mg/m3 250 ppm
2-Methylpentane (CAS 107-83-5)	TLV	1050 mg/m3 250 ppm
3-Methylpentane (CAS 96-14-0)	TLV	1050 mg/m3 250 ppm
N-Butane (CAS 106-97-8)	TLV	600 mg/m3 250 ppm
N-HEXANE (CAS 110-54-3)	TLV	72 mg/m3 20 ppm
Propane (CAS 74-98-6)	TLV	900 mg/m3 500 ppm

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

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	STEL TWA	1200 mg/m3 400 mg/m3
2,3-Dimethylbutane (CAS 79-29-8)	STEL TWA	1200 mg/m3 400 mg/m3
2-Methylpentane (CAS 107-83-5)	STEL TWA	1200 mg/m3 400 mg/m3
3-Methylpentane (CAS 96-14-0)	STEL TWA	1200 mg/m3 400 mg/m3
N-Butane (CAS 106-97-8)	STEL TWA	3000 mg/m3 1900 mg/m3
N-HEXANE (CAS 110-54-3)	TWA	72 mg/m3
Propane (CAS 74-98-6)	TWA	1800 mg/m3

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

Components	Type	Value
N-HEXANE (CAS 110-54-3)	TWA	72 mg/m3 20 ppm

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

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	STEL TWA	1000 ppm 500 ppm
2,3-Dimethylbutane (CAS 79-29-8)	STEL TWA	1000 ppm 500 ppm
2-Methylpentane (CAS 107-83-5)	STEL	1000 ppm

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

Components	Type	Value
	TWA	500 ppm
3-Methylpentane (CAS 96-14-0)	STEL	1000 ppm
	TWA	500 ppm
Isobutane (CAS 75-28-5)	TWA	1000 ppm
N-Butane (CAS 106-97-8)	TWA	1000 ppm
N-HEXANE (CAS 110-54-3)	TWA	50 ppm
Propane (CAS 74-98-6)	TWA	2500 ppm

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

Components	Type	Value
Isobutane (CAS 75-28-5)	STEL	1500 mg/m3
	TWA	1200 mg/m3
N-Butane (CAS 106-97-8)	STEL	1500 mg/m3
	TWA	1200 mg/m3
N-HEXANE (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm
Propane (CAS 74-98-6)	STEL	1800 mg/m3
		1000 ppm
	TWA	1400 mg/m3
		778 ppm

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

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	TWA	1800 mg/m3
		500 ppm
2,3-Dimethylbutane (CAS 79-29-8)	TWA	1800 mg/m3
		500 ppm
2-Methylpentane (CAS 107-83-5)	TWA	1800 mg/m3
		500 ppm
3-Methylpentane (CAS 96-14-0)	TWA	1800 mg/m3
		500 ppm
N-HEXANE (CAS 110-54-3)	TWA	72 mg/m3
		20 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
2,2-Dimethylbutane (CAS 75-83-2)	TWA	720 mg/m3
		200 ppm
2,3-Dimethylbutane (CAS 79-29-8)	TWA	720 mg/m3
		200 ppm
2-Methylpentane (CAS 107-83-5)	TWA	720 mg/m3
		200 ppm
3-Methylpentane (CAS 96-14-0)	TWA	720 mg/m3
		200 ppm
Isobutane (CAS 75-28-5)	TWA	2400 mg/m3
		1000 ppm
N-Butane (CAS 106-97-8)	TWA	2400 mg/m3
		1000 ppm
N-HEXANE (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3
		1000 ppm

Spain. Occupational Exposure Limits

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	STEL	3580 mg/m3

Spain. Occupational Exposure Limits

Components	Type	Value
		1000 ppm
	TWA	1790 mg/m ³
		500 ppm
2,3-Dimethylbutane (CAS 79-29-8)	STEL	3580 mg/m ³
		1000 ppm
	TWA	1790 mg/m ³
		500 ppm
2-Methylpentane (CAS 107-83-5)	STEL	3580 mg/m ³
		1000 ppm
	TWA	1790 mg/m ³
		500 ppm
3-Methylpentane (CAS 96-14-0)	STEL	3580 mg/m ³
		1000 ppm
	TWA	1790 mg/m ³
		500 ppm
Isobutane (CAS 75-28-5)	TWA	1000 ppm
N-Butane (CAS 106-97-8)	TWA	1000 ppm
N-HEXANE (CAS 110-54-3)	TWA	72 mg/m ³
		20 ppm
Propane (CAS 74-98-6)	TWA	1000 ppm

Sweden. Occupational Exposure Limit Values

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	STEL	1100 mg/m ³
		300 ppm
	TWA	700 mg/m ³
		200 ppm
2,3-Dimethylbutane (CAS 79-29-8)	STEL	1100 mg/m ³
		300 ppm
	TWA	700 mg/m ³
		200 ppm
2-Methylpentane (CAS 107-83-5)	STEL	1100 mg/m ³
		300 ppm
	TWA	700 mg/m ³
		200 ppm
3-Methylpentane (CAS 96-14-0)	STEL	1100 mg/m ³
		300 ppm
	TWA	700 mg/m ³
		200 ppm
N-HEXANE (CAS 110-54-3)	STEL	180 mg/m ³
		50 ppm
	TWA	90 mg/m ³
		25 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value
2,2-Dimethylbutane (CAS 75-83-2)	STEL	3600 mg/m ³
		1000 ppm
	TWA	1800 mg/m ³
		500 ppm
2,3-Dimethylbutane (CAS 79-29-8)	STEL	3600 mg/m ³
		1000 ppm
	TWA	1800 mg/m ³
		500 ppm
2-Methylpentane (CAS 107-83-5)	STEL	3600 mg/m ³
		1000 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value
	TWA	1800 mg/m ³ 500 ppm
3-Methylpentane (CAS 96-14-0)	STEL	3600 mg/m ³ 1000 ppm
	TWA	1800 mg/m ³ 500 ppm
Isobutane (CAS 75-28-5)	TWA	1900 mg/m ³ 800 ppm
N-Butane (CAS 106-97-8)	TWA	1900 mg/m ³ 800 ppm
N-HEXANE (CAS 110-54-3)	STEL	3600 mg/m ³ 1000 ppm
	TWA	180 mg/m ³ 50 ppm
Propane (CAS 74-98-6)	STEL	7200 mg/m ³ 4000 ppm
	TWA	1800 mg/m ³ 1000 ppm

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
N-Butane (CAS 106-97-8)	STEL	1810 mg/m ³ 750 ppm
	TWA	1450 mg/m ³ 600 ppm
N-HEXANE (CAS 110-54-3)	TWA	72 mg/m ³ 20 ppm

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

Components	Type	Value
N-HEXANE (CAS 110-54-3)	TWA	72 mg/m ³ 20 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
N-HEXANE (CAS 110-54-3)	5 mg/g	2,5-Hexanedion	Creatinine in urine	*

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

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

Components	Value	Determinant	Specimen	Sampling time
N-HEXANE (CAS 110-54-3)	5 mg/l	2,5-Hexandion plus 4,5-Dihydroxy-2- hexanon	Urine	*

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

Hungary. Chemical Safety at Workplace Ordinance Joint Decree No. 25/2000 (Annex 2): Permissible limit values of biological exposure (effect) indices

Components	Value	Determinant	Specimen	Sampling time
N-HEXANE (CAS 110-54-3)	3,5 mg/g	hexane-2,5-dior	Creatinine in 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
N-HEXANE (CAS 110-54-3)	0,4 mg/l	2,5-Hexanodion , sin hidrólisis	Urine	*

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

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

Components	Value	Specimen	Sampling time
N-HEXANE (CAS 110-54-3)	5 mg/l	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	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Do not get in eyes. Chemical goggles are recommended. Eye wash fountain is recommended.
Skin protection	
- Hand protection	For prolonged or repeated skin contact use suitable protective gloves. Chemical resistant gloves are recommended.
- Other	Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Wear suitable protective clothing. Chemical resistant gloves.
Respiratory protection	If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.
Thermal hazards	Not available.
Hygiene measures	Do not get in eyes, on skin, on clothing. When using, do not eat, drink or smoke. Wash hands after handling and before eating. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practices.
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.Colorless
Odour	Mild. Ether-like.
Odour threshold	Not established
pH	Not applicable
Melting point/freezing point	Not established / -151,798775166 °C (-241,2 °F)
Initial boiling point and boiling range	61 °C (141,8 °F)
Flash point	< -17,00 °C (< 1,40 °F) Tag closed cup
Evaporation rate	< 1 BuAc
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1 % (estimated)
Flammability limit - upper (%)	6 % (estimated)
Vapour pressure	352 mm Hg @ 38 °C
Vapour density	~3
Solubility(ies)	Not soluble in water
Partition coefficient (n-octanol/water)	> 1
Auto-ignition temperature	306 °C (582,8 °F)
Decomposition temperature	Not available.
Viscosity	< 14 cSt @ 25°C
Explosive properties	Not available.
Oxidizing properties	Not available.

9.2. Other information

Heat of combustion	> 30 kJ/g
Percent volatile	96 %
Specific gravity	0,64 - 0,66 @ 20°C
VOC (Weight %)	96,1 % per State and Federal Consumer Product Regulations

SECTION 10: Stability and reactivity

10.1. Reactivity	Strong oxidizing agents. Fluorine. Chlorine. Nitrates.
10.2. Chemical stability	Risk of explosion.
10.3. Possibility of hazardous reactions	Hazardous polymerisation does not occur.
10.4. Conditions to avoid	Heat, flames and sparks. Avoid temperatures exceeding the flash point.
10.5. Incompatible materials	Strong oxidizing agents. Fluorine. Chlorine. Nitrates.
10.6. Hazardous decomposition products	At thermal decomposition temperatures, carbon monoxide and carbon dioxide.

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 be harmful if swallowed. May be fatal if swallowed and enters airways.
Inhalation	May be harmful if inhaled. Vapours have a narcotic effect and may cause headache, fatigue, dizziness and nausea.
Skin contact	Causes skin irritation.
Eye contact	May be irritating to eyes.

Symptoms Irritant effects. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Vapours have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Behavioural changes. Decrease in motor functions. Narcosis.

11.1. Information on toxicological effects

Acute toxicity	Based on available data, the classification criteria are not met.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	May be irritating to eyes.
Respiratory sensitisation	Based on available data, the classification criteria are not met.
Skin sensitisation	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Suspected of damaging fertility or the unborn child.
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 harmful if swallowed and enters airways.
Mixture versus substance information	None known.
Other information	Symptoms may be delayed.

SECTION 12: Ecological information

12.1. Toxicity	Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the environment.
12.2. Persistence and degradability	Not inherently biodegradable.
12.3. Bioaccumulative potential	Not available.

Partition coefficient

n-octanol/water (log Kow)

LPS® Food Grade Silicone	> 1
2,2-Dimethylbutane	3,82
2,3-Dimethylbutane	3,42
2-Methylpentane	3,74

3-Methylpentane 3,6
N-HEXANE 3,9

Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	Not available.
12.5. Results of PBT and vPvB assessment	Not a PBT or vPvB substance or mixture.
12.6. Other adverse effects	Not available.

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	Contents under pressure. Do not puncture, incinerate or crush. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. 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)	2.1
Subsidiary class(es)	-
14.4. Packing group	Not available.
14.5. Environmental hazards	No
Tunnel restriction code	Not available.
Labels required	2.1
14.6. Special precautions for user	Not available.

RID

14.1. UN number	UN1950
14.2. UN proper shipping name	Aerosols, flammable
14.3. Transport hazard class(es)	2.1
Subsidiary class(es)	-
14.4. Packing group	Not available.
14.5. Environmental hazards	No
Labels required	2.1
14.6. Special precautions for user	Not available.

ADN

14.1. UN number	UN1950
14.2. UN proper shipping name	Aerosols, flammable
14.3. Transport hazard class(es)	2.1
Subsidiary class(es)	-
14.4. Packing group	Not available.
14.5. Environmental hazards	No
Labels required	2.1
14.6. Special precautions for user	Not available.

IATA

14.1. UN number	UN1950
14.2. UN proper shipping name	Aerosols, flammable

14.3. Transport hazard class(es)	2.1
Subsidiary class(es)	-
14.4. Packing group	Not available.
14.5. Environmental hazards	Not available.
Labels required	2.1
ERG Code	Not available.
14.6. Special precautions for user	Not available.

IMDG

14.1. UN number	UN1950
14.2. UN proper shipping name	Aerosols, flammable
14.3. Transport hazard class(es)	2.1
Subsidiary class(es)	-
14.4. Packing group	Not available.
14.5. Environmental hazards	
Marine pollutant	No
Labels required	2.1
14.6. Special precautions for user	Not available.
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	This substance/mixture is not intended to be transported in bulk.

ADN; ADR; IATA; IMDG; RID



SECTION 15: Regulatory information

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

EU regulations

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

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. 143/2011 Annex XIV Substances Subject to Authorisation

Not listed.

Restrictions on use

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

2,2-Dimethylbutane (CAS 75-83-2)
2,3-Dimethylbutane (CAS 79-29-8)
2-Methylpentane (CAS 107-83-5)
3-Methylpentane (CAS 96-14-0)
N-HEXANE (CAS 110-54-3)

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

Not regulated.

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

Not regulated.

Other EU regulations

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

Not regulated.

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

2,2-Dimethylbutane (CAS 75-83-2)
2,3-Dimethylbutane (CAS 79-29-8)
2-Methylpentane (CAS 107-83-5)
3-Methylpentane (CAS 96-14-0)
N-HEXANE (CAS 110-54-3)

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

N-HEXANE (CAS 110-54-3)

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

Not available.

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

Not available.

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

R11 Highly flammable.
R12 Extremely flammable.
R38 Irritating to skin.
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R62 Possible risk of impaired fertility.
R65 Harmful: may cause lung damage if swallowed.
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.
H336 May cause drowsiness or dizziness.
H361f Suspected of damaging fertility.
H411 Toxic to aquatic life with long lasting effects.

Revision information

This document has undergone significant changes and should be reviewed in its entirety.

Training information

Not available.

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available.