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

White Lithium

Registration number

Synonyms None.

03816, M03816 **Part Number** 10-August-2015 Issue date

Version number 02

Revision date 25-August-2016 Supersedes date 10-August-2015

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

Identified uses A white lithium based grease formulated with PTFE additives to provide superior lubrication.

Uses advised against None known. 1.3. Details of the supplier of the safety data sheet

Alsco Ltd **Supplier**

Unit 13 Hillmead Industrial Estate Company name

Address Marshall Road

Swindon, Wiltshire

United Kingdom SN5 5FZ

+44 1793 733 900 **Telephone** 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;R48/20, Xi;R36/38, 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

Aerosols Category 1 H222 - Extremely flammable

aerosol.

H229 - Pressurized container: May

burst if heated.

Health hazards

exposure

H315 - Causes skin irritation. Skin corrosion/irritation Category 2 Serious eye damage/eye irritation Category 2

H319 - Causes serious eye irritation.

Reproductive toxicity Category 2

H361 - Suspected of damaging fertility or the unborn child.

Specific target organ toxicity - single Category 3 narcotic effects H336 - May cause drowsiness or

dizziness.

Material name: White Lithium - ITW Pro Brands (EU)

03816, M03816 Version #: 02 Revision date: 25-August-2016 Issue date: 10-August-2015

Specific target organ toxicity - repeated

exposure (inhalation)

Category 2 (nervous system)

H373 - May cause damage to organs (nervous system) through prolonged or repeated exposure by

inhalation.

Environmental hazards

Hazardous to the aquatic environment,

long-term aquatic hazard

Category 2

H411 - Toxic to aquatic life with

long lasting effects.

Hazard summary

Physical hazards Extremely flammable.

Health hazards Irritating to eyes and skin. Also harmful: danger of serious damage to health by prolonged

> exposure through inhalation. Possible risk of impaired fertility. Possible risk of harm to the unborn child. 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 Prolonged exposure may cause chronic effects.

Main symptoms May cause drowsiness and dizziness. Narcosis. Headache. Nausea, vomiting. Behavioural

changes. Decrease in motor functions. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Prolonged exposure may cause chronic effects.

2.2. Label elements

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

2,2-dimethylbutane, 2,3-Dimethylbutane, 2-Methylpentane, 3-Methylpentane, Acetone, n-Hexane, Contains:

Petroleum Gases, Liquefied, Sweetened, Petroleum Oil

Hazard pictograms









Signal word Danger

Hazard statements

Extremely flammable aerosol. H222

Pressurized container: May burst if heated. H229

Causes skin irritation. H315 Causes serious eye irritation. H319 May cause drowsiness or dizziness. H336

Suspected of damaging fertility or the unborn child. H361

May cause damage to organs (nervous system) through prolonged or repeated exposure by H373

Toxic to aquatic life with long lasting effects. H411

Precautionary statements

Prevention

Obtain special instructions before use. P201

Do not handle until all safety precautions have been read and understood. P202

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P210

Do not spray on an open flame or other ignition source. P211

Do not pierce or burn, even after use. P251

Do not breathe gas. P260

Wash thoroughly after handling. P264

Use only outdoors or in a well-ventilated area. P271

Avoid release to the environment. P273

Wear protective gloves/protective clothing/eye protection/face protection. P280

Response

IF ON SKIN: Wash with plenty of water. P302 + P352

IF INHALED: Remove person to fresh air and keep comfortable for breathing. P304 + P340

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present P305 + P351 + P338

and easy to do. Continue rinsing.

IF exposed or concerned: Get medical advice/attention. P308 + P313 Call a POISON CENTER/doctor if you feel unwell. P312 If skin irritation occurs: Get medical advice/attention. P332 + P313 If eye irritation persists: Get medical advice/attention. P337 + P313 P362 + P364 Take off contaminated clothing and wash it before reuse.

P391 Collect spillage.

Storage

Store in a well-ventilated place. Keep container tightly closed. P403 + P233

Store locked up. P405

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information 61,78, 36 % of the mixture consists of component(s) of unknown acute oral toxicity. 97,03 % of

the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 60,7 % of the mixture consists of component(s) of unknown acute dermal toxicity.

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
Petroleum Gases, Liqu Sweetened	efied,	20 - 30	68476-86-8 270-705-8	-	649-203-00-1	
Classification:	DSD:	F+;R12, Carc. C	Cat. 1;R45, Muta. Ca	at. 2;R46		K,S
	CLP:	Muta. 1B;H340,	Carc. 1A;H350			K,S,U
Petroleum Oil		20 - 30	64742-52-5 265-155-0	-	649-465-00-7	Note L
Classification:	DSD:	Carc. Cat. 2;R4	5			L
	CLP:	Asp. Tox. 1;H30)4, Skin Irrit. 2;H315	5, Eye Irrit. 2;H319, Carc. 1B;	H350	L
2-Methylpentane		10 - 20	107-83-5 203-523-4	-	601-007-00-7	
Classification:	DSD:	F;R11, Xn;R65,	Xi;R38, R67, N;R5	1/53		С
	CLP:	Flam. Liq. 2;H22 Aquatic Chronic		14, Skin Irrit. 2;H315, STOT S	E 3;H336,	С
Acetone		10 - 20	67-64-1 200-662-2	-	606-001-00-8	#
Classification:	DSD:	F;R11, Xi;R36, I	R66-67			
	CLP:	Flam. Liq. 2;H22	25, Eye Irrit. 2;H319), STOT SE 3;H336		
2,3-Dimethylbutane		1 - 10	79-29-8 201-193-6	-	601-007-00-7	
Classification:	DSD:	F;R11, Xn;R65,	Xi;R38, R67, N;R5	1/53		С
	CLP:	Flam. Liq. 2;H22 Aquatic Chronic		4, Skin Irrit. 2;H315, STOT S	E 3;H336,	С
3-Methylpentane		1 - 10	96-14-0 202-481-4	-	601-007-00-7	
Classification:	DSD:	F;R11, Xn;R65,	Xi;R38, R67, N;R5	1/53		С
	CLP:	Flam. Liq. 2;H22 Aquatic Chronic		4, Skin Irrit. 2;H315, STOT S	E 3;H336,	С
2,2-dimethylbutane		1 - 5	75-83-2 200-906-8	-	601-007-00-7	
Classification:	DSD:	F;R11, Xn;R65,	Xi;R38, R67, N;R5	1/53		С
	CLP:	Flam. Liq. 2;H22 Aquatic Chronic		4, Skin Irrit. 2;H315, STOT S	E 3;H336,	С

Chemical name % CAS-No. / EC REACH Registration No. INDEX No. Notes

n-Hexane 1 - 3 110-54-3 - 601-037-00-0

203-777-6

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,

STOT RE 2;H373, Aquatic Chronic 2;H411

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.

Note K: The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0,1 % w/w 1,3-butadiene (EINECS No 203-450-8).

Note L: This component has been tested by Supplier. According to Supplier, the component complies with the criteria of Note L in Annex I of 67/548/EEC, and is exempt from a classification of T; R45. (Contains less than 3% DMSO)

Note S: This substance may not require a label according to Article 17 (see section 1.3 of Annex I) (Table 3.1). This substance may not require a label according to Article 23 of Directive 67/548/EEC (see section 8 of Annex VI to that Directive) (Table 3.2).

Note U: When put on the market gases have to be classified as "Gases under pressure", in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case.

Composition comments

The full text for all R- and H-phrases is displayed in section 16.

SECTION 4: First aid measures

General information

IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. 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. 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. In the unlikely event of swallowing contact a physician or poison control centre. Rinse mouth.

Ingestion
4.2. Most important symptoms

May cause drowsiness and dizziness. Narcosis. Headache. Nausea, vomiting. Behavioural changes. Decrease in motor functions. Severe eye irritation. Symptoms may include stinging.

and effects, both acute and delayed

tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.

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

Alcohol resistant foam. Powder. Carbon dioxide (CO2).

media

Unsuitable extinguishing

g D0 110

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

media

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

Special fire fighting procedures

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

Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. In the event of fire and/or explosion do not breathe fumes.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe 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 product from entering drains. 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. Put material in suitable, covered, labeled containers.

6.4. Reference to other sections

Use personal protection recommended in Section 8 of the SDS. For waste disposal, see section

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. 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. Do not breathe gas. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. 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), BGBI. II, no. 184/2001

Components	Туре	Value	
2,2-dimethylbutane (CAS 75-83-2)	MAK	715 mg/m3	
		200 ppm	
	STEL	2860 mg/m3	
		800 ppm	
2,3-Dimethylbutane (CAS 79-29-8)	MAK	715 mg/m3	
,		200 ppm	
	STEL	2860 mg/m3	
		800 ppm	
2-Methylpentane (CAS 107-83-5)	MAK	715 mg/m3	

Austria. MAK List, OEL Ordinance Components	Type	Value
		200 ppm
	STEL	2860 mg/m3
		800 ppm
3-Methylpentane (CAS	MAK	715 mg/m3
96-14-0)		200 ppm
	STEL	2860 mg/m3
	SILL	800 ppm
Acetone (CAS 67-64-1)	MAK	1200 mg/m3
Acetone (GAG 01-04-1)	IVIZIX	500 ppm
	STEL	4800 mg/m3
	3122	2000 ppm
n-Hexane (CAS 110-54-3)	MAK	72 mg/m3
1100010	W u C	20 ppm
	STEL	288 mg/m3
	3122	80 ppm
Belgium. Exposure Limit Values.		оо ррш
Components	Туре	Value
Acetone (CAS 67-64-1)	STEL	2420 mg/m3
rectorie (OAO 01-04-1)	STEE	1000 ppm
	TWA	1210 mg/m3
	IWA	500 ppm
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3
i-Hexaile (OAS 110-54-5)	IWA	20 ppm
Pulgaria OELa Pagulatian Na 12	on protection of workers ago	inst risks of exposure to chemical agents at work
Components	Type	Value
Acetone (CAS 67-64-1)	STEL	1400 mg/m3
,	TWA	600 mg/m3
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3
(20 ppm
Croatia. Dangerous Substance Ex	posure Limit Values in the W	orkplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/0
Components	Туре	Value
Acetone (CAS 67-64-1)	MAC	1210 mg/m3
,		500 ppm
	STEL	3620 mg/m3
		1500 ppm
n-Hexane (CAS 110-54-3)	MAC	72 mg/m3
		20 ppm
Czech Republic. OELs. Governme	ent Decree 361	
Components	Туре	Value
Acetone (CAS 67-64-1)	Ceiling	1500 mg/m3
,	TWA	800 mg/m3
n-Hexane (CAS 110-54-3)	Ceiling	200 mg/m3
(0.10 0,	TWA	70 mg/m3
Denmark. Exposure Limit Values		, and the second
Components	Туре	Value
Acetone (CAS 67-64-1)	TLV	600 mg/m3
(3.30.0)	- 	250 ppm
n-Hexane (CAS 110-54-3)	TLV	72 mg/m3
(5.15.11.0)	- - •	20 ppm
Estonia OFI s Occupational Eva	neura I imite of Hazardoue Su	bstances. (Annex of Regulation No. 293 of 18 Septembe
estonia. OELS. Occupational Exp. 2001)	03016 EIIIIII3 UI 118281UUUS SU	balances. (Annies of negulation No. 233 of 10 aeptembe
Components	Туре	Value
	Type TWA	Value 1210 mg/m3

n-Hexane (CAS 110-54-3)

 TWA

1210 mg/m3 500 ppm

72 mg/m3 20 ppm

Finland. Workplace Exposure Lim Components	Туре	Value
2,2-dimethylbutane (CAS	STEL	2300 mg/m3
75-83-2)		630 ppm
	TWA	1800 mg/m3
	1447.	500 ppm
2,3-Dimethylbutane (CAS	STEL	2300 mg/m3
79-29-8)		630 ppm
	TWA	1800 mg/m3
		500 ppm
2-Methylpentane (CAS 107-83-5)	STEL	2300 mg/m3
10, 00 0,		630 ppm
	TWA	1800 mg/m3
		500 ppm
3-Methylpentane (CAS 96-14-0)	STEL	2300 mg/m3
33 11 3)		630 ppm
	TWA	1800 mg/m3
		500 ppm
Acetone (CAS 67-64-1)	STEL	1500 mg/m3
	T14/A	630 ppm
	TWA	1200 mg/m3
n-Hexane (CAS 110-54-3)	STEL	500 ppm 2300 mg/m3
Ti-flexafie (CAS 110-54-5)	SILL	630 ppm
	TWA	72 mg/m3
		20 ppm
France Threshold Limit Values (V	/I FP) for Occupational Expos	ure to Chemicals in France, INRS ED 984
Components	Туре	Value Form
Acetone (CAS 67-64-1)	VLE	2420 mg/m3
		1000 ppm
	VME	1210 mg/m3
T. Have to (OAO 440 54.0)		500 ppm
n-Hexane (CAS 110-54-3)	VLE	500 ppm 1500 mg/m3 Vapor.
n-Hexane (CAS 110-54-3)		500 ppm 1500 mg/m3 Vapor. 72 mg/m3
	VLE VME	500 ppm 1500 mg/m3 Vapor. 72 mg/m3 20 ppm
Germany. DFG MAK List (advisory in the Work Area (DFG)	VLE VME v OELs). Commission for the	500 ppm 1500 mg/m3 Vapor. 72 mg/m3 20 ppm nvestigation of Health Hazards of Chemical Compour
Germany. DFG MAK List (advisory in the Work Area (DFG) Components	VLE VME y OELs). Commission for the Type	500 ppm 1500 mg/m3 Vapor. 72 mg/m3 20 ppm Investigation of Health Hazards of Chemical Compour
Germany. DFG MAK List (advisory in the Work Area (DFG) Components 2,2-dimethylbutane (CAS	VLE VME v OELs). Commission for the	500 ppm 1500 mg/m3 Vapor. 72 mg/m3 20 ppm nvestigation of Health Hazards of Chemical Compour
Germany. DFG MAK List (advisory in the Work Area (DFG) Components	VLE VME y OELs). Commission for the Type	500 ppm 1500 mg/m3 Vapor. 72 mg/m3 20 ppm Investigation of Health Hazards of Chemical Compour
Germany. DFG MAK List (advisory in the Work Area (DFG) Components 2,2-dimethylbutane (CAS 75-83-2) 2,3-Dimethylbutane (CAS	VLE VME y OELs). Commission for the Type	500 ppm 1500 mg/m3 Vapor. 72 mg/m3 20 ppm nvestigation of Health Hazards of Chemical Compour Value 1800 mg/m3
Germany. DFG MAK List (advisory in the Work Area (DFG) Components 2,2-dimethylbutane (CAS 75-83-2)	VLE VME VOELs). Commission for the Type TWA	500 ppm 1500 mg/m3 Vapor. 72 mg/m3 20 ppm nvestigation of Health Hazards of Chemical Compour Value 1800 mg/m3 500 ppm 1800 mg/m3
Germany. DFG MAK List (advisory in the Work Area (DFG) Components 2,2-dimethylbutane (CAS 75-83-2) 2,3-Dimethylbutane (CAS 79-29-8) 2-Methylpentane (CAS	VLE VME VOELs). Commission for the Type TWA	500 ppm 1500 mg/m3 Vapor. 72 mg/m3 20 ppm nvestigation of Health Hazards of Chemical Compour Value 1800 mg/m3 500 ppm
Germany. DFG MAK List (advisory in the Work Area (DFG) Components 2,2-dimethylbutane (CAS 75-83-2) 2,3-Dimethylbutane (CAS 79-29-8)	VLE VME VOELs). Commission for the Type TWA TWA	500 ppm 1500 mg/m3 Vapor. 72 mg/m3 20 ppm nvestigation of Health Hazards of Chemical Compour Value 1800 mg/m3 500 ppm 1800 mg/m3 500 ppm 1800 mg/m3
Germany. DFG MAK List (advisory in the Work Area (DFG) Components 2,2-dimethylbutane (CAS 75-83-2) 2,3-Dimethylbutane (CAS 79-29-8) 2-Methylpentane (CAS 107-83-5)	VLE VME VOELs). Commission for the Type TWA TWA TWA	500 ppm 1500 mg/m3 Vapor. 72 mg/m3 20 ppm Investigation of Health Hazards of Chemical Compour Value 1800 mg/m3 500 ppm 1800 mg/m3 500 ppm 1800 mg/m3 500 ppm 1800 mg/m3 500 ppm
Germany. DFG MAK List (advisory in the Work Area (DFG) Components 2,2-dimethylbutane (CAS 75-83-2) 2,3-Dimethylbutane (CAS 79-29-8) 2-Methylpentane (CAS	VLE VME VOELs). Commission for the Type TWA TWA	500 ppm 1500 mg/m3 Vapor. 72 mg/m3 20 ppm Investigation of Health Hazards of Chemical Compour Value 1800 mg/m3 500 ppm 1800 mg/m3 500 ppm 1800 mg/m3 500 ppm 1800 mg/m3
Germany. DFG MAK List (advisory in the Work Area (DFG) Components 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)	VLE VME VOELs). Commission for the Type TWA TWA TWA TWA TWA	500 ppm 1500 mg/m3 Vapor. 72 mg/m3 20 ppm Investigation of Health Hazards of Chemical Compour Value 1800 mg/m3 500 ppm
Germany. DFG MAK List (advisory in the Work Area (DFG) Components 2,2-dimethylbutane (CAS 75-83-2) 2,3-Dimethylbutane (CAS 79-29-8) 2-Methylpentane (CAS 107-83-5) 3-Methylpentane (CAS	VLE VME VOELs). Commission for the Type TWA TWA TWA	500 ppm 1500 mg/m3 Vapor. 72 mg/m3 20 ppm Investigation of Health Hazards of Chemical Compour Value 1800 mg/m3 500 ppm 1800 mg/m3
Germany. DFG MAK List (advisory in the Work Area (DFG) Components 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) Acetone (CAS 67-64-1)	VLE VME VOELs). Commission for the Type TWA TWA TWA TWA TWA TWA TWA	500 ppm 1500 mg/m3 Vapor. 72 mg/m3 20 ppm Investigation of Health Hazards of Chemical Compour Value 1800 mg/m3 500 ppm
Germany. DFG MAK List (advisory in the Work Area (DFG) Components 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)	VLE VME VOELs). Commission for the Type TWA TWA TWA TWA TWA	500 ppm 1500 mg/m3 Vapor. 72 mg/m3 20 ppm nvestigation of Health Hazards of Chemical Compour Value 1800 mg/m3 500 ppm 1200 mg/m3 500 ppm 1200 mg/m3 500 ppm
Germany. DFG MAK List (advisory in the Work Area (DFG) Components 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) Acetone (CAS 67-64-1) n-Hexane (CAS 110-54-3)	VLE VME VOELs). Commission for the Type TWA TWA TWA TWA TWA TWA TWA TW	500 ppm 1500 mg/m3 Vapor. 72 mg/m3 20 ppm Investigation of Health Hazards of Chemical Compour Value 1800 mg/m3 500 ppm 1200 mg/m3 500 ppm 1200 mg/m3 500 ppm 180 mg/m3 500 ppm
Germany. DFG MAK List (advisory in the Work Area (DFG) Components 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) Acetone (CAS 67-64-1)	VLE VME VOELs). Commission for the Type TWA TWA TWA TWA TWA TWA TWA TW	500 ppm 1500 mg/m3 Vapor. 72 mg/m3 20 ppm Investigation of Health Hazards of Chemical Compour Value 1800 mg/m3 500 ppm 1200 mg/m3 500 ppm 1200 mg/m3 500 ppm 180 mg/m3 500 ppm
Germany. DFG MAK List (advisory in the Work Area (DFG) Components 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) Acetone (CAS 67-64-1) n-Hexane (CAS 110-54-3) Germany. TRGS 900, Limit Values Components 2,2-dimethylbutane (CAS	VLE VME VOELs). Commission for the Type TWA TWA TWA TWA TWA TWA TWA TW	500 ppm 1500 mg/m3 Vapor. 72 mg/m3 20 ppm Investigation of Health Hazards of Chemical Compour Value 1800 mg/m3 500 ppm 1200 mg/m3 500 ppm 1200 mg/m3 500 ppm
Germany. DFG MAK List (advisory in the Work Area (DFG) Components 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) Acetone (CAS 67-64-1) n-Hexane (CAS 110-54-3) Germany. TRGS 900, Limit Values Components	VLE VME VOELs). Commission for the Type TWA TWA TWA TWA TWA TWA TWA TW	500 ppm 1500 mg/m3 Vapor. 72 mg/m3 20 ppm Investigation of Health Hazards of Chemical Compour Value 1800 mg/m3 500 ppm 1200 mg/m3 500 ppm

Germany. TRGS 900, Limit Values in the Components	ne Ambient Air at the Workplace Type	Value
2,3-Dimethylbutane (CAS 79-29-8)	AGW	1800 mg/m3
2-Methylpentane (CAS 107-83-5)	AGW	500 ppm 1800 mg/m3
3-Methylpentane (CAS 96-14-0)	AGW	500 ppm 1800 mg/m3
Acetone (CAS 67-64-1)	AGW	500 ppm 1200 mg/m3 500 ppm
n-Hexane (CAS 110-54-3)	AGW	180 mg/m3 50 ppm
Greece. OELs (Decree No. 90/1999, as	amended)	
Components	Туре	Value
Acetone (CAS 67-64-1)	STEL	3560 mg/m3
,	TWA	1780 mg/m3
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm
Hungary. OELs. Joint Decree on Chem	ical Safety of Workplaces	
Components	Туре	Value
Acetone (CAS 67-64-1)	STEL	2420 mg/m3
,	TWA	1210 mg/m3
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3
Iceland. OELs. Regulation 154/1999 on	occupational exposure limits	ŭ
Components	Туре	Value
Acetone (CAS 67-64-1)	TWA	600 mg/m3
,		250 ppm
n-Hexane (CAS 110-54-3)	TWA	90 mg/m3
		25 ppm
Ireland. Occupational Exposure Limits		
Components	Туре	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3
,		500 ppm
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm
Italy. Occupational Exposure Limits		
Components	Туре	Value
2,2-dimethylbutane (CAS	STEL	1000 ppm
75-83-2)	TWA	500 ppm
2,3-Dimethylbutane (CAS	STEL	1000 ppm
79-29-8)		•
	TWA	500 ppm
2-Methylpentane (CAS 107-83-5)	STEL	1000 ppm
107-83-3)	TWA	500 ppm
3-Methylpentane (CAS	STEL	1000 ppm
96-14-0)		•
	TWA	500 ppm
Acetone (CAS 67-64-1)	TWA	1210 mg/m3
n Havana (CAC 440 54.0)	TIMA	500 ppm
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3 20 ppm
Latvia OELa Casunational amassari	imit values of shaming!	• •
Latvia. OELs. Occupational exposure I Components	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3
7.00tolic (07.0 07-0 1 -1)	1 **/ \	500 ppm
n-Hexane (CAS 110-54-3)	STEL	300 mg/m3
(· - • • · · · · · · · · · · · · · · · ·

Latvia. OELs. Occupational exposu Components	Type	Value
	TWA	72 mg/m3
		20 ppm
Lithuania. OELs. Limit Values for (Components	Chemical Substances, Gene Type	ral Requirements Value
Acetone (CAS 67-64-1)	STEL	2420 mg/m3
		1000 ppm
	TWA	1210 mg/m3
		500 ppm
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3
(20 ppm
Luxembourg. Binding Occupationa Components		• •
·	Туре	
Acetone (CAS 67-64-1)	TWA	1210 mg/m3
		500 ppm
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm
Malta. OELs. Occupational Exposu Schedules I and V)	re Limit Values (L.N. 227. of	Occupational Health and Safety Authority Act (CAP. 42
Components	Туре	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3
(0.00 0.00)		500 ppm
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3
Trickane (enerite e+ e)	1 **/ (20 ppm
		20 ρριτι
Netherlands. OELs (binding)	_	
Components	Туре	Value
Acetone (CAS 67-64-1)	STEL	2420 mg/m3
,	TWA	1210 mg/m3
n-Hexane (CAS 110-54-3)	STEL	144 mg/m3
Tricxanc (enerite 54 e)	TWA	72 mg/m3
Norway. Administrative Norms for Components	Contaminants in the Workpl	•
	Туре	
Acetone (CAS 67-64-1)	TLV	295 mg/m3
		125 ppm
n-Hexane (CAS 110-54-3)	TLV	72 mg/m3
		20 ppm
Poland. MACs. Regulation regarding environment, Annex 1	g maximum permissible co	ncentrations and intensities of harmful factors in the w
Components	Туре	Value
Acetone (CAS 67-64-1)	STEL	1800 mg/m3
,	TWA	600 mg/m3
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3
·		5
Portugal. OELs. Decree-Law n. 290 Components	Type	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3
		500 ppm
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm
Portugal. VLEs. Norm on occupation Components	onal exposure to chemical a Type	gents (NP 1796) Value
Acetone (CAS 67-64-1)	STEL	750 ppm
	TWA	500 ppm
n Hoyana (CAS 110 54 2)	TWA	• •
n-Hexane (CAS 110-54-3)		50 ppm
Romania. OELs. Protection of work Components	ers from exposure to chemi Type	ical agents at the workplace Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3
ACEIONE (OAO 07-04-1)	1 V V PA	500 ppm

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

n-Hexane (CAS 110-54-3) TWA 72 mg/m3 20 ppm

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

oomponomo	. , p o	74.45
Acetone (CAS 67-64-1)	TWA	1210 mg/m3
		500 ppm
n-Hexane (CAS 110-54-3)	STEL	140 mg/m3
		40 ppm
	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)

(Official Gazette of the Republic of Components	Туре	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	
Acetone (CAS 67-64-1)	TWA	1210 mg/m3	
		500 ppm	
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3	
		20 ppm	
Spain. Occupational Exposure Li Components	mits Type	Value	
Acetone (CAS 67-64-1)	TWA	1210 mg/m3	
7.00.01.0 (07.0 07 01 1)	1777	500 ppm	
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3	
The results (OAO 110-34-3)	1 ***	20 ppm	
		20 ррті	
Sweden. Occupational Exposure Components	Limit Values Type	Value	
2,2-dimethylbutane (CAS	STEL	1100 mg/m3	
75-83-2)			
10 00 2)		000	
75 55 2)	T)A/A	300 ppm	
73 33 2)	TWA	700 mg/m3	
		700 mg/m3 200 ppm	
	TWA STEL	700 mg/m3 200 ppm 1100 mg/m3	
2,3-Dimethylbutane (CAS	STEL	700 mg/m3 200 ppm 1100 mg/m3 300 ppm	
2,3-Dimethylbutane (CAS		700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3	
2,3-Dimethylbutane (CAS 79-29-8)	STEL	700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm	
2,3-Dimethylbutane (CAS	STEL	700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm 1100 mg/m3	
2,3-Dimethylbutane (CAS 79-29-8) 2-Methylpentane (CAS	STEL TWA STEL	700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm 1100 mg/m3	
2,3-Dimethylbutane (CAS 79-29-8) 2-Methylpentane (CAS	STEL	700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3	
2,3-Dimethylbutane (CAS 79-29-8) 2-Methylpentane (CAS 107-83-5)	STEL TWA STEL TWA	700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm	
2,3-Dimethylbutane (CAS 79-29-8) 2-Methylpentane (CAS	STEL TWA STEL	700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm 1100 mg/m3	
2,3-Dimethylbutane (CAS 79-29-8) 2-Methylpentane (CAS 107-83-5) 3-Methylpentane (CAS	STEL TWA STEL TWA STEL	700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm 1100 mg/m3 200 ppm 1100 mg/m3	
2,3-Dimethylbutane (CAS 79-29-8) 2-Methylpentane (CAS 107-83-5) 3-Methylpentane (CAS	STEL TWA STEL TWA	700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm 1100 mg/m3 200 ppm 1100 mg/m3	
2,3-Dimethylbutane (CAS 79-29-8) 2-Methylpentane (CAS 107-83-5) 3-Methylpentane (CAS 96-14-0)	STEL TWA STEL TWA STEL TWA	700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm 1100 mg/m3 200 ppm 1100 mg/m3 200 ppm	
2,3-Dimethylbutane (CAS 79-29-8) 2-Methylpentane (CAS 107-83-5) 3-Methylpentane (CAS 96-14-0)	STEL TWA STEL TWA STEL	700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm 1100 mg/m3 200 ppm 1100 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm 700 mg/m3	
2,3-Dimethylbutane (CAS 79-29-8) 2-Methylpentane (CAS 107-83-5) 3-Methylpentane (CAS 96-14-0)	STEL TWA STEL TWA STEL TWA STEL	700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm 1100 mg/m3 200 ppm 1100 mg/m3 300 ppm 1200 ppm 1200 mg/m3 500 ppm	
2,3-Dimethylbutane (CAS 79-29-8) 2-Methylpentane (CAS 107-83-5) 3-Methylpentane (CAS	STEL TWA STEL TWA STEL TWA	700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm 1100 mg/m3 200 ppm 1100 mg/m3 200 ppm 1100 mg/m3 300 ppm 700 mg/m3 200 ppm 700 mg/m3	

Components	Limit Values Type	Value
n-Hexane (CAS 110-54-3)	STEL	180 mg/m3
,		50 ppm
	TWA	90 mg/m3
		25 ppm
Switzerland. SUVA Grenzwerte ar	n Arbeitsplatz	• •
Components	Туре	Value
2,2-dimethylbutane (CAS	STEL	3600 mg/m3
75-83-2)		1000 ppm
	T\A/ A	1000 ppm
	TWA	1800 mg/m3
0.0 D: (0.4.0	OTE!	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
107 00-0)		1000 ppm
	TWA	1800 mg/m3
	1,117,1	500 ppm
3-Methylpentane (CAS 96-14-0)	STEL	3600 mg/m3
90-14-0)		1000 ppm
	TWA	1800 mg/m3
		500 ppm
Acetone (CAS 67-64-1)	STEL	2400 mg/m3
		1000 ppm
	TWA	1200 mg/m3
		500 ppm
n-Hexane (CAS 110-54-3)	STEL	1440 mg/m3
Trioxarie (Grie Tro Grie)	3122	400 ppm
	TWA	180 mg/m3
	IVV	50 ppm
III FIIAO Wa Labara E	wite OMEL al	σο μριτι
UK. EH40 Workplace Exposure Li Components	mits (WELs) Type	Value
Acetone (CAS 67-64-1)	STEL	3620 mg/m3
100000000000000000000000000000000000000	0.22	1500 ppm
	TWA	1210 mg/m3
	1 44/1	500 ppm
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3
I-HEXALIE (UAS 110-34-3)	IVVA	20 ppm
		2000/39/EC, 2006/15/EC, 2009/161/EU
Components	Туре	Value
Acetone (CAS 67-64-1)	TWA	1210 mg/m3
		500 ppm
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm

Biological limit values

Croatia. BLV. Dangerous Substance Exposure Limit Values at Workplace, Annexes 4 (as amended)
Components Value Determinant Specimen Sampling time

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	*
	38,95 mmol/mol	Acetone	Creatinine in urine	*
n-Hexane (CAS 110-54-3)	150 μg/l	n-Hexane	Blood	*
	5,3 mg/g	2,5-Hexanedio ne	Creatinine in urine	*

Croatia. BLV. Dangerous Substance E	xposure Limit Values at Workp	lace, Annexes 4 (as amended)
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Components	Value	Determinant	Specimen	Sampling time	
	5,25 mmol/mol	2,5-Hexanedio ne	Creatinine in urine	*	
	40 ppm	n-Hexane	End-exhaled air	*	
	1,74 umol/l	n-Hexane	Blood	*	
	1,66 umol/l	n-Hexane	End-exhaled	*	

^{* -} 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	*
n-Hexane (CAS 110-54-3)	5 mg/g	2,5-Hexanedio ne	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	
Acetone (CAS 67-64-1)	80 mg/l	Aceton	Urine	*	
n-Hexane (CAS 110-54-3)	5 mg/l	2,5-Hexandion plus 4,5-Dihydroxy- 2-hexanon (nach Hydrolyse)	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-dio n	Creatinine in urine	*
	3,5 µmol/mmol	hexane-2,5-dio n	Creatinine in 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	*	
n-Hexane (CAS 110-54-3)	3 mg/g	2,5-hexanedion e and 4,5-dihydroxy-2 -hexanone	Creatinine in urine	*	
	5 mg/l	2,5-hexanedion e and 4,5-dihydroxy-2 -hexanone	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 * n-Hexane (CAS 110-54-3) 0,2 mg/l 2,5-Hexanodio na, sin hidrólisis Urine *

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.

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

Components Value Determinant Specimen Sampling time

n-Hexane (CAS 110-54-3) 5 mg/l 2,5-Hexandion plus 4,5-Dihydroxy-2-hexanon *

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

Recommended monitoring

procedures

Follow standard monitoring procedures.

Derived no effect levels

(DNELs)

Predicted no effect

concentrations (PNECs)

Not available.

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. Use of an impervious apron is recommended.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment. **Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

Hygiene measures Observe any medical surveillance requirements. 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 White.

Odour Slight petroleum odor

Odour threshold Not available.

pH Not available.

Melting point/freezing point Not applicable

Initial boiling point and boiling 70 °C (158 °F)

range

Flash point

< -17,0 °C (< 1,4 °F) Tag closed cup

Evaporation rate < 1 (Ethyl Ether =1)
Flammability (solid, gas) Flammable gas.

Upper/lower flammability or explosive limits

Flammability limit - lower 1,8 % Estimated

(%)

Flammability limit - upper 9,5 % Estimated

(%)

Vapour pressure 2200 - 2700 mm Hg @ 20 °C

Vapour density 3 (air =1)

Not available. Relative density

Solubility(ies)

Not soluble in water Solubility (water)

Solubility (other) Not available.

Partition coefficient (n-octanol/water)

Not available. **Auto-ignition temperature Decomposition temperature** Not available. 700 - 1600 cP **Viscosity Explosive properties** Not explosive. Not oxidising. Oxidising properties

9.2. Other information

Percent volatile 85 - 90 %

0,74 - 0,78 @ 20 °C (water =1) Specific gravity

VOC 51,3 % 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.

Material is stable under normal conditions. 10.2. Chemical stability

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

10.6. Hazardous

decomposition products

Upon decomposition this product emits acrid dense smoke with carbon dioxide, carbon monoxide,

water and other products of combustion.

SECTION 11: Toxicological information

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

Information on likely routes of exposure

May cause damage to organs through prolonged or repeated exposure by inhalation. May cause Inhalation

drowsiness and dizziness. Headache. Nausea, vomiting.

Skin contact Causes skin irritation.

Eye contact Causes serious eye irritation.

May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of Ingestion

occupational exposure.

Symptoms May cause drowsiness and dizziness. Narcosis. Headache. Nausea, vomiting. Behavioural

changes. Decrease in motor functions. 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

Narcotic effects. **Acute toxicity**

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

Acute Dermal

LD50

Rabbit > 20 ml/kg, 24 Hours

Inhalation

Vapour

LC50 Rat 50,1 mg/l, 4 Hours

Oral

LD50 Rat 9,1 ml/kg

n-Hexane (CAS 110-54-3)

Acute Dermal

Rabbit LD50 > 5 ml/kg, 4 Hours

Material name: White Lithium - ITW Pro Brands (EU)

Components **Species Test results** Inhalation Vapour LC50 Rat 73860 ppm, 4 Hours Oral LD50 Rat 49 ml/kg Petroleum Oil (CAS 64742-52-5) **Acute Dermal** LD50 Rabbit > 2000 mg/kg

 Inhalation
 LC50
 Rat
 > 3,9 mg/l, 4 Hours

 Oral
 Oral
 Residence of the control of the contr

LD50 Rat > 2000 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 mutagenicityNo 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.

Titanium dioxide only presents a risk of cancer by inhalation of very fine dust. In this product, the titanium dioxide is incorporated into the grease and is not present as a respirable dust.

ACGIH Carcinogens

Acetone (CAS 67-64-1) 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)

Petroleum Gases, Liquefied, Sweetened (CAS 68476-86-8)

Petroleum Oil (CAS 64742-52-5)

Reproductive toxicity Suspected of damaging fertility or the unborn child.

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

n-Hexane (CAS 110-54-3) Toxic for reproduction - category 2.

Specific target organ toxicity -

single exposure

May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure

May cause damage to organs (nervous system) through prolonged or repeated exposure by

inhalation.

Aspiration hazard Not likely, due to the form of the product.

Mixture versus substance

information

degradability

No information available.

Other information Symptoms may be delayed.

SECTION 12: Ecological information

12.1. Toxicity Toxic to aquatic life with long lasting effects. Based on available data, the classification criteria are

not met for hazardous to the aquatic environment, acute hazard.

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 4740 - 6330 mg/l, 96 hours (Oncorhynchus mykiss) n-Hexane (CAS 110-54-3) Aquatic LC50 Fish Fathead minnow (Pimephales promelas) 2,101 - 2,981 mg/l, 96 hours 12.2. Persistence and No data is available on the degradability of this product.

Material name: White Lithium - ITW Pro Brands (EU)

SDS EU

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12.3. Bioaccumulative potential

Partition coefficient

n-octanol/water (log Kow)

 White Lithium
 < 1</td>

 2,2-dimethylbutane
 3,82

 2,3-Dimethylbutane
 3,42

 2-Methylpentane
 3,74

 3-Methylpentane
 3,6

 Acetone
 -0,24

 n-Hexane
 3,9

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT Not available.

and vPvB assessment

ivoi 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 codeThe 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 Aerosols, flammable

name

14.3. Transport hazard class(es)

Class 2.1 Subsidiary risk -Label(s) 2.1

Hazard No. (ADR) Not available.

Tunnel restriction code D

14.4. Packing group Not applicable.

14.5. Environmental hazards No.

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

for user

RID

14.1. UN number UN1950

14.2. UN proper shipping Aerosols, flammable

name

14.3. Transport hazard class(es)

Class 2.1 Subsidiary risk -Label(s) 2.1

14.4. Packing group Not applicable.

14.5. Environmental hazards No.

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

for user

ADN

14.1. UN number UN1950

14.2. UN proper shipping Aerosols, flammable

name

14.3. Transport hazard class(es)

Class Subsidiary risk Label(s) 2.1

Not applicable. 14.4. Packing group

14.5. Environmental hazards No.

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

for user

IATA

14.1. UN number UN1950

14.2. UN proper shipping Aerosols, flammable

14.3. Transport hazard class(es)

2.1 Class Subsidiary risk 2.1 Label(s)

14.4. Packing group Not applicable.

14.5. Environmental hazards No.

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

for user

Other information

Passenger and cargo

aircraft

Allowed with restrictions.

Not applicable.

Cargo aircraft only Allowed with restrictions.

IMDG

14.1. UN number UN1950

14.2. UN proper shipping AEROSOLS, flammable

name

14.3. Transport hazard class(es)

Class Subsidiary risk 2.1 Label(s)

Not applicable. 14.4. Packing group

14.5. Environmental hazards

Marine pollutant No. F-D. S-U **EmS**

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

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 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

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

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) n-Hexane (CAS 110-54-3)

Petroleum Gases, Liquefied, Sweetened (CAS 68476-86-8)

Petroleum Oil (CAS 64742-52-5)

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

Petroleum Gases, Liquefied, Sweetened (CAS 68476-86-8)

Petroleum Oil (CAS 64742-52-5)

Other EU regulations

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

Acetone (CAS 67-64-1)

n-Hexane (CAS 110-54-3)

Petroleum Gases, Liquefied, Sweetened (CAS 68476-86-8)

Pregnant women should not work with the product, if there is the least risk of exposure. The Other regulations

> 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

R11 Highly flammable. R12 Extremely flammable. R36 Irritating to eyes.

R36/38 Irritating to eyes and skin.

R38 Irritating to skin. R45 May cause cancer.

R46 May cause heritable genetic damage.

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.

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R62 Possible risk of impaired fertility.

R63 Possible risk of harm to the unborn child. R65 Harmful: may cause lung damage if swallowed.

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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.

H340 May cause genetic defects.

H350 May cause cancer.

H373 May cause damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

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

Follow training instructions when handling this material.

ITW Pro Brands cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. 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.

Revision information Training information Disclaimer

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