

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 1B31 PB23
Registration number	-
Synonyms	None.
Product code	HumiSeal Europe 1B31 PB23
Issue date	24-May-2015
Version number	04
Revision date	10-April-2018
Supersedes date	17-October-2017

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 USA	1-800-424-9300
	OutSide USA	+1 703-741-5970

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

Flammable liquids	Category 2	H225 - Highly flammable liquid and vapour.
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Health hazards

Acute toxicity, inhalation	Category 4	H332 - Harmful if inhaled.
Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Reproductive toxicity (the unborn child)	Category 2	H361d - Suspected of damaging the unborn child.
Specific target organ toxicity - single exposure	Category 3 narcotic effects	H336 - May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

Category 2

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

Aspiration hazard

Category 1

H304 - May be fatal if swallowed and enters airways.

Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard

Category 2

H411 - Toxic to aquatic life with long lasting effects.

Hazard summary

May be ignited by heat, sparks or flames. May be fatal if swallowed and enters airways. Harmful if inhaled. May cause damage to organs through prolonged or repeated exposure. May cause drowsiness and dizziness. Causes skin irritation. Possible reproductive hazard. Prolonged exposure may cause chronic effects. Dangerous for the environment if discharged into watercourses. Occupational exposure to the substance or mixture may cause adverse health effects.

2.2. Label elements

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

Contains:

Ethylbenzene, Methyl ethyl ketone, Toluene, Xylene

Hazard pictograms



Signal word

Danger

Hazard statements

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe mist or vapour.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTRE/doctor.
P331	Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTRE/doctor if you feel unwell.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P370 + P378	In case of fire: Use appropriate media to extinguish.
P391	Collect spillage.

Storage

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

Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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Supplemental label information 19,1 % of the mixture consists of component(s) of unknown acute oral toxicity. 19,1 % of the mixture consists of component(s) of unknown acute dermal toxicity. 51,18 % of the mixture consists of component(s) of unknown acute inhalation toxicity. 99,88 % of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 26,5 % of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

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
Xylene	40 - < 50	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
Toluene	20 - < 30	108-88-3 203-625-9	01-2119471310-51-XXXX	601-021-00-3	#
Classification:	Flam. Liq. 2;H225, Asp. Tox. 1;H304, Skin Irrit. 2;H315, STOT SE 3;H336, Repr. 2;H361d, STOT RE 2;H373, Aquatic Chronic 2;H411				
Ethylbenzene	5 - < 10	100-41-4 202-849-4	01-2119489370-35-XXXX	601-023-00-4	#
Classification:	Flam. Liq. 2;H225, Asp. Tox. 1;H304, Acute Tox. 4;H332, STOT RE 2;H373, Aquatic Chronic 2;H411				
Methyl ethyl ketone	5 - < 10	78-93-3 201-159-0	01-2119457290-43-XXXX	606-002-00-3	#
Classification:	Flam. Liq. 2;H225, Eye Irrit. 2;H319, STOT SE 3;H336				

Other components below reportable levels 10 - < 20

List of abbreviations and symbols that may be used above

#: 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 H-statements is displayed in section 16.

SECTION 4: First aid measures

General information

Take off all contaminated clothing immediately. 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. Wash contaminated clothing before reuse.

4.1. Description of first aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a POISON CENTRE or doctor/physician if you feel unwell.

Skin contact Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

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

Ingestion Call a physician or poison control centre immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

4.2. Most important symptoms and effects, both acute and delayed

Aspiration may cause pulmonary oedema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Direct contact with eyes may cause temporary irritation. 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. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards Highly flammable liquid and vapour.

5.1. Extinguishing media	
Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
5.2. Special hazards arising from the substance or mixture	Vapours may form explosive mixtures with air. Vapours may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
5.3. Advice for firefighters	
Special protective equipment for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Special fire fighting procedures	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapour. 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. Wear appropriate protective equipment and clothing during clean-up. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions

Avoid release to the environment. 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

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. This product is miscible in water. Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

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

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapour. 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 outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. 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
Ethylbenzene (CAS 100-41-4)	Ceiling	880 mg/m ³
		200 ppm
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	MAK	440 mg/m ³
		100 ppm
	MAK	295 mg/m ³
		100 ppm
	STEL	590 mg/m ³
		200 ppm
Toluene (CAS 108-88-3)	MAK	190 mg/m ³
		50 ppm
	STEL	380 mg/m ³
		100 ppm
	MAK	221 mg/m ³
Xylene (CAS 1330-20-7)		50 ppm
	STEL	442 mg/m ³
		100 ppm

Belgium. Exposure Limit Values.

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	STEL	551 mg/m ³
		125 ppm
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	TWA	442 mg/m ³
		100 ppm
	STEL	900 mg/m ³
		300 ppm
	TWA	600 mg/m ³
		200 ppm
Toluene (CAS 108-88-3)	STEL	384 mg/m ³
		100 ppm
	TWA	77 mg/m ³
		20 ppm
	STEL	442 mg/m ³
Xylene (CAS 1330-20-7)		100 ppm
	TWA	221 mg/m ³
		50 ppm

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

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	STEL	545 mg/m ³
	TWA	435 mg/m ³
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	885 mg/m ³
	TWA	590 mg/m ³
Toluene (CAS 108-88-3)	STEL	384 mg/m ³
		100 ppm
	TWA	192 mg/m ³
		50 ppm
	STEL	442 mg/m ³
		100 ppm
Xylene (CAS 1330-20-7)	TWA	221 mg/m ³
		50 ppm

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

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	MAC	442 mg/m ³
		100 ppm
	STEL	884 mg/m ³

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

Components	Type	Value
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	MAC	200 ppm 600 mg/m3
	STEL	200 ppm 900 mg/m3
Toluene (CAS 108-88-3)	MAC	300 ppm 192 mg/m3
	STEL	50 ppm 384 mg/m3
Xylene (CAS 1330-20-7)	MAC	100 ppm 221 mg/m3
	STEL	50 ppm 442 mg/m3 100 ppm

Czech Republic. OELs. Government Decree 361

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	Ceiling	500 mg/m3
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	TWA	200 mg/m3
	Ceiling	900 mg/m3
Toluene (CAS 108-88-3)	TWA	600 mg/m3
	Ceiling	500 mg/m3
Xylene (CAS 1330-20-7)	TWA	200 mg/m3
	Ceiling	400 mg/m3
	TWA	200 mg/m3

Denmark. Exposure Limit Values

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	TLV	217 mg/m3
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	TLV	50 ppm 145 mg/m3
	TLV	50 ppm 94 mg/m3
Xylene (CAS 1330-20-7)	TLV	25 ppm 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
Ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
	TWA	200 ppm 442 mg/m3 100 ppm
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	900 mg/m3
	TWA	300 ppm 600 mg/m3 200 ppm
Toluene (CAS 108-88-3)	STEL	384 mg/m3 100 ppm
	TWA	192 mg/m3 50 ppm
Xylene (CAS 1330-20-7)	STEL	450 mg/m3 100 ppm
	TWA	200 mg/m3 50 ppm

Finland. Workplace Exposure Limits

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	STEL	880 mg/m ³
		200 ppm
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	TWA	220 mg/m ³
		50 ppm
	STEL	300 mg/m ³
Toluene (CAS 108-88-3)		100 ppm
	STEL	380 mg/m ³
	TWA	81 mg/m ³
Xylene (CAS 1330-20-7)		25 ppm
	STEL	440 mg/m ³
	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
Ethylbenzene (CAS 100-41-4)	VLE	442 mg/m ³
		100 ppm
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	VME	88,4 mg/m ³
		20 ppm
	VLE	900 mg/m ³
Toluene (CAS 108-88-3)		300 ppm
	VME	600 mg/m ³
	VLE	384 mg/m ³
Xylene (CAS 1330-20-7)		200 ppm
	VME	76,8 mg/m ³
	VLE	442 mg/m ³
		20 ppm
	VME	221 mg/m ³
		50 ppm

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

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	TWA	88 mg/m ³
		20 ppm
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	TWA	600 mg/m ³
		200 ppm
Toluene (CAS 108-88-3)	TWA	190 mg/m ³
		50 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
Ethylbenzene (CAS 100-41-4)	AGW	88 mg/m ³
		20 ppm
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	AGW	600 mg/m ³
		200 ppm
Toluene (CAS 108-88-3)	AGW	190 mg/m ³
		50 ppm
Xylene (CAS 1330-20-7)	AGW	440 mg/m ³
		100 ppm

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

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	STEL	545 mg/m3
	TWA	125 ppm 435 mg/m3
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	100 ppm 900 mg/m3
	TWA	300 ppm 600 mg/m3
Toluene (CAS 108-88-3)	STEL	200 ppm 384 mg/m3
	TWA	100 ppm 192 mg/m3
Xylene (CAS 1330-20-7)	STEL	50 ppm 650 mg/m3
	TWA	150 ppm 435 mg/m3
		100 ppm

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
	TWA	442 mg/m3
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	900 mg/m3
	TWA	600 mg/m3
Toluene (CAS 108-88-3)	STEL	380 mg/m3
	TWA	190 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
Ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
	TWA	200 ppm 200 mg/m3
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	50 ppm 900 mg/m3
	TWA	300 ppm 145 mg/m3
Toluene (CAS 108-88-3)	STEL	50 ppm 188 mg/m3
	TWA	94 mg/m3 25 ppm
Xylene (CAS 1330-20-7)	STEL	442 mg/m3 100 ppm
	TWA	109 mg/m3 25 ppm

Ireland. Occupational Exposure Limits

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
	TWA	200 ppm 442 mg/m3
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	100 ppm 900 mg/m3
	TWA	300 ppm 600 mg/m3

Ireland. Occupational Exposure Limits Components

Components	Type	Value
Toluene (CAS 108-88-3)	STEL	200 ppm 384 mg/m3
	TWA	100 ppm 192 mg/m3
Xylene (CAS 1330-20-7)	STEL	50 ppm 442 mg/m3
	TWA	100 ppm 221 mg/m3 50 ppm

Italy. Occupational Exposure Limits Components

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
	TWA	200 ppm 442 mg/m3 100 ppm
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	900 mg/m3
	TWA	300 ppm 600 mg/m3
Toluene (CAS 108-88-3)	TWA	200 ppm 192 mg/m3
Xylene (CAS 1330-20-7)	STEL	50 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

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
	TWA	200 ppm 442 mg/m3 100 ppm
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	900 mg/m3
	TWA	300 ppm 200 mg/m3 67 ppm
Toluene (CAS 108-88-3)	STEL	150 mg/m3 40 ppm
	TWA	50 mg/m3 14 ppm
Xylene (CAS 1330-20-7)	STEL	442 mg/m3 100 ppm
	TWA	221 mg/m3 50 ppm

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

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
	TWA	200 ppm 442 mg/m3 100 ppm
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	900 mg/m3
	TWA	300 ppm 600 mg/m3
Toluene (CAS 108-88-3)	STEL	200 ppm 384 mg/m3 100 ppm

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

Components	Type	Value
Xylene (CAS 1330-20-7)	TWA	192 mg/m3
	STEL	50 ppm
		450 mg/m3
	TWA	100 ppm
	TWA	200 mg/m3
		50 ppm

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

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
	TWA	200 ppm
		442 mg/m3
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	100 ppm
	TWA	900 mg/m3
		300 ppm
Toluene (CAS 108-88-3)	STEL	600 mg/m3
		200 ppm
	TWA	384 mg/m3
		100 ppm
Xylene (CAS 1330-20-7)	STEL	192 mg/m3
		50 ppm
	TWA	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
Ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
	TWA	200 ppm
		442 mg/m3
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	100 ppm
	TWA	900 mg/m3
		300 ppm
Toluene (CAS 108-88-3)	STEL	600 mg/m3
		200 ppm
	TWA	384 mg/m3
		100 ppm
Xylene (CAS 1330-20-7)	STEL	192 mg/m3
		50 ppm
	TWA	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

Netherlands. OELs (binding)

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	STEL	430 mg/m3
	TWA	215 mg/m3
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	900 mg/m3
	TWA	590 mg/m3
Toluene (CAS 108-88-3)	STEL	384 mg/m3
	TWA	150 mg/m3
Xylene (CAS 1330-20-7)	STEL	442 mg/m3
	TWA	210 mg/m3

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	TLV	20 mg/m3
		5 ppm
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	TLV	220 mg/m3
		75 ppm
Toluene (CAS 108-88-3)	TLV	94 mg/m3
		25 ppm
Xylene (CAS 1330-20-7)	TLV	108 mg/m3
		25 ppm

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

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	STEL	400 mg/m3
	TWA	200 mg/m3
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	900 mg/m3
	TWA	450 mg/m3
Toluene (CAS 108-88-3)	STEL	200 mg/m3
	TWA	100 mg/m3
Xylene (CAS 1330-20-7)	TWA	100 mg/m3

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

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
	TWA	200 ppm 442 mg/m3
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	100 ppm 900 mg/m3
	TWA	300 ppm 600 mg/m3
Toluene (CAS 108-88-3)	STEL	200 ppm 384 mg/m3
	TWA	100 ppm 192 mg/m3
Xylene (CAS 1330-20-7)	STEL	50 ppm 442 mg/m3
	TWA	100 ppm 221 mg/m3

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

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	STEL	125 ppm
	TWA	100 ppm
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	300 ppm
	TWA	200 ppm
Toluene (CAS 108-88-3)	TWA	50 ppm
	STEL	150 ppm
Xylene (CAS 1330-20-7)	TWA	100 ppm

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

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
	TWA	200 ppm 442 mg/m3
		100 ppm

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

Components	Type	Value
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	900 mg/m3
		300 ppm
	TWA	600 mg/m3
		200 ppm
Toluene (CAS 108-88-3)	STEL	384 mg/m3
		100 ppm
	TWA	192 mg/m3
		50 ppm
Xylene (CAS 1330-20-7)	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
Ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
		200 ppm
	TWA	442 mg/m3
		100 ppm
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	900 mg/m3
		300 ppm
	TWA	600 mg/m3
		200 ppm
Toluene (CAS 108-88-3)	STEL	384 mg/m3
		100 ppm
	TWA	192 mg/m3
		50 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
Ethylbenzene (CAS 100-41-4)	TWA	442 mg/m3
		100 ppm
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	TWA	600 mg/m3
		200 ppm
Toluene (CAS 108-88-3)	TWA	192 mg/m3
		50 ppm
Xylene (CAS 1330-20-7)	TWA	221 mg/m3
		50 ppm

Spain. Occupational Exposure Limits

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
		200 ppm
	TWA	441 mg/m3
		100 ppm
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	900 mg/m3
		300 ppm
	TWA	600 mg/m3
		200 ppm
Toluene (CAS 108-88-3)	STEL	384 mg/m3
		100 ppm
	TWA	192 mg/m3

Spain. Occupational Exposure Limits Components

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

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

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	Ceiling	884 mg/m3
	TWA	200 ppm
		220 mg/m3
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	Ceiling	50 ppm
	TWA	900 mg/m3
		300 ppm
Toluene (CAS 108-88-3)	Ceiling	150 mg/m3
	TWA	50 ppm
		384 mg/m3
Xylene (CAS 1330-20-7)	Ceiling	100 ppm
	TWA	384 mg/m3
		192 mg/m3
Xylene (CAS 1330-20-7)	Ceiling	50 ppm
	TWA	442 mg/m3
		100 ppm
		221 mg/m3
		50 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz Components

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	STEL	220 mg/m3
	TWA	50 ppm
		220 mg/m3
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	50 ppm
	TWA	590 mg/m3
		200 ppm
Toluene (CAS 108-88-3)	STEL	590 mg/m3
	TWA	200 ppm
		760 mg/m3
Xylene (CAS 1330-20-7)	STEL	200 ppm
	TWA	190 mg/m3
		50 ppm
Xylene (CAS 1330-20-7)	STEL	870 mg/m3
	TWA	200 ppm
		435 mg/m3
		100 ppm

UK. EH40 Workplace Exposure Limits (WELs) Components

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	STEL	552 mg/m3
	TWA	125 ppm
		441 mg/m3
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	100 ppm
	TWA	899 mg/m3
		300 ppm
Toluene (CAS 108-88-3)	STEL	600 mg/m3
	TWA	200 ppm
		384 mg/m3
		100 ppm
		191 mg/m3
		50 ppm

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
Xylene (CAS 1330-20-7)	STEL	441 mg/m ³ 100 ppm
	TWA	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
Ethylbenzene (CAS 100-41-4)	STEL	884 mg/m ³ 200 ppm
	TWA	442 mg/m ³ 100 ppm
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	STEL	900 mg/m ³ 300 ppm
	TWA	600 mg/m ³ 200 ppm
Toluene (CAS 108-88-3)	STEL	384 mg/m ³ 100 ppm
	TWA	192 mg/m ³ 50 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
Ethylbenzene (CAS 100-41-4)	1,5 g/g	Mandelic acid	Creatinine in urine	*
	1,5 mg/l	Ethylbenzene	Blood	*
	1,12 mol/mol	Mandelic acid	Creatinine in urine	*
	83,2 nmol/l	Ethylbenzene	End-exhaled air	*
	2 ppm	Ethylbenzene	End-exhaled air	*
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	14,13 umol/l	Ethylbenzene	Blood	*
	2,6 mg/g	2-Butanone (Methyl ethyl ketone)	Creatinine in urine	*
	4,08 mmol/mol	2-Butanone (Methyl ethyl ketone)	Creatinine in urine	*
Toluene (CAS 108-88-3)	2,5 g/g	Hippuric acid	Creatinine in urine	*
	1 mg/g	o-cresol (Phenol, 2-methyl-)	Creatinine in urine	*
	1 mg/l	Toluene	Blood	*
	1,05 mmol/mol	o-cresol (Phenol, 2-methyl-)	Creatinine in urine	*
	1,58 mol/mol	Hippuric acid	Creatinine in urine	*
	20 ppm		End-exhaled air	*
	10,85 umol/l	Toluene	Blood	*
	0,83 umol/l		End-exhaled air	*
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	*

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

Components	Value	Determinant	Specimen	Sampling time
	14,13 µmol/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
Ethylbenzene (CAS 100-41-4)	1100 µmol/mmol	Mandelic acid	Creatinine in urine	*
	1500 mg/g	Mandelic acid	Creatinine in urine	*
Toluene (CAS 108-88-3)	1000 µmol/mmol	Hippuric acid	Creatinine in urine	*
	1600 mg/g	Hippuric acid	Creatinine in urine	*
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
Ethylbenzene (CAS 100-41-4)	5,2 mmol/l	Mandelic acid	Urine	*
Toluene (CAS 108-88-3)	500 nmol/l	Toluene concentration	Blood	*
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
Ethylbenzene (CAS 100-41-4)	1500 mg/g	Acide mandélique	Creatinine in urine	*
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	2 mg/l	Méthyléthylcétone	Urine	*
Toluene (CAS 108-88-3)	2500 mg/g	Acide hippurique	Creatinine in urine	*
	2500 mg/g	Acide hippurique	Creatinine in urine	*
	1 mg/l	Toluène	Venous blood	*
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
Ethylbenzene (CAS 100-41-4)	300 mg/l	Mandelsäure plus Phenylglyoxylsäure	Urine	*
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	2 mg/l	2-Butanon	Urine	*
Toluene (CAS 108-88-3)	600 µg/l	Toluol	Blood	*
	1,5 mg/l	o-Kresol (nach Hydrolyse)	Urine	*
Xylene (CAS 1330-20-7)	2000 mg/l	Methylhippur-(Tolur-) säure (alle Isomere)	Urine	*
	1,5 mg/l	Xylol	Blood	*

* - 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
Ethylbenzene (CAS 100-41-4)	1500 mg/g	mandelic acid	Creatinine in urine	*
	1110 µmol/mmol	mandelic acid	Creatinine in urine	*
Toluene (CAS 108-88-3)	1 mg/g	o-crezol	Creatinine in urine	*
	1,05 µmol/mmol	o-crezol	Creatinine in urine	*
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
Ethylbenzene (CAS 100-41-4)	8,03 mg/g	2-ethylphenol	Creatinine in urine	*
	12 mg/l	2-ethylphenol	Urine	*
Toluene (CAS 108-88-3)	600 µg/l	Toluene	Blood	*
	1600 mg/g	Hippuric acid	Creatinine in urine	*
	1,03 mg/g	o-cresol (Phenol, 2-methyl-)	Creatinine in urine	*
	2401 mg/l	Hippuric acid	Urine	*
Xylene (CAS 1330-20-7)	1,5 mg/l	o-cresol (Phenol, 2-methyl-)	Urine	*
	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
Ethylbenzene (CAS 100-41-4)	700 mg/g	Suma del acido mandélico y el ácido fenilgloxílico	Creatinine in urine	*
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	2 mg/l	Metiletilcetona	Urine	*
Toluene (CAS 108-88-3)	1,6 g/g	Ácido hipúrico	Creatinine in urine	*
	0,5 mg/l	o-cresol (Phenol, 2-methyl-)	Urine	*
Xylene (CAS 1330-20-7)	0,05 mg/l	Tolueno	Blood	*
	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
Ethylbenzene (CAS 100-41-4)	800 mg/l	Mandelsäure plus Phenylglyoxylsäure	Urine	*
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	2 mg/l	2-Butanon (MEK)	Urine	*
Toluene (CAS 108-88-3)	600 µg/l	Toluol	Blood	*
	2 g/g	Hippursäure	Creatinine in urine	*
	0,5 mg/l	o-Kresol	Urine	*

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

Components	Value	Determinant	Specimen	Sampling time
Xylene (CAS 1330-20-7)	1,5 g/g	Methyl-Hippursäure	Creatinine in urine	*
	1,5 mg/l	Xylol	Blood	*

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

UK. EH40 Biological Monitoring Guidance Values (BMGVs)

Components	Value	Determinant	Specimen	Sampling time
2-Butanone (Methyl ethyl ketone) (CAS 78-93-3)	70 umol/l	Butan-2-one	Urine	*
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**

Ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
Toluene (CAS 108-88-3)	Can be absorbed through the skin.
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)

Ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
Toluene (CAS 108-88-3)	Can be absorbed through the skin.
Xylene (CAS 1330-20-7)	Can be absorbed through the skin.

8.2. Exposure controls

Appropriate engineering controls Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash fountain and emergency showers are recommended.

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. Use of an impervious apron is recommended.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Chemical respirator with organic vapour cartridge and full facepiece.

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 Liquid.

Form Liquid.

Colour	Clear.
Odour	Aromatic
Odour threshold	Not available.
pH	Does not apply.
Melting point/freezing point	-94,9 °C (-138,82 °F) estimated
Initial boiling point and boiling range	79,59 °C (175,26 °F) estimated
Flash point	-1,0 °C (30,2 °F)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	0,9 % estimated
Flammability limit - upper (%)	11,2 % estimated
Vapour pressure	29,28 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	404 °C (759,2 °F) estimated
Decomposition temperature	Not available.
Viscosity	20 - 26 cP
Viscosity temperature	25 °C (77 °F)
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
9.2. Other information	
Brookfield viscosity	20 - 26 cP
Density	0,89 g/cm ³ estimated
Miscible (water)	Negligible
Percent volatile	70 - 75 % v/v
Specific gravity	0,89 estimated
VOC	667 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	Avoid heat, 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. Ammonia. Amines. Isocyanates. Caustics.
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	Harmful if inhaled. May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting.
Skin contact	Causes skin irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Symptoms Aspiration may cause pulmonary oedema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Skin irritation. May cause redness and pain.

11.1. Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways. Harmful if inhaled.
Skin corrosion/irritation Causes skin irritation.
Serious eye damage/eye irritation Direct contact with eyes may cause temporary 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 Risk of cancer cannot be excluded with prolonged exposure.

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

Toluene (CAS 108-88-3)

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. Suspected of damaging the unborn child.

Specific target organ toxicity - single exposure May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard May be fatal if swallowed and enters airways.

Mixture versus substance information No information available.

Other information Not available.

SECTION 12: Ecological information

12.1. Toxicity 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
Ethylbenzene (CAS 100-41-4)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	1,37 - 4,4 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	7,5 - 11 mg/l, 96 hours
Methyl ethyl ketone (CAS 78-93-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	4025 - 6440 mg/l, 48 hours
Fish	LC50	Sheepshead minnow (Cyprinodon variegatus)	> 400 mg/l, 96 hours
Toluene (CAS 108-88-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	5,46 - 9,83 mg/l, 48 hours
Fish	LC50	Coho salmon, silver salmon (Oncorhynchus kisutch)	8,11 mg/l, 96 hours
Xylene (CAS 1330-20-7)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	7,711 - 9,591 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

12.2. Persistence and degradability

12.3. Bioaccumulative potential

Partition coefficient

n-octanol/water (log Kow)

Ethylbenzene	3,15
Methyl ethyl ketone	0,29
Toluene	2,73

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**

Ethylbenzene (CAS 100-41-4)	Ethylbenzene 0,5 UG/L Ethylbenzene 50 UG/L
Methyl ethyl ketone (CAS 78-93-3)	Pesticides (total) 0,5 UG/L Pesticides (total) 5 UG/L
Toluene (CAS 108-88-3)	Toluene 0,5 UG/L Toluene 50 UG/L
Xylene (CAS 1330-20-7)	Pesticides (total) 0,5 UG/L Pesticides (total) 5 UG/L

Estonia Dangerous substances in soil Data

Ethylbenzene (CAS 100-41-4)	Ethylbenzene 0,1 mg/kg Ethylbenzene 5 mg/kg Ethylbenzene 50 mg/kg
Methyl ethyl ketone (CAS 78-93-3)	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
Toluene (CAS 108-88-3)	Toluene 0,1 mg/kg Toluene 100 mg/kg Toluene 3 mg/kg
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

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.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information**ADR**

14.1. UN number	UN1263
14.2. UN proper shipping name	Paint
14.3. Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Hazard No. (ADR)	33
Tunnel restriction code	D/E
14.4. Packing group	II
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

RID

14.1. UN number	UN1263
------------------------	--------

14.2. UN proper shipping name Paint

14.3. Transport hazard class(es)

Class 3

Subsidiary risk -

Label(s) 3

14.4. Packing group II

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 UN1263

14.2. UN proper shipping name Paint

14.3. Transport hazard class(es)

Class 3

Subsidiary risk -

Label(s) 3

14.4. Packing group II

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 UN1263

14.2. UN proper shipping name PAINT

14.3. Transport hazard class(es)

Class 3

Subsidiary risk -

14.4. Packing group II

14.5. Environmental hazards No.

ERG Code 3L

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 UN1263

14.2. UN proper shipping name PAINT

14.3. Transport hazard class(es)

Class 3

Subsidiary risk -

14.4. Packing group II

14.5. Environmental hazards

Marine pollutant No.

EmS F-E, S-E

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 Not established.



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

Ethylbenzene (CAS 100-41-4)

Methyl ethyl ketone (CAS 78-93-3)

Toluene (CAS 108-88-3)

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.

Other EU regulations

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

Ethylbenzene (CAS 100-41-4)

Methyl ethyl ketone (CAS 78-93-3)

Toluene (CAS 108-88-3)

Xylene (CAS 1330-20-7)

Other regulations

Pregnant women should not work with the product, if there is the least risk of exposure. 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. Additional information is given in the Safety Data Sheet.

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 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.
H361d Suspected of damaging the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

Revision information

SECTION 2: Hazards identification: Specific hazards
Composition / Information on Ingredients: Ingredients
SECTION 4: First aid measures: Inhalation
SECTION 4: First aid measures: Skin contact
SECTION 8: Exposure controls/personal protection: Respiratory protection
SECTION 11: Toxicological information: Inhalation
SECTION 11: Toxicological information: Skin contact
SECTION 11: Toxicological information: Skin contact
SECTION 16: Other information: Disclaimer

Training information

Follow training instructions when handling this material.

Disclaimer

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create any warranty, expressed or implied. It is the responsibility of the user to determine the applicability of this information and the suitability of the material or product for any particular purpose