

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	Humiseal 1A27 Aerosol
Registration number	-
Synonyms	None.
Product code	HumiSeal Europe 1A27 Aerosol
Issue date	01-May-2019
Version number	02
Revision date	16-August-2019
Supersedes date	01-May-2019

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

Identified uses	Protective Coating for Printed Circuit Board
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Supplier

Company name	HUMISEAL EUROPE LTD.		
Address	505 Eskdale Road Winnersh Wokingham Berkshire RG41 5TU UK		
Division	A CHASE CORPORATION COMPANY		
Telephone	General Assistance	44 (0) 118 944 2333	
e-mail	europetechsupport@chasecorp.com		
Contact person	Not available.		

1.4. Emergency telephone number	Chemtrec U.K.	+(44) 870 820 0418
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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 Regulation (EC) No 1272/2008 as amended

Physical hazards

Aerosols	Category 1	H222 - Extremely flammable aerosol. H229 - Pressurized container: May burst if heated.
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Health hazards

Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Serious eye damage/eye irritation	Category 2	H319 - Causes serious eye irritation.
Specific target organ toxicity - single exposure	Category 3 narcotic effects	H336 - May cause drowsiness or dizziness.

Environmental hazardsHazardous to the aquatic environment,
long-term aquatic hazard

Category 2

H411 - Toxic to aquatic life with
long lasting effects.**Hazard summary**

Aerosol CONTENTS UNDER PRESSURE.

Pressurised container may explode when exposed to heat or flame. May cause drowsiness and dizziness. Causes serious eye irritation. Causes skin irritation. Dangerous for the environment if discharged into watercourses.

2.2. Label elements**Label according to Regulation (EC) No. 1272/2008 as amended****Contains:** ACETONE, Heptane**Hazard pictograms****Signal word**

Danger

Hazard statements

H222 Extremely flammable aerosol.
 H229 Pressurized container: May burst if heated.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H336 May cause drowsiness or dizziness.
 H411 Toxic to aquatic life with long lasting effects.

Precautionary statements**Prevention**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P211 Do not spray on an open flame or other ignition source.
 P251 Do not pierce or burn, even after use.
 P264 Wash thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P273 Avoid release to the environment.
 P280 Wear eye protection/face protection.
 P280 Wear protective gloves.

Response

P302 + P352 IF ON SKIN: Wash with plenty of water.
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P312 Call a POISON CENTRE/doctor if you feel unwell.
 P332 + P313 If skin irritation occurs: Get medical advice/attention.
 P337 + P313 If eye irritation persists: Get medical advice/attention.
 P362 + P364 Take off contaminated clothing and wash it before reuse.
 P391 Collect spillage.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.
 P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Disposal

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

Supplemental label information

31,77 % of the mixture consists of component(s) of unknown acute oral toxicity. 31,77 % of the mixture consists of component(s) of unknown acute dermal toxicity. 74,12 % of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 56,47 % of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment. EUH066 - Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

Not a PBT or vPvB substance or mixture.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****General information**

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
ACETONE	30 - < 40	67-64-1 200-662-2	01-2119471330-49-xxxx	606-001-00-8	#
Classification:	Flam. Liq. 2;H225, Eye Irrit. 2;H319, STOT SE 3;H336				

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
XYLENE	10 - < 20	1330-20-7 215-535-7	01-2119488216-32-xxxx	601-022-00-9	#
Classification:	Flam. Liq. 3;H226, Acute Tox. 4;H312, Skin Irrit. 2;H315, Acute Tox. 4;H332, Aquatic Chronic 2;H411				C
Heptane	5 - < 10	142-82-5 205-563-8	-	601-008-00-2	#
Classification:	Flam. Liq. 2;H225, Asp. Tox. 1;H304, Skin Irrit. 2;H315, STOT SE 3;H336, Aquatic Acute 1;H400, Aquatic Chronic 1;H410				C

Other components below reportable levels 40 - < 50

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.

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

SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

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

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

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

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

5.2. Special hazards arising from the substance or mixture Contents under pressure. Pressurised container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

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

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

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapours. 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. For personal protection, see 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. Move the cylinder to a safe and open area if the leak is irreparable. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. This product is miscible in water. 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.

6.4. Reference to other sections For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Pressurised container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Avoid breathing mist/vapours. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. 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 Level 2 Aerosol.

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 in 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

8.1. Control parameters

Occupational exposure limits

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

Components	Type	Value
ACETONE (CAS 67-64-1)	MAK	1200 mg/m3 500 ppm
	STEL	4800 mg/m3 2000 ppm
	Ceiling	610 mg/m3
ETHYL-3-ETHOXY PROPIONATE (CAS 763-69-9)	MAK	100 ppm 610 mg/m3 100 ppm
	MAK	2000 mg/m3 500 ppm
	STEL	8000 mg/m3 2000 ppm
Heptane (CAS 142-82-5)	MAK	2000 mg/m3 500 ppm
	STEL	8000 mg/m3 2000 ppm
	Ceiling	3600 mg/m3 2000 ppm

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

Components	Type	Value
	MAK	1800 mg/m3 1000 ppm
XYLENE (CAS 1330-20-7)	MAK	221 mg/m3 50 ppm
	STEL	442 mg/m3 100 ppm

Belgium. Exposure Limit Values

Components	Type	Value
PROPANE (CAS 74-98-6)	TWA	1000 ppm

Belgium. Exposure Limit Values.

Components	Type	Value
ACETONE (CAS 67-64-1)	STEL	2420 mg/m3 1000 ppm
	TWA	1210 mg/m3 500 ppm
Heptane (CAS 142-82-5)	STEL	2085 mg/m3 500 ppm
	TWA	1664 mg/m3 400 ppm
XYLENE (CAS 1330-20-7)	STEL	442 mg/m3 100 ppm
	TWA	221 mg/m3 50 ppm

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

Components	Type	Value
ACETONE (CAS 67-64-1)	STEL	1400 mg/m3
	TWA	600 mg/m3
Heptane (CAS 142-82-5)	TWA	1600 mg/m3
PROPANE (CAS 74-98-6)	TWA	1800 mg/m3
XYLENE (CAS 1330-20-7)	STEL	442 mg/m3 100 ppm
	TWA	221 mg/m3 50 ppm

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Components	Type	Value
ACETONE (CAS 67-64-1)	MAC	1210 mg/m3 500 ppm
	STEL	3620 mg/m3 1500 ppm
Heptane (CAS 142-82-5)	MAC	2085 mg/m3 500 ppm
XYLENE (CAS 1330-20-7)	MAC	221 mg/m3 50 ppm
	STEL	442 mg/m3 100 ppm

Czech Republic. OELs. Government Decree 361

Components	Type	Value
ACETONE (CAS 67-64-1)	Ceiling	1500 mg/m3
	TWA	800 mg/m3
ETHYL-3-ETHOXY PROPIONATE (CAS 763-69-9)	Ceiling	500 mg/m3
	TWA	150 mg/m3
Heptane (CAS 142-82-5)	Ceiling	2000 mg/m3
	TWA	1000 mg/m3
XYLENE (CAS 1330-20-7)	Ceiling	400 mg/m3
	TWA	200 mg/m3

Denmark. Exposure Limit Values

Components	Type	Value
ACETONE (CAS 67-64-1)	TLV	600 mg/m3
		250 ppm
Heptane (CAS 142-82-5)	TLV	820 mg/m3
		200 ppm
PROPANE (CAS 74-98-6)	TLV	1800 mg/m3
		1000 ppm
XYLENE (CAS 1330-20-7)	TLV	109 mg/m3
		25 ppm

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

Components	Type	Value
ACETONE (CAS 67-64-1)	TWA	1210 mg/m3
		500 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m3
		500 ppm
PROPANE (CAS 74-98-6)	TWA	1800 mg/m3
		1000 ppm
XYLENE (CAS 1330-20-7)	STEL	450 mg/m3
		100 ppm
		200 mg/m3
XYLENE (CAS 1330-20-7)	TWA	200 mg/m3
		50 ppm
		50 ppm

Finland. Workplace Exposure Limits

Components	Type	Value
ACETONE (CAS 67-64-1)	STEL	1500 mg/m3
		630 ppm
	TWA	1200 mg/m3
Heptane (CAS 142-82-5)	STEL	2100 mg/m3
		500 ppm
	TWA	1200 mg/m3
PROPANE (CAS 74-98-6)	STEL	2000 mg/m3
		1100 ppm
	TWA	1500 mg/m3
XYLENE (CAS 1330-20-7)	STEL	800 ppm
		440 mg/m3
	TWA	100 ppm

Finland. Workplace Exposure Limits

Components	Type	Value
	TWA	220 mg/m ³ 50 ppm

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

Components	Type	Value
ACETONE (CAS 67-64-1)	VLE	2420 mg/m ³
Regulatory status: Regulatory binding (VRC)		1000 ppm
Regulatory status: Regulatory binding (VRC)	VME	1210 mg/m ³
Regulatory status: Regulatory binding (VRC)		500 ppm
Regulatory status: Regulatory binding (VRC)		
Heptane (CAS 142-82-5)	VLE	2085 mg/m ³
Regulatory status: Regulatory binding (VRC)		500 ppm
Regulatory status: Regulatory binding (VRC)	VME	1668 mg/m ³
Regulatory status: Regulatory binding (VRC)		400 ppm
Regulatory status: Regulatory binding (VRC)		
XYLENE (CAS 1330-20-7)	VLE	442 mg/m ³
Regulatory status: Regulatory binding (VRC)		100 ppm
Regulatory status: Regulatory binding (VRC)	VME	221 mg/m ³
Regulatory status: Regulatory binding (VRC)		50 ppm
Regulatory status: Regulatory binding (VRC)		

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Type	Value
ACETONE (CAS 67-64-1)	TWA	1200 mg/m ³ 500 ppm
ETHYL-3-ETHOXY PROPIONATE (CAS 763-69-9)	TWA	610 mg/m ³ 100 ppm
Heptane (CAS 142-82-5)	TWA	2100 mg/m ³ 500 ppm
PROPANE (CAS 74-98-6)	TWA	1800 mg/m ³ 1000 ppm
XYLENE (CAS 1330-20-7)	TWA	440 mg/m ³ 100 ppm

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

Components	Type	Value
ACETONE (CAS 67-64-1)	AGW	1200 mg/m ³ 500 ppm
ETHYL-3-ETHOXY PROPIONATE (CAS 763-69-9)	AGW	610 mg/m ³ 100 ppm
PROPANE (CAS 74-98-6)	AGW	1800 mg/m ³

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

Components	Type	Value
XYLENE (CAS 1330-20-7)	AGW	1000 ppm
		440 mg/m3
		100 ppm

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

Components	Type	Value
ACETONE (CAS 67-64-1)	STEL	3560 mg/m3
	TWA	1780 mg/m3
Heptane (CAS 142-82-5)	STEL	2000 mg/m3
	TWA	500 ppm
PROPANE (CAS 74-98-6)	TWA	2000 mg/m3
	TWA	500 ppm
XYLENE (CAS 1330-20-7)	TWA	1800 mg/m3
	STEL	1000 ppm
	STEL	650 mg/m3
	TWA	150 ppm
	TWA	435 mg/m3
	TWA	100 ppm

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value
ACETONE (CAS 67-64-1)	STEL	2420 mg/m3
	TWA	1210 mg/m3
Heptane (CAS 142-82-5)	STEL	8000 mg/m3
	TWA	2000 mg/m3
XYLENE (CAS 1330-20-7)	STEL	442 mg/m3
	TWA	221 mg/m3

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

Components	Type	Value
ACETONE (CAS 67-64-1)	TWA	600 mg/m3
		250 ppm
Heptane (CAS 142-82-5)	TWA	820 mg/m3
		200 ppm
PROPANE (CAS 74-98-6)	TWA	1800 mg/m3
		1000 ppm
XYLENE (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
		TWA
		25 ppm

Ireland. Occupational Exposure Limits

Components	Type	Value
ACETONE (CAS 67-64-1)	TWA	1210 mg/m3
		500 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m3
		500 ppm
PROPANE (CAS 74-98-6)	TWA	1000 ppm
XYLENE (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
		TWA
		50 ppm

Italy. Occupational Exposure Limits Components

Components	Type	Value
ACETONE (CAS 67-64-1)	TWA	1210 mg/m3
		500 ppm
Heptane (CAS 142-82-5)	STEL	500 ppm
	TWA	2085 mg/m3
XYLENE (CAS 1330-20-7)	STEL	500 ppm
		442 mg/m3
	TWA	100 ppm
		221 mg/m3
		50 ppm

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

Components	Type	Value
ACETONE (CAS 67-64-1)	TWA	1210 mg/m3
		500 ppm
Heptane (CAS 142-82-5)	STEL	2085 mg/m3
		500 ppm
	TWA	350 mg/m3
PROPANE (CAS 74-98-6)	STEL	85 ppm
	TWA	300 mg/m3
XYLENE (CAS 1330-20-7)	STEL	100 mg/m3
		442 mg/m3
	TWA	100 ppm
		221 mg/m3
		50 ppm

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

Components	Type	Value
ACETONE (CAS 67-64-1)	STEL	2420 mg/m3
		1000 ppm
	TWA	1210 mg/m3
Heptane (CAS 142-82-5)	STEL	500 ppm
		3128 mg/m3
	TWA	750 ppm
XYLENE (CAS 1330-20-7)	STEL	2085 mg/m3
		500 ppm
	TWA	450 mg/m3
		100 ppm
		200 mg/m3
		50 ppm

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

Components	Type	Value
ACETONE (CAS 67-64-1)	TWA	1210 mg/m3
		500 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m3
		500 ppm
XYLENE (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)

Components	Type	Value
ACETONE (CAS 67-64-1)	TWA	1210 mg/m ³ 500 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m ³ 500 ppm
XYLENE (CAS 1330-20-7)	STEL	442 mg/m ³ 100 ppm
	TWA	221 mg/m ³ 50 ppm

Netherlands. OELs (binding)

Components	Type	Value
ACETONE (CAS 67-64-1)	STEL	2420 mg/m ³
	TWA	1210 mg/m ³
Heptane (CAS 142-82-5)	STEL	1600 mg/m ³
	TWA	1200 mg/m ³
XYLENE (CAS 1330-20-7)	STEL	442 mg/m ³
	TWA	210 mg/m ³

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value
ACETONE (CAS 67-64-1)	TLV	295 mg/m ³ 125 ppm
Heptane (CAS 142-82-5)	TLV	800 mg/m ³ 200 ppm
PROPANE (CAS 74-98-6)	TLV	900 mg/m ³ 500 ppm
XYLENE (CAS 1330-20-7)	TLV	108 mg/m ³ 25 ppm

Ordinance of the Minister of Labour and Social Policy on 6 June 2014 on the maximum permissible concentrations and intensities of harmful health factors in the work environment, Journal of Laws 2014, item 817

Components	Type	Value
ACETONE (CAS 67-64-1)	STEL	1800 mg/m ³
	TWA	600 mg/m ³
Heptane (CAS 142-82-5)	STEL	2000 mg/m ³
	TWA	1200 mg/m ³
PROPANE (CAS 74-98-6)	TWA	1800 mg/m ³
XYLENE (CAS 1330-20-7)	STEL	200 mg/m ³
	TWA	100 mg/m ³

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

Components	Type	Value
ACETONE (CAS 67-64-1)	TWA	1210 mg/m ³ 500 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m ³ 500 ppm
XYLENE (CAS 1330-20-7)	STEL	442 mg/m ³ 100 ppm
	TWA	221 mg/m ³ 50 ppm

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

Components	Type	Value
ACETONE (CAS 67-64-1)	STEL	750 ppm
	TWA	500 ppm
Heptane (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm
PROPANE (CAS 74-98-6)	TWA	2500 ppm
XYLENE (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm

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

Components	Type	Value
ACETONE (CAS 67-64-1)	TWA	1210 mg/m3
		500 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m3
		500 ppm
PROPANE (CAS 74-98-6)	STEL	1800 mg/m3
		1000 ppm
	TWA	1400 mg/m3
XYLENE (CAS 1330-20-7)		778 ppm
	STEL	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

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

Components	Type	Value
ACETONE (CAS 67-64-1)	TWA	1210 mg/m3
		500 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m3
		500 ppm
XYLENE (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

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

Components	Type	Value
ACETONE (CAS 67-64-1)	TWA	1210 mg/m3
		500 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m3
		500 ppm
PROPANE (CAS 74-98-6)	TWA	1800 mg/m3
		1000 ppm
XYLENE (CAS 1330-20-7)	TWA	221 mg/m3
		50 ppm

Spain. Occupational Exposure Limits

Components	Type	Value
ACETONE (CAS 67-64-1)	TWA	1210 mg/m3
		500 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m3
		500 ppm
PROPANE (CAS 74-98-6)	TWA	1000 ppm

Spain. Occupational Exposure Limits Components

Components	Type	Value
XYLENE (CAS 1330-20-7)	STEL	442 mg/m3 100 ppm
	TWA	221 mg/m3 50 ppm

Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7) Components

Components	Type	Value
ACETONE (CAS 67-64-1)	STEL	1200 mg/m3 500 ppm
	TWA	600 mg/m3 250 ppm
Heptane (CAS 142-82-5)	STEL	1200 mg/m3 300 ppm
	TWA	800 mg/m3 200 ppm
XYLENE (CAS 1330-20-7)	Ceiling	442 mg/m3 100 ppm
	TWA	221 mg/m3 50 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz Components

Components	Type	Value
ACETONE (CAS 67-64-1)	STEL	2400 mg/m3 1000 ppm
	TWA	1200 mg/m3 500 ppm
ETHYL-3-ETHOXY PROPIONATE (CAS 763-69-9)	STEL	610 mg/m3 100 ppm
	TWA	610 mg/m3 100 ppm
Heptane (CAS 142-82-5)	STEL	1600 mg/m3 400 ppm
	TWA	1600 mg/m3 400 ppm
PROPANE (CAS 74-98-6)	STEL	7200 mg/m3 4000 ppm
	TWA	1800 mg/m3 1000 ppm
XYLENE (CAS 1330-20-7)	STEL	870 mg/m3 200 ppm
	TWA	435 mg/m3 100 ppm

UK. EH40 Workplace Exposure Limits (WELs) Components

Components	Type	Value
ACETONE (CAS 67-64-1)	STEL	3620 mg/m3 1500 ppm
	TWA	1210 mg/m3 500 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m3

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
XYLENE (CAS 1330-20-7)	STEL	500 ppm
		441 mg/m ³
	TWA	100 ppm
		220 mg/m ³
		50 ppm

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

Components	Type	Value
ACETONE (CAS 67-64-1)	TWA	1210 mg/m ³
		500 ppm
Heptane (CAS 142-82-5)	TWA	2085 mg/m ³
		500 ppm
XYLENE (CAS 1330-20-7)	STEL	442 mg/m ³
		100 ppm
	TWA	221 mg/m ³
		50 ppm

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

Components	Value	Determinant	Specimen	Sampling Time
ACETONE (CAS 67-64-1)	20 mg/g	Acetone	Creatinine in urine	*
	20 mg/l	Acetone	Blood	*
	0,34 mmol/l	Acetone	Blood	*
	38,95 mmol/mol	Acetone	Creatinine in urine	*
XYLENE (CAS 1330-20-7)	1,5 g/g	Methylhippuric acids	Creatinine in blood	*
	1,5 mg/l	Xylene	Blood	*
	0,88 mol/mol	Methylhippuric acids	Creatinine in blood	*
	14,13 umol/l	Xylene	Blood	*

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

Czech Republic. Limit Values for Indicators of Biological Exposure Tests in Urine and Blood, Annex 2, Tables 1 and 2, Government Decree 432/2003 Sb.

Components	Value	Determinant	Specimen	Sampling Time
XYLENE (CAS 1330-20-7)	820 µmol/mmol	Methylhippuric acids	Creatinine in urine	*
	1400 mg/g	Methylhippuric acids	Creatinine in urine	*

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

Finland. HTP-arvot, App 2., Biological Limit Values, (BRA/BGV) , Social Affairs and Ministry of Health

Components	Value	Determinant	Specimen	Sampling Time
XYLENE (CAS 1330-20-7)	5 mmol/l	Methylhippuric acids	Urine	*

* - 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	*
XYLENE (CAS 1330-20-7)	1500 mg/g	Acides méthylhippuriques	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	*
XYLENE (CAS 1330-20-7)	2000 mg/l	Methylhippur-(Tolur-) säure (alle Isomere)	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
XYLENE (CAS 1330-20-7)	1500 mg/g	methyl hippuric acids	Creatinine in urine	*
	860 µmol/mmol	methyl hippuric acids	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	*
XYLENE (CAS 1330-20-7)	1334 mg/g	Methylhippuric acids	Creatinine in urine	*
	2000 mg/l	Methylhippuric acids	Urine	*
	1,5 mg/l	Xylene	Blood	*

* - 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	*
XYLENE (CAS 1330-20-7)	1 g/g	Ácidos metilhipúricos	Creatinine in urine	*

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

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

Components	Value	Determinant	Specimen	Sampling Time
ACETONE (CAS 67-64-1)	80 mg/l	Aceton	Urine	*
XYLENE (CAS 1330-20-7)	2 g/l	Methyl-Hippursäure	Urine	*

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

UK. EH40 Biological Monitoring Guidance Values (BMGVs)

Components	Value	Determinant	Specimen	Sampling Time
XYLENE (CAS 1330-20-7)	650 mmol/mol	Methyl hippuric acid	Creatinine in urine	*

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

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs) Not available.

Predicted no effect concentrations (PNECs) Not available.

Exposure guidelines**EU Exposure Limit Values: Skin designation**

XYLENE (CAS 1330-20-7)

Can be absorbed through the skin.

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

XYLENE (CAS 1330-20-7)

Can be absorbed through the skin.

8.2. Exposure controls

Appropriate engineering controls	Good general ventilation 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. Provide eyewash station and safety shower.
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	Chemical respirator with organic vapour cartridge and full facepiece.
Skin protection	
- Hand protection	Wear appropriate chemical resistant gloves.
- Other	Wear appropriate chemical resistant clothing.
Respiratory protection	Chemical respirator with organic vapour cartridge and full facepiece.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
Hygiene measures	When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
Environmental exposure controls	Inform appropriate managerial or supervisory personnel of all environmental releases. Good general ventilation 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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state	Liquid.
Form	Aerosol
Colour	Clear.
Odour	Aromatic
Odour threshold	Not available.
pH	Does not apply.
Melting point/freezing point	-187,6 °C (-305,68 °F) estimated
Initial boiling point and boiling range	-42,1 °C (-43,78 °F) estimated
Flash point	-18,0 °C (-0,4 °F)
Evaporation rate	> 1 BuAc
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1,9 % estimated
Flammability limit - upper (%)	12,8 % estimated
Vapour pressure	2219,35 hPa estimated
Vapour density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	287,78 °C (550 °F) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.

9.2. Other information

Density	0,72 g/cm3
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Heat of combustion (NFPA 30B)	29,43 kJ/g estimated
Miscible (water)	Negligible
Percent volatile	94 - 96 % v/v
Specific gravity	0,72
VOC	475 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
10.5. Incompatible materials	Strong acids. Strong oxidising agents. Halogens.
10.6. Hazardous decomposition products	No hazardous decomposition products are known.

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 Not known.

Components	Species	Test Results
ACETONE (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	20000 mg/kg
Inhalation		
LC50	Rat	50,1 mg/l, 8 Hours
Oral		
LD50	Rat	5800 mg/kg
Heptane (CAS 142-82-5)		
Acute		
Inhalation		
LC50	Rat	103 mg/l, 4 Hours
XYLENE (CAS 1330-20-7)		
Acute		
Oral		
LD50	Rat	3523 - 8600 mg/kg
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Causes serious eye irritation.	
Respiratory sensitisation	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	Due to partial or complete lack of data the classification is not possible.	
Carcinogenicity	Due to partial or complete lack of data the classification is not possible.	

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

Not listed.

IARC Monographs. Overall Evaluation of Carcinogenicity

XYLENE (CAS 1330-20-7)

3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity	Components in this product have been shown to cause birth defects and reproductive disorders in laboratory animals.
Specific target organ toxicity - single exposure	May cause drowsiness and dizziness.
Specific target organ toxicity - repeated exposure	Due to partial or complete lack of data the classification is not possible.
Aspiration hazard	Due to partial or complete lack of data the classification is not possible.
Mixture versus substance information	No information available.
Other information	Not available.

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.

Product	Species	Test Results	
Humiseal 1A27 Aerosol			
Aquatic			
Crustacea	EC50	Daphnia	56953,5703 mg/l, 48 hours estimated
Fish	LC50	Fish	301,9483 mg/l, 96 hours estimated
Components	Species	Test Results	

ACETONE (CAS 67-64-1)

Aquatic

Crustacea	EC50	Water flea (Daphnia magna)	10294 - 17704 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4740 - 6330 mg/l, 96 hours

Heptane (CAS 142-82-5)

Aquatic

Fish	LC50	Mozambique tilapia (Tilapia mossambica)	375 mg/l, 96 hours
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XYLENE (CAS 1330-20-7)

Aquatic

Fish	LC50	Bluegill (Lepomis macrochirus)	7,711 - 9,591 mg/l, 96 hours
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12.2. Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

12.3. Bioaccumulative potential

Partition coefficient

n-octanol/water (log Kow)

ACETONE	-0,24
Heptane	4,66
XYLENE	3,12 - 3,2

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects The product contains volatile organic compounds which have a photochemical ozone creation potential.

12.7. Additional information

Estonia Dangerous substances in groundwater Data

XYLENE (CAS 1330-20-7)	Pesticides (total) 0,5 ug/l Pesticides (total) 5 ug/l
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Estonia Dangerous substances in soil Data

XYLENE (CAS 1330-20-7)	Synthetic pesticides (total of active substances) 0,5 mg/kg Synthetic pesticides (total of active substances) 20 mg/kg Synthetic pesticides (total of active substances) 5 mg/kg
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number	UN1950
14.2. UN proper shipping name	Aerosols, flammable
14.3. Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Hazard No. (ADR)	Not available.
Tunnel restriction code	D
14.4. Packing group	Not available.
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

RID

14.1. UN number	UN1950
14.2. UN proper shipping name	Aerosols, flammable
14.3. Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
14.4. Packing group	Not available.
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

ADN

14.1. UN number	UN1950
14.2. UN proper shipping name	Aerosols, [flammable]
14.3. Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
14.4. Packing group	Not available.
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

14.1. UN number	UN1950
14.2. UN proper shipping name	Aerosols, flammable
14.3. Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
14.4. Packing group	Not available.
14.5. Environmental hazards	No.

ERG Code	10L
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

14.1. UN number	UN1950
14.2. UN proper shipping name	AEROSOLS
14.3. Transport hazard class(es)	
Class	2
Subsidiary risk	-
14.4. Packing group	Not available.
14.5. Environmental hazards	
Marine pollutant	No.
EmS	F-D, S-U
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

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
XYLENE (CAS 1330-20-7)

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)

Heptane (CAS 142-82-5)

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

Not listed.

Other EU regulations

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

ACETONE (CAS 67-64-1)

Heptane (CAS 142-82-5)

XYLENE (CAS 1330-20-7)

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations

Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, 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 H-statements not written out in full under Sections 2 to 15

H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

Revision information

None.

Training information

Follow training instructions when handling this material.

Disclaimer

The information offered in this data sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication, however, no guarantee is made to its accuracy. This 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 other process. This material is intended for industrial use only. No warranty, expressed or implied is made.