SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation

LPS® Dry Film PTFE Lubricant

of the mixture

Registration number

Synonyms None.

Part Number 02616, M02616 20-June-2016 Issue date

Version number

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

Identified uses A dry film industrial lubricant for rubber, plastic and metal parts.

None known. Uses advised against

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

Telephone +44 1793 733 900 In Case of Emergency +001 703-527-3887

Manufacturer

Company name ITW Pro Brands

4647 Hugh Howell Rd., Tucker, GA 30084 (U.S.A.) **Address**

Website http://www.lpslabs.com lpssds@itwprobrands.com e-mail

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

F+;R12, 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

H229 - Pressurized container: May

burst if heated.

Health hazards

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

Serious eye damage/eye irritation Category 2 H319 - Causes serious eye

irritation.

H361 - Suspected of damaging Reproductive toxicity Category 2

fertility or the unborn child.

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

dizziness.

exposure

Environmental hazards Hazardous to the aquatic environment, Category 2 H411 - Toxic to aquatic life with

long-term aquatic hazard long lasting effects.

Hazard summary

Physical hazards Extremely flammable. **Health hazards** May impair fertility. May cause harm to the unborn child. Irritating to eyes and 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

Irritating to eyes and skin. Do not breathe dust/fume/gas/mist/vapors/spray. Pregnant women or women of child-bearing age should not be exposed to this product. Toxic to aquatic organisms,

may cause long-term adverse effects in the aquatic environment.

Main symptoms May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation.

Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May

cause redness and pain.

2.2. Label elements

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

1,1-Difluoroethane (HFC-152a), 2,2-Dimethylbutane, 2,3-Dimethylbutane, 2-Methylpentane, Contains:

3-Methylpentane, Isopropanol, n-Hexane

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 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

Avoid breathing gas. P261

Wash thoroughly after handling. P264

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

P273 Avoid release to the environment.

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

Response

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

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 Take off contaminated clothing and wash it before reuse. P362 + P364

Collect spillage. P391

Storage

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

Store locked up. P405

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

Disposal

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

Supplemental label information 18,5 % of the mixture consists of component(s) of unknown long-term hazards to the aquatic

environment.

2.3. Other hazards None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

eral information						
Chemical name		%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
1,1-Difluoroethane (HF	C-152a)	40 - 50	75-37-6 200-866-1	-	-	
Classification:	DSD:	F+;R12				
	CLP:	Flam. Gas 1;H2	20			
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;H2: Aquatic Chronic		04, Skin Irrit. 2;H315, STOT S	SE 3;H336,	С
Isopropanol		10 - 20	67-63-0 200-661-7	-	603-117-00-0	
Classification:	DSD:	F;R11, Xi;R36,	R67			
	CLP:	Flam. Liq. 2;H2	25, Eye Irrit. 2;H319	9, STOT SE 3;H336		
3-Methylpentane		5 - 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;H2: Aquatic Chronic		04, Skin Irrit. 2;H315, STOT S	SE 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;H2: Aquatic Chronic		04, Skin Irrit. 2;H315, STOT S	SE 3;H336,	С
2,3-Dimethylbutane		1 - 5	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;H2: Aquatic Chronic		04, Skin Irrit. 2;H315, STOT S	SE 3;H336,	С
n-Hexane		0,1 - 1	110-54-3 203-777-6	-	601-037-00-0	#
Classification:	DSD:	F;R11, Repr. Ca	at. 3;R62, Xn;R65-4	8/20, Xi;R38, R67, N;R51/53	}	
	CLP:		25, Asp. Tox. 1;H30 73, Aquatic Chronic	04, Skin Irrit. 2;H315, STOT 5 2;H411	SE 3;H336,	

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.

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

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.

Ingestion In the unlikely event of swallowing contact a physician or poison control centre. Rinse mouth.

4.2. Most important symptoms and effects, both acute and delayed May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May

cause redness and pain.

4.3. Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards Extremely flammable aerosol.

5.1. Extinguishing media

Suitable extinguishing

media

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

Unsuitable extinguishing

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

5.2. Special hazards arising from the substance or mixture

Contents under pressure. Pressurised container may explode when exposed to heat or flame.

During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters
Special protective

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.

Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.

Specific methods

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing gas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.

For emergency responders

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions

Avoid release to the environment. 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.

Large Spills: Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Scoop up used absorbent into drums or other appropriate container. 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.

Never return spills to original containers for re-use.

6.4. Reference to other sections

Use personal protection recommended in Section 8 of the SDS. For waste disposal, see section 13.

Material name: LPS® Dry Film PTFE Lubricant - ITW Pro Brands (EU) 02616, M02616 Version #: 01 Issue date: 20-June-2016

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. Avoid breathing 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. Keep away from heat, sparks and open flame. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

Austria MAK List OEL Ordinance (CwV) BCBL II no 194/2001

8.1. Control parameters

Occupational exposure limits

Austria. MAK List, OEL Ordinance 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
		200 ppm
	STEL	2860 mg/m3
		800 ppm
3-Methylpentane (CAS 96-14-0)	MAK	715 mg/m3
		200 ppm
	STEL	2860 mg/m3
		800 ppm
Isopropanol (CAS 67-63-0)	MAK	500 mg/m3
		200 ppm
	STEL	2000 mg/m3
		800 ppm
n-Hexane (CAS 110-54-3)	MAK	72 mg/m3
		20 ppm
	STEL	288 mg/m3
		80 ppm
Belgium. Exposure Limit Values.		
Components	Туре	Value
Isopropanol (CAS 67-63-0)	STEL	1000 mg/m3
		400 ppm
	TWA	500 mg/m3
		200 ppm
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3
•		20 ppm
Bulgaria. OELs. Regulation No 13	on protection of workers aga	ainst risks of exposure to chemical agents at work
Components	Туре	Value
1,1-Difluoroethane (HFC-152a) (CAS 75-37-6)	TWA	3000 mg/m3
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	CTEL	1005

STEL

Isopropanol (CAS 67-63-0)

1225 mg/m3

Bulgaria. OELs. Regulation No 13 Components	Type	Value
	TWA	980 mg/m3
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3
Croatia. Dangerous Substance Ex Components	posure Limit Values in the Wo	20 ppm orkplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09 Value
Isopropanol (CAS 67-63-0)	MAC	999 mg/m3
isoproparior (CAS 07-03-0)	IVIAC	400 ppm
	STEL	1250 mg/m3
		500 ppm
n-Hexane (CAS 110-54-3)	MAC	72 mg/m3
		20 ppm
Cyprus. OELs. Control of factory a Components	atmosphere and dangerous su Type	bstances in factories regulation, PI 311/73, as amended. Value
Isopropanol (CAS 67-63-0)	TWA	980 mg/m3
(6/18 6/ 68 6)	1777	400 ppm
Czech Republic. OELs. Governme	ent Decree 361	''
Components	Туре	Value
Isopropanol (CAS 67-63-0)	Ceiling	1000 mg/m3
isoproparior (OAS 07-05-0)	TWA	500 mg/m3
n-Hexane (CAS 110-54-3)	Ceiling	200 mg/m3
	TWA	70 mg/m3
Denmark. Exposure Limit Values		
Components	Туре	Value
	T1.)/	490 mg/m3
Isopropanol (CAS 67-63-0)	TLV	490 mg/m3
, , , , , ,		200 ppm
n-Hexane (CAS 110-54-3) Estonia. OELs. Occupational Exp	TLV	<u> </u>
n-Hexane (CAS 110-54-3)	TLV	200 ppm 72 mg/m3 20 ppm
n-Hexane (CAS 110-54-3) Estonia. OELs. Occupational Exp. 2001)	TLV osure Limits of Hazardous Sul	200 ppm 72 mg/m3 20 ppm pstances. (Annex of Regulation No. 293 of 18 September Value 600 mg/m3
n-Hexane (CAS 110-54-3) Estonia. OELs. Occupational Exp. 2001) Components	TLV osure Limits of Hazardous Sul Type STEL	200 ppm 72 mg/m3 20 ppm postances. (Annex of Regulation No. 293 of 18 September Value 600 mg/m3 250 ppm
n-Hexane (CAS 110-54-3) Estonia. OELs. Occupational Exp. 2001) Components	TLV osure Limits of Hazardous Sul Type	200 ppm 72 mg/m3 20 ppm pstances. (Annex of Regulation No. 293 of 18 September Value 600 mg/m3 250 ppm 350 mg/m3
n-Hexane (CAS 110-54-3) Estonia. OELs. Occupational Exp. 2001) Components Isopropanol (CAS 67-63-0)	TLV osure Limits of Hazardous Sul Type STEL TWA	200 ppm 72 mg/m3 20 ppm ostances. (Annex of Regulation No. 293 of 18 September Value 600 mg/m3 250 ppm 350 mg/m3 150 ppm
n-Hexane (CAS 110-54-3) Estonia. OELs. Occupational Exp. 2001) Components	TLV osure Limits of Hazardous Sul Type STEL	200 ppm 72 mg/m3 20 ppm pstances. (Annex of Regulation No. 293 of 18 September Value 600 mg/m3 250 ppm 350 mg/m3
n-Hexane (CAS 110-54-3) Estonia. OELs. Occupational Exp. 2001) Components Isopropanol (CAS 67-63-0)	TLV osure Limits of Hazardous Sul Type STEL TWA TWA	200 ppm 72 mg/m3 20 ppm ostances. (Annex of Regulation No. 293 of 18 September Value 600 mg/m3 250 ppm 350 mg/m3 150 ppm 72 mg/m3
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n-Hexane (CAS 110-54-3) Estonia. OELs. Occupational Expanding Expanding Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Finland. Workplace Exposure Lime Components 2,2-Dimethylbutane (CAS 75-83-2) 2,3-Dimethylbutane (CAS 79-29-8) 2-Methylpentane (CAS 107-83-5)	TLV osure Limits of Hazardous Sul Type STEL TWA TWA STEL TWA STEL TWA STEL TWA STEL TWA STEL TWA STEL TWA	200 ppm 72 mg/m3 20 ppm postances. (Annex of Regulation No. 293 of 18 September Value 600 mg/m3 250 ppm 350 mg/m3 150 ppm 72 mg/m3 20 ppm Value 2300 mg/m3 630 ppm 1800 mg/m3 500 ppm 2300 mg/m3 630 ppm 1800 mg/m3 630 ppm 1800 mg/m3 500 ppm 2300 mg/m3 630 ppm 1800 mg/m3 500 ppm 2300 mg/m3 500 ppm 2300 mg/m3 500 ppm
n-Hexane (CAS 110-54-3) Estonia. OELs. Occupational Expanding Expanding Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Finland. Workplace Exposure Lime Components 2,2-Dimethylbutane (CAS 75-83-2) 2,3-Dimethylbutane (CAS 79-29-8) 2-Methylpentane (CAS 107-83-5) 3-Methylpentane (CAS	TLV osure Limits of Hazardous Sul Type STEL TWA TWA TWA STEL TWA STEL TWA STEL TWA STEL TWA STEL	200 ppm 72 mg/m3 20 ppm postances. (Annex of Regulation No. 293 of 18 September Value 600 mg/m3 250 ppm 350 mg/m3 150 ppm 72 mg/m3 20 ppm Value 2300 mg/m3 630 ppm 1800 mg/m3 500 ppm 2300 mg/m3 630 ppm 1800 mg/m3
n-Hexane (CAS 110-54-3) Estonia. OELs. Occupational Expanding Expanding Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Finland. Workplace Exposure Lime Components 2,2-Dimethylbutane (CAS 75-83-2) 2,3-Dimethylbutane (CAS 79-29-8) 2-Methylpentane (CAS 107-83-5)	TLV osure Limits of Hazardous Sul Type STEL TWA TWA STEL TWA STEL TWA STEL TWA STEL TWA STEL TWA STEL TWA	200 ppm 72 mg/m3 20 ppm postances. (Annex of Regulation No. 293 of 18 September Value 600 mg/m3 250 ppm 350 mg/m3 150 ppm 72 mg/m3 20 ppm Value 2300 mg/m3 630 ppm 1800 mg/m3 500 ppm 2300 mg/m3 630 ppm 1800 mg/m3 630 ppm 1800 mg/m3 500 ppm 2300 mg/m3 630 ppm 1800 mg/m3 500 ppm 2300 mg/m3 500 ppm 2300 mg/m3 500 ppm
n-Hexane (CAS 110-54-3) Estonia. OELs. Occupational Expanding Expanding Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Finland. Workplace Exposure Lime Components 2,2-Dimethylbutane (CAS 75-83-2) 2,3-Dimethylbutane (CAS 79-29-8) 2-Methylpentane (CAS 107-83-5) 3-Methylpentane (CAS	TLV osure Limits of Hazardous Sul Type STEL TWA TWA STEL TWA STEL TWA STEL TWA STEL TWA STEL TWA STEL TWA	200 ppm 72 mg/m3 20 ppm postances. (Annex of Regulation No. 293 of 18 September Value 600 mg/m3 250 ppm 350 mg/m3 150 ppm 72 mg/m3 20 ppm Value 2300 mg/m3 630 ppm 1800 mg/m3 500 ppm 2300 mg/m3

620 mg/m3 250 ppm
1.1
500 mg/m3
200 ppm
2300 mg/m3
630 ppm
72 mg/m3
20 ppm
Exposure to Chemicals in France, INRS ED 984 Value Form
980 mg/m3
400 ppm
1500 mg/m3 Vapor.
72 mg/m3 20 ppm
r the Investigation of Health Hazards of Chemical Compoun
Value
1800 mg/m3
500 ppm
1800 mg/m3
500 ppm
1800 mg/m3
500 ppm
1800 mg/m3
1800 Hig/Hi3
500 ppm
500 mg/m3
200 ppm
180 mg/m3
50 ppm
e Workplace
Value
1800 mg/m3
500 ppm
1800 mg/m3
500 ppm
эоо ррш
1800 ma/m3
1800 mg/m3
500 ppm
-
500 ppm 1800 mg/m3
500 ppm 1800 mg/m3 500 ppm
500 ppm 1800 mg/m3 500 ppm 500 mg/m3
500 ppm 1800 mg/m3 500 ppm 500 mg/m3 200 ppm
500 ppm 1800 mg/m3 500 ppm 500 mg/m3 200 ppm 180 mg/m3
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500 ppm 1800 mg/m3 500 ppm 500 mg/m3 200 ppm 180 mg/m3 50 ppm
500 ppm 1800 mg/m3 500 ppm 500 mg/m3 200 ppm 180 mg/m3 50 ppm
500 ppm 1800 mg/m3 500 ppm 500 mg/m3 200 ppm 180 mg/m3 50 ppm Value
500 ppm 1800 mg/m3 500 ppm 500 mg/m3 200 ppm 180 mg/m3 50 ppm Value 1225 mg/m3 500 ppm
500 ppm 1800 mg/m3 500 ppm 500 mg/m3 200 ppm 180 mg/m3 50 ppm Value 1225 mg/m3 500 ppm 980 mg/m3
500 ppm 1800 mg/m3 500 ppm 500 mg/m3 200 ppm 180 mg/m3 50 ppm Value 1225 mg/m3 500 ppm

Components	Туре	Value
Isopropanol (CAS 67-63-0)	STEL	2000 mg/m3
	TWA	500 mg/m3
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3
Iceland. OELs. Regulation 154/199	9 on occupational exposure	limits
Components	Туре	Value
Isopropanol (CAS 67-63-0)	TWA	490 mg/m3
		200 ppm
n-Hexane (CAS 110-54-3)	TWA	90 mg/m3
		25 ppm
lreland. Occupational Exposure Li	mits	
Components	Туре	Value
Isopropanol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3
,		20 ppm
Italy. Occupational Exposure Limi	ts	
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)	TIALA	F00 mag
0 Matheda antan a 7040	TWA	500 ppm
2-Methylpentane (CAS 107-83-5)	STEL	1000 ppm
	TWA	500 ppm
3-Methylpentane (CAS	STEL	1000 ppm
96-14-0)		
	TWA	500 ppm
Isopropanol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3
		20 ppm
	ure limit values of chemical s	substances in work environment
Latvia. OELs. Occupational expos		
Latvia. OELs. Occupational expos Components	Туре	Value
•	Type STEL	Value 600 mg/m3
Components		
Components Isopropanol (CAS 67-63-0)	STEL	600 mg/m3 350 mg/m3
Components	STEL TWA	600 mg/m3 350 mg/m3 300 mg/m3
Components Isopropanol (CAS 67-63-0)	STEL TWA STEL	600 mg/m3 350 mg/m3
Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3)	STEL TWA STEL TWA	600 mg/m3 350 mg/m3 300 mg/m3 72 mg/m3 20 ppm
Components Isopropanol (CAS 67-63-0)	STEL TWA STEL TWA	600 mg/m3 350 mg/m3 300 mg/m3 72 mg/m3 20 ppm
Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Lithuania. OELs. Limit Values for Components	STEL TWA STEL TWA Chemical Substances, Gene	600 mg/m3 350 mg/m3 300 mg/m3 72 mg/m3 20 ppm ral Requirements Value
Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Lithuania. OELs. Limit Values for	STEL TWA STEL TWA Chemical Substances, Gene	600 mg/m3 350 mg/m3 300 mg/m3 72 mg/m3 20 ppm ral Requirements Value
Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Lithuania. OELs. Limit Values for Components	STEL TWA STEL TWA Chemical Substances, Generative Type STEL	600 mg/m3 350 mg/m3 300 mg/m3 72 mg/m3 20 ppm ral Requirements Value 600 mg/m3 250 ppm
Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Lithuania. OELs. Limit Values for Components	STEL TWA STEL TWA Chemical Substances, Gene	600 mg/m3 350 mg/m3 300 mg/m3 72 mg/m3 20 ppm ral Requirements Value 600 mg/m3 250 ppm 350 mg/m3
Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Lithuania. OELs. Limit Values for Components Isopropanol (CAS 67-63-0)	STEL TWA STEL TWA Chemical Substances, Gene Type STEL TWA	600 mg/m3 350 mg/m3 300 mg/m3 72 mg/m3 20 ppm ral Requirements Value 600 mg/m3 250 ppm 350 mg/m3 150 ppm
Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Lithuania. OELs. Limit Values for Components	STEL TWA STEL TWA Chemical Substances, Generative Type STEL	600 mg/m3 350 mg/m3 300 mg/m3 72 mg/m3 20 ppm ral Requirements Value 600 mg/m3 250 ppm 350 mg/m3
Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Lithuania. OELs. Limit Values for Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3)	STEL TWA STEL TWA Chemical Substances, Gene Type STEL TWA TWA	600 mg/m3 350 mg/m3 300 mg/m3 72 mg/m3 20 ppm ral Requirements Value 600 mg/m3 250 ppm 350 mg/m3 150 ppm 72 mg/m3 20 ppm
Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Lithuania. OELs. Limit Values for Components Isopropanol (CAS 67-63-0)	STEL TWA STEL TWA Chemical Substances, Gene Type STEL TWA TWA	600 mg/m3 350 mg/m3 300 mg/m3 72 mg/m3 20 ppm ral Requirements Value 600 mg/m3 250 ppm 350 mg/m3 150 ppm 72 mg/m3 20 ppm
Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Lithuania. OELs. Limit Values for Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Luxembourg. Binding Occupation Components	STEL TWA STEL TWA Chemical Substances, Gener Type STEL TWA TWA TWA al exposure limit values (Anr Type	600 mg/m3 350 mg/m3 300 mg/m3 72 mg/m3 20 ppm ral Requirements Value 600 mg/m3 250 ppm 350 mg/m3 150 ppm 72 mg/m3 20 ppm 72 mg/m3 20 ppm mex I), Memorial A Value
Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Lithuania. OELs. Limit Values for Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Luxembourg. Binding Occupation	STEL TWA STEL TWA Chemical Substances, Gene Type STEL TWA TWA TWA al exposure limit values (Ann	600 mg/m3 350 mg/m3 300 mg/m3 72 mg/m3 20 ppm ral Requirements Value 600 mg/m3 250 ppm 350 mg/m3 150 ppm 72 mg/m3 20 ppm rex I), Memorial A Value 72 mg/m3
Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Lithuania. OELs. Limit Values for Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Luxembourg. Binding Occupation Components n-Hexane (CAS 110-54-3)	STEL TWA STEL TWA Chemical Substances, Gene Type STEL TWA TWA TWA TWA al exposure limit values (Anr Type TWA	600 mg/m3 350 mg/m3 300 mg/m3 72 mg/m3 20 ppm ral Requirements Value 600 mg/m3 250 ppm 350 mg/m3 150 ppm 72 mg/m3 20 ppm rex I), Memorial A Value 72 mg/m3 20 ppm
Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Lithuania. OELs. Limit Values for Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Luxembourg. Binding Occupation Components n-Hexane (CAS 110-54-3)	STEL TWA STEL TWA Chemical Substances, Gene Type STEL TWA TWA TWA TWA al exposure limit values (Anr Type TWA	600 mg/m3 350 mg/m3 300 mg/m3 72 mg/m3 20 ppm ral Requirements Value 600 mg/m3 250 ppm 350 mg/m3 150 ppm 72 mg/m3 20 ppm rex I), Memorial A Value 72 mg/m3
Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Lithuania. OELs. Limit Values for Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Luxembourg. Binding Occupation Components n-Hexane (CAS 110-54-3) Malta. OELs. Occupational Expose	STEL TWA STEL TWA Chemical Substances, Gene Type STEL TWA TWA TWA TWA al exposure limit values (Anr Type TWA	600 mg/m3 350 mg/m3 300 mg/m3 72 mg/m3 20 ppm ral Requirements Value 600 mg/m3 250 ppm 350 mg/m3 150 ppm 72 mg/m3 20 ppm rex I), Memorial A Value 72 mg/m3 20 ppm
Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Lithuania. OELs. Limit Values for Components Isopropanol (CAS 67-63-0) n-Hexane (CAS 110-54-3) Luxembourg. Binding Occupation Components n-Hexane (CAS 110-54-3) Malta. OELs. Occupational Exposi Schedules I and V)	STEL TWA STEL TWA Chemical Substances, Gene Type STEL TWA TWA TWA al exposure limit values (Anr Type TWA TWA TWA TWA TWA	600 mg/m3 350 mg/m3 300 mg/m3 72 mg/m3 20 ppm ral Requirements Value 600 mg/m3 250 ppm 350 mg/m3 150 ppm 72 mg/m3 20 ppm rex I), Memorial A Value 72 mg/m3 20 ppm Occupational Health and Safety Authority Act (CAP. 424)

144 mg/m3	Туре	Components
144 mg/mo	STEL	n-Hexane (CAS 110-54-3)
72 mg/m3	TWA	Triexane (OAS 110-34-3)
		Norway. Administrative Norms for
Value	Туре	Components
245 mg/m3	TLV	sopropanol (CAS 67-63-0)
100 ppm		(0.10 0. 00 1)
72 mg/m3	TLV	n-Hexane (CAS 110-54-3)
20 ppm		
ons and intensities of harmful factors in the worl	ng maximum permissible co	Poland. MACs. Regulation regardii environment, Annex 1
Value	Туре	Components
1200 mg/m3	STEL	Isopropanol (CAS 67-63-0)
900 mg/m3	TWA	
72 mg/m3	TWA	n-Hexane (CAS 110-54-3)
ies A, n.266)	0/2001 (Journal of the Reput	Portugal. OELs. Decree-Law n. 290
Value	Туре	Components
72 mg/m3	TWA	n-Hexane (CAS 110-54-3)
20 ppm		
	<u>-</u>	Portugal. VLEs. Norm on occupation
Value	Туре	Components
400 ppm	STEL	Isopropanol (CAS 67-63-0)
200 ppm	TWA	
50 ppm	TWA	n-Hexane (CAS 110-54-3)
		Romania. OELs. Protection of wor
Value	Туре	Components
500 mg/m3	STEL	Isopropanol (CAS 67-63-0)
203 ppm		
200 mg/m3	TWA	
81 ppm 72 mg/m3	TWA	n-Hexane (CAS 110-54-3)
20 ppm	IVVA	in-riexarie (CAS 110-54-5)
• •	10/2007 concorning protoctic	Slovakia. OELs. Regulation No. 30
Value	Type	Components
1000 mg/m3	STEL	Isopropanol (CAS 67-63-0)
400 ppm 500 mg/m3	TWA	
200 ppm	IVVA	
140 mg/m3	STEL	n-Hexane (CAS 110-54-3)
40 ppm		(
72 mg/m3	TWA	
20 ppm		
isks due to exposure to chemicals while workin		Slovenia. OELs. Regulations conc (Official Gazette of the Republic of
Value	Туре	Components
Value	TWA	
720 mg/m3		O O Directable de la COAC
720 mg/m3 200 ppm	T) A / A	2,3-السetnyibutane (CAS
720 mg/m3	TWA	79-29-8)
720 mg/m3 200 ppm	TWA	79-29-8)
720 mg/m3 200 ppm 720 mg/m3	TWA	2-Methylpentane (CAS
720 mg/m3 200 ppm 720 mg/m3 200 ppm		79-29-8) 2-Methylpentane (CAS 107-83-5)
Value	Туре	Components 2,2-Dimethylbutane (CAS 75-83-2) 2,3-Dimethylbutane (CAS

TWA

TWA

720 mg/m3

500 mg/m3 200 ppm

200 ppm

3-Methylpentane (CAS 96-14-0)

Isopropanol (CAS 67-63-0)

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	Type	Value	
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3	
Trioxano (one tro oto)	1777	20 ppm	
Spain. Occupational Exposure Lii	mits		
Components	Туре	Value	
Isopropanol (CAS 67-63-0)	STEL	1000 mg/m3	
		400 ppm	
	TWA	500 mg/m3	
		200 ppm	
n-Hexane (CAS 110-54-3)	TWA	72 mg/m3	
		20 ppm	
Sweden. Occupational Exposure		Value	
Components	Туре	Value	
2,2-Dimethylbutane (CAS 75-83-2)	STEL	1100 mg/m3	
73-03-2)		300 ppm	
	TWA	700 mg/m3	
		200 ppm	
2,3-Dimethylbutane (CAS	STEL	1100 mg/m3	
79-29-8)		300 ppm	
	TWA	700 mg/m3	
		200 ppm	
2-Methylpentane (CAS	STEL	1100 mg/m3	
107-83-5)			
	T14/4	300 ppm	
	TWA	700 mg/m3	
2. Mathedra antono (CAC	CTEL	200 ppm	
3-Methylpentane (CAS 96-14-0)	STEL	1100 mg/m3	
		300 ppm	
	TWA	700 mg/m3	
		200 ppm	
Isopropanol (CAS 67-63-0)	STEL	600 mg/m3	
	T14/4	250 ppm	
	TWA	350 mg/m3	
n Hayana (CAC 110 F4 9)	CTEL	150 ppm	
n-Hexane (CAS 110-54-3)	STEL	180 mg/m3	
	TWA	50 ppm 90 mg/m3	
	IVVA	25 ppm	
O.::	Aubaitan late	20 ρβιτι	
Switzerland. SUVA Grenzwerte ar Components	n Arbeitspiatz Type	Value	
2,2-Dimethylbutane (CAS	STEL	3600 mg/m3	
75-83-2)	0.22	-	
		1000 ppm	
	TWA	1800 mg/m3	
O O Dimo athrelle stars (OAO	OTEL	500 ppm	
2,3-Dimethylbutane (CAS 79-29-8)	STEL	3600 mg/m3	
		1000 ppm	
	TWA	1800 mg/m3	
	OTT-:	500 ppm	
2-Methylpentane (CAS 107-83-5)	STEL	3600 mg/m3	
•		1000 ppm	
	TWA	1800 mg/m3	
		500 ppm	
3-Methylpentane (CAS	STEL	3600 mg/m3	
96-14-0)		1000 ppm	
	TWA	1800 mg/m3	
avial reason I DOS Dr. Film DTFF Lubrice		1000 mg/mo	

Switzerland. SUVA Grenzwerte an Components	Туре	Value	
		500 ppm	
Isopropanol (CAS 67-63-0)	STEL	1000 mg/m3	
		400 ppm	
	TWA	500 mg/m3	
		200 ppm	
n-Hexane (CAS 110-54-3)	STEL	1440 mg/m3	
		400 ppm	
	TWA	180 mg/m3	
		50 ppm	
UK. EH40 Workplace Exposure Li	mits (WELs)		
Components	Туре	Value	
Isopropanol (CAS 67-63-0)	STEL	1250 mg/m3	
		500 ppm	
	TWA	999 mg/m3	
		400 ppm	
		72 mg/m3	
n-Hexane (CAS 110-54-3)	TWA	7 £ 111g/1113	
n-Hexane (CAS 110-54-3)	IWA	20 ppm	
		20 ppm	
	ues in Directives 91/322/EEC,	20 ppm 2000/39/EC, 2006/15/EC, 2009/161/EU	

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-Hexanedio ne urine *

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

Components	Value	Determinant	Specimen	Sampling time
Isopropanol (CAS 67-63-0)	25 mg/l	Aceton	Urine	*
	25 mg/l	Aceton	Blood	*
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	
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.

^{* -} 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	
Isopropanol (CAS 67-63-0)	40 mg/l	Acetona	Urine	*	
n-Hexane (CAS 110-54-3)	0,2 mg/l	2,5-Hexanodio na, sin hidrólisis	Urine	*	

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

Components	Value	Determinant	Specimen	Sampling time
Isopropanol (CAS 67-63-0)	25 mg/l	Aceton	Urine	*
	25 mg/l	Aceton	Blood	*
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.

Recommended monitoring

procedures

Derived no effect levels (DNELs)

Predicted no effect

concentrations (PNECs)

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.

Not available.

Not available.

Wear safety glasses with side shields (or goggles). Eye/face protection

Skin protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove - Hand protection

supplier.

- 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.

Follow standard monitoring procedures.

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

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 White. Colour Odour Alcoholic. **Odour threshold** Not available. Not available. Melting point/freezing point Not available. Not available. Initial boiling point and boiling range

Not available. Flash point

Evaporation rate > 1 BuAc Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower Not available.

(%)

Flammability limit - upper

(%)

Not available.

Vapour pressure Not available.

Vapour density > 1

Relative density Not available.

Solubility(ies)

Solubility (water) < 10 %
Solubility (other) Not available.

Partition coefficient Not available.

(n-octanol/water)

Auto-ignition temperatureNot available.Decomposition temperatureNot available.ViscosityNot available.Explosive propertiesNot explosive.Oxidising propertiesNot oxidising.

9.2. Other information

Percent volatile 96 - 99 % Specific gravity 0,82

VOC 47 % per US State & Federal Consumer Product Regulations

SECTION 10: Stability and reactivity

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

10.2. Chemical stability Material is stable under normal conditions.

10.3. Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoidContact with incompatible materials.

10.5. Incompatible materials Acids. Strong oxidising agents. Isocyanates. Chlorine.

10.6. Hazardous

decomposition products

Carbon oxides.

SECTION 11: Toxicological information

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

Information on likely routes of exposure

Inhalation May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be

harmful.

Skin contact Causes skin irritation.

Eye contact Causes serious eye irritation.

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

occupational exposure.

Symptoms May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation.

Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May

cause redness and pain.

11.1. Information on toxicological effects

Acute toxicity Narcotic effects.

Components Species Test results

1,1-Difluoroethane (HFC-152a) (CAS 75-37-6)

<u>Acute</u>

Inhalation

Gas

LC50 Rat > 437500 ppm, 4 Hours

Components **Species Test results** Isopropanol (CAS 67-63-0) **Acute** Dermal Rabbit LD50 12800 mg/kg 16,4 ml/kg, 24 Hours Inhalation Vapour LC50 Rat > 10000 ppm, 6 Hours Oral LD50 Dog 4797 mg/kg Mouse 3600 mg/kg Rabbit 5,03 g/kg Rat 5,84 g/kg 4,7 g/kg n-Hexane (CAS 110-54-3) **Acute** Dermal LD50 Rabbit > 2000 mg/kg, 4 Hours > 5 ml/kg, 4 Hours Inhalation LC50 Mouse 48000 ppm, 4 Hours Vapour LC50 Rat > 5000 ppm, 24 Hours > 31.86 mg/l73860 ppm, 4 Hours Oral LD50 Rat 28710 mg/kg 24 ml/kg Causes skin irritation. Skin corrosion/irritation Causes serious eye irritation. Serious eye damage/eye irritation **Respiratory sensitisation** Due to partial or complete lack of data the classification is not possible. Due to partial or complete lack of data the classification is not possible. Skin sensitisation Due to partial or complete lack of data the classification is not possible. Germ cell mutagenicity Carcinogenicity Due to partial or complete lack of data the classification is not possible. **ACGIH Carcinogens** Isopropanol (CAS 67-63-0) Not classifiable as a human carcinogen. A4 Suspected of damaging fertility or the unborn child. Reproductive toxicity May cause drowsiness and dizziness. Specific target organ

toxicity - single exposure

Specific target organ toxicity - repeated

exposure

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

Not classified.

Mixture versus substance

information

No information available.

Other information None known.

SECTION 12: Ecological information

12.1. Toxicity Toxic to aquatic life with long lasting effects. Components Species Test results

Isopropanol (CAS 67-63-0)

Aquatic

Fish LC50 Bluegill (Lepomis macrochirus) > 1400 mg/l, 96 hours

n-Hexane (CAS 110-54-3)

Aquatic

Fish LC50 Fathead minnow (Pimephales promelas) 2,101 - 2,981 mg/l, 96 hours

12.2. Persistence and

degradability

No data is available on the degradability of this product.

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

 1,1-Difluoroethane (HFC-152a)
 0,75

 2,2-Dimethylbutane
 3,82

 2,3-Dimethylbutane
 3,42

 2-Methylpentane
 3,74

 3-Methylpentane
 3,6

 Isopropanol
 0,05

 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

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

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 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

IATA

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

Other information

Passenger and cargo Allowed with restrictions.

aircraft

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 2.1 Subsidiary risk -Label(s) 2.1

14.4. Packing group Not applicable.

14.5. Environmental hazards

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

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

for user

14.7. Transport in bulk Not applicable.

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 Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended Not listed.

Restrictions on use

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

Not listed.

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

Not listed.

Other EU regulations

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

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)

Isopropanol (CAS 67-63-0)

n-Hexane (CAS 110-54-3)

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

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)

Isopropanol (CAS 67-63-0)

n-Hexane (CAS 110-54-3)

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

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, 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

Information on evaluation method leading to the classification of mixture

Full text of any statements or R-phrases and H-statements under Sections 2 to 15 Not available.

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

R11 Highly flammable.

R12 Extremely flammable.

R36 Irritating to eyes.

R36/38 Irritating to eyes and skin.

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.

R60 May impair fertility.

R61 May cause harm to the unborn child.

R62 Possible risk of impaired fertility.

R65 Harmful: may cause lung damage if swallowed.

R67 Vapours may cause drowsiness and dizziness.

H220 Extremely flammable gas.

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.

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

H411 Toxic to aquatic life with long lasting effects.

Revision information

Product and Company Identification: Product and Company Identification

Composition / Information on Ingredients: Ingredients Physical & Chemical Properties: Multiple Properties Transport Information: Material Transportation Information

Regulatory Information: Risk Phrases - Labeling HazReg Data: North America

GHS: Classification

Training information

Disclaimer

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.