SAFETY DATA SHEET

Version #: 20
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture	Chockfast Red Resin
Registration number	-
Synonyms	None.
SKU#	GP107R

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

Identified uses	Not available.
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Company Name	ITW Performance Polymers
Address	Bay 150 Shannon Industrial Estate Co. Clare Ireland V14 DF82
Contact Person	Customer Service
Telephone Number	353(61)771500 353(61)471285
Email	customerservice.shannon@itwpp.com
Emergency Phone Number	44(0) 1235 239 670 (24 hours)

1.4. Emergency telephone number

General in EU	112 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Austria National Poisons Information Center	+431 406 4343 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Belgium National Poisons Control Center	070 245 245 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Bulgaria National Toxicological Information Center	+359 2 9154 233 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Croatia Poisons Information Center	+385 1 2348 342 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)
Cyprus Poison Center	1401 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Czech Republic National Poisons Information Center	+420 224 919 293, or +420 224 915 402 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)
Denmark National Poisons Control Center	+45 82 12 12 12 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Estonia National Poisons Information Center	16662 or abroad: (+372) 626 9390 (Monday 9:00AM to Saturday 9:00AM (closed on Sundays and on national holidays). SDS/Product information may not be available for the Emergency Service.)
Finland National Poison Information Center	(09) 471 977 (direct) or (09) 4711 (exchange) (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
France National Poisons Control Center	ORFILA number (INRS): + 33 (0) 1 45 42 59 59 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

1.4. Emergency telephone number

Greece Poison Information Centre	(0030) 2107793777 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Hungary National Emergency Phone Number	+36-80-201-199 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Iceland Poison Center	(+354) 543 2222 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Latvia Emergency medical aid	113
Latvia Poison and Drug Information Center	+371 67042473 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Lithuania Neatidėliotina informacija apsinuodijus	+370 5 236 20 52 or +37068753378 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)
Malta Accident and Emergency Department	2545 4030 (Hours of operation not provided. SDS/Product information may not be available for the Emergency Service.)
Netherlands National Poisons Information Center (NVIC)	NVIC: +31 (0)88 755 8000 (Only for the purpose of informing medical personnel in cases of acute intoxications)
Norway Norwegian Poison Information Center	22 59 13 00 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Portugal Poison Center	800 250 250 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Romania Biroul RSI si Informare Toxicologica	021.318.36.06 (Available 8:00AM-3:00PM. SDS/Product information may not be available for the Emergency Service.)
Slovakia National Toxicological Information Center	+421 2 5477 4166 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Spain Toxicology Information Service	+ 34 91 562 04 20 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Sweden National Poison Information Center	112 - and ask for Poison Information (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)
Switzerland Tox Info Suisse	145 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

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

Health hazards

Acute toxicity, dermal	Category 4	H312 - Harmful in contact with skin.
Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Serious eye damage/eye irritation	Category 2	
Skin sensitization	Category 1	H317 - May cause an allergic skin reaction.

Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard	Category 3	H412 - Harmful to aquatic life with long lasting effects.

2.2. Label elements

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

UFI:

Austria: 61D0-Q0F3-F001-EJPQ
Belgium: 61D0-Q0F3-F001-EJPQ
Bulgaria: 61D0-Q0F3-F001-EJPQ
Croatia: 61D0-Q0F3-F001-EJPQ
Cyprus: 61D0-Q0F3-F001-EJPQ
Czech Republic: 61D0-Q0F3-F001-EJPQ
Denmark: 61D0-Q0F3-F001-EJPQ
Estonia: 61D0-Q0F3-F001-EJPQ
EU: 61D0-Q0F3-F001-EJPQ
Finland: 61D0-Q0F3-F001-EJPQ
France: 61D0-Q0F3-F001-EJPQ
Germany: 61D0-Q0F3-F001-EJPQ
Greece: 61D0-Q0F3-F001-EJPQ
Hungary: 61D0-Q0F3-F001-EJPQ
Iceland: 61D0-Q0F3-F001-EJPQ
Ireland: 61D0-Q0F3-F001-EJPQ
Italy: 61D0-Q0F3-F001-EJPQ
Latvia: 61D0-Q0F3-F001-EJPQ
Lithuania: 61D0-Q0F3-F001-EJPQ
Luxembourg: 61D0-Q0F3-F001-EJPQ
Malta: 61D0-Q0F3-F001-EJPQ
Netherlands: 61D0-Q0F3-F001-EJPQ
Norway: 61D0-Q0F3-F001-EJPQ
Poland: 61D0-Q0F3-F001-EJPQ
Portugal: 61D0-Q0F3-F001-EJPQ
Romania: 61D0-Q0F3-F001-EJPQ
Slovakia: 61D0-Q0F3-F001-EJPQ
Slovenia: 61D0-Q0F3-F001-EJPQ
Spain: 61D0-Q0F3-F001-EJPQ
Sweden: 61D0-Q0F3-F001-EJPQ

Contains: Epoxy Resin: Reaction product of bisphenol A and epichlorohydrin (refer to epichlorohydrin), o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]

Hazard pictograms

Signal word Warning

Hazard statements

H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H333	May be harmful if inhaled.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention

P261	Avoid breathing mist/vapors.
P264	Wash thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear eye protection/face protection.
P280	Wear protective gloves/protective clothing.

Response

P302 + P352	IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313	If skin irritation or rash 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.

Storage Not available.

Disposal

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

Supplemental label information 95% of the mixture consists of component(s) of unknown acute oral toxicity. 95% of the mixture consists of component(s) of unknown acute dermal toxicity. 99,5% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment.

2.3. Other hazards This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII. The mixture does not contain any substances included in the list established in accordance with REACH Article 59(1) for having endocrine disrupting properties at a concentration equal to or greater than 0.1% by weight.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Epoxy Resin: Reaction product of bisphenol A and epichlorohydrin (refer to epichlorohydrin)	60 - 100	25068-38-6 -	01-2119456619-26-0000	-	
Classification: Skin Irrit. 2;H315, Eye Irrit. 2;H319, Skin Sens. 1;H317					
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	1 - 5	1330-20-7 215-535-7	-	601-022-00-9	#
Classification: Flam. Liq. 3;H226, Acute Tox. 4;H312;(ATE: 1100 mg/kg bw), Acute Tox. 4;H332;(ATE: 11 mg/l), Skin Irrit. 2;H315, Aquatic Chronic 2;H411					
ethylbenzene	< 1	100-41-4 202-849-4	-	601-023-00-4	#
Classification: Flam. Liq. 2;H225, Acute Tox. 4;H332;(ATE: 11 mg/l), Carc. 2;H351, STOT RE 2;H373, Asp. Tox. 1;H304, Aquatic Chronic 2;H411					

List of abbreviations and symbols that may be used above

ATE: Acute toxicity estimate.
M: M-factor
vPvB: very persistent and very bioaccumulative substance.
PBT: persistent, bioaccumulative and toxic substance.
#: This substance has been assigned Union workplace exposure limit(s).
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 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 Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. Get medical advice/attention if you feel unwell. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. 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 Rinse mouth. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

4.3. Indication of any immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards Combustible liquid.

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 The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures. 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 Avoid breathing mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material.

For emergency responders Keep unnecessary personnel away. Ensure adequate ventilation. Avoid breathing mist/vapors. Local authorities should be advised if significant spillages cannot be contained. 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. Prevent entry into waterways, sewer, basements or confined areas.

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 Keep away from open flames, hot surfaces and sources of ignition. Avoid breathing mist/vapors. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Store in 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) Observe industrial sector guidance on best practices.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

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

Components	Type	Value
ethylbenzene (CAS 100-41-4)	Ceiling	880 mg/m3
		200 ppm
	MAK	440 mg/m3
		100 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	MAK	221 mg/m3
		50 ppm
	STEL	442 mg/m3
		100 ppm

Belgium. OEL. Exposure Limit Values to Chemical Substances at Work, Code of Well-being at work, Book VI, Title 1 - Chemical agents, as amended

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	551 mg/m3
		125 ppm
	TWA	87 mg/m3
		20 ppm

Belgium. OEL. Exposure Limit Values to Chemical Substances at Work, Code of Well-being at work, Book VI, Title 1 - Chemical agents, as amended

Components	Type	Value
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

Bulgaria. OELs. Ordinance No 13 on protection of workers against risks of exposure to chemical agents at work, as amended

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	545 mg/m3
	TWA	435 mg/m3
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

Croatia. OELs (GVI). Regulation on Protection of Workers against Exposure to Dangerous Chemicals at Work, OELs and Biological Limit Values, Annex I (NN 91/2018), as amended

Components	Type	Value
ethylbenzene (CAS 100-41-4)	MAC	442 mg/m3
		100 ppm
	STEL	884 mg/m3
		200 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	MAC	221 mg/m3
		50 ppm
	STEL	442 mg/m3
		100 ppm

Cyprus. OELs. Occupational Exposure Limit Values of Chemicals at Work (Safety and Health at Work (Chem. Agents) Reg., Ann. 1, R.A.A. 268/2001, as amended)

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
		200 ppm
	TWA	442 mg/m3
		100 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

Czech Republic. Occupational exposure limit values of chemicals at work (Decree on protection of health at work, 361/2007, Annex 2, Part A & Annex 3, Part A, as amended)

Components	Type	Value
ethylbenzene (CAS 100-41-4)	Ceiling	500 mg/m3
	TWA	200 mg/m3

Czech Republic. Occupational exposure limit values of chemicals at work (Decree on protection of health at work, 361/2007, Annex 2, Part A & Annex 3, Part A, as amended)

Components	Type	Value
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Ceiling	400 mg/m3
	TWA	200 mg/m3

Denmark. Work Environment Authority. Exposure Limits for Substances & Materials, Annex 2

Components	Type	Value
ethylbenzene (CAS 100-41-4)	TLV	217 mg/m3
		50 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	TLV	109 mg/m3
		25 ppm

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances (Regulation No. 105/2001, Annex), as amended

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
		200 ppm
	TWA	442 mg/m3
		100 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	450 mg/m3
		100 ppm
	TWA	200 mg/m3
		50 ppm

Finland. HTP-arvot, App 3., Binding Limit Values, Social Affairs and Ministry of Health

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	880 mg/m3
		200 ppm
	TWA	220 mg/m3
		50 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	440 mg/m3
		100 ppm
	TWA	220 mg/m3
		50 ppm

France. OELs. Occupational Exposure Limits as Prescribed by Art. R.4412-149 of Labor Code, as amended

Components	Type	Value
ethylbenzene (CAS 100-41-4)	VLE	442 mg/m3
		100 ppm
	VME	88,4 mg/m3
		20 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	VLE	442 mg/m3
		100 ppm
	VME	221 mg/m3
		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/m3
Regulatory status: Regulatory binding (VRC)		
		100 ppm
Regulatory status: Regulatory binding (VRC)		
	VME	88,4 mg/m3
Regulatory status: Regulatory binding (VRC)		
		20 ppm
Regulatory status: Regulatory binding (VRC)		
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	VLE	442 mg/m3
Regulatory status: Regulatory binding (VRC)		
		100 ppm
Regulatory status: Regulatory binding (VRC)		
	VME	221 mg/m3
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), as updated

Components	Type	Value
ethylbenzene (CAS 100-41-4)	TWA	88 mg/m3
		20 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	TWA	220 mg/m3
		50 ppm

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

Components	Type	Value
ethylbenzene (CAS 100-41-4)	AGW	88 mg/m3
		20 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	AGW	220 mg/m3
		50 ppm

Greece. OELs, Presidential Decree No. 307/1986, as amended

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	545 mg/m3
		125 ppm
	TWA	435 mg/m3
		100 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	650 mg/m3
		150 ppm
	TWA	435 mg/m3
		100 ppm

Hungary. OELs. Decree on protection of workers exposed to chemical agents (5/2020. (II.6)), Annex 1&2, as amended

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3

Hungary. OELs. Decree on protection of workers exposed to chemical agents (5/2020. (II.6)), Annex 1&2, as amended

Components	Type	Value
	TWA	442 mg/m3
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	442 mg/m3
	TWA	221 mg/m3

Iceland. OELs. Regulation 390/2009 on Pollution Limits and Measures to Reduce Pollution at the Workplace, as amended

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
		200 ppm
	TWA	200 mg/m3
		50 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
	TWA	109 mg/m3
		25 ppm

Ireland. OELVs, Schedules 1 & 2, Code of Practice for Chemical Agents and Carcinogens Regulations

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
		200 ppm
	TWA	442 mg/m3
		100 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

Italy. OELs (Legislative Decree n.81, 9 April 2008), as amended

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
		200 ppm
	TWA	442 mg/m3
		100 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

Latvia. OELs. Occupational Exposure Limits of Chemical Substances at Workplace (Reg. No. 325/ 2007, L.V. 80, Annex 1), as amended

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

Latvia. OELs. Occupational Exposure Limits of Chemical Substances at Workplace (Reg. No. 325/ 2007, L.V. 80, Annex 1), as amended

Components	Type	Value
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

Lithuania. OELs. Occupational Exposure Limit Values for Chemical Substances (Hygiene Norm HN 23:2011; Order No. V-824/A1-389), as amended

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
		200 ppm
	TWA	442 mg/m3
		100 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

Luxembourg. OELs. Binding Occupational Exposure Limit Values (Annex I), G.D.R. of 14 November 2016, OJ Memorial A, n ° 235/2016, as amended

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
		200 ppm
	TWA	442 mg/m3
		100 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

Malta. OELs. Protection of Health and Safety of Workers from Risks related to Chemical Agents at Work (L.N 227/2003 Schedules I and V), as amended

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
		200 ppm
	TWA	442 mg/m3
		100 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

Netherlands. OELs per Annex XIII of Working Conditions Regulation (Staatscourant no. 252, 29 December 2006), as amended

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	430 mg/m3

Netherlands. OELs per Annex XIII of Working Conditions Regulation (Staatscourant no. 252, 29 December 2006), as amended

Components	Type	Value
	TWA	215 mg/m3
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	442 mg/m3
	TWA	210 mg/m3

Norway. Regulation No. 1358 on Measures and Limit Values for Physical and Chemical Factors in Work Environment and Infection Groups for Biological Factors, as amended

Components	Type	Value
ethylbenzene (CAS 100-41-4)	TLV	20 mg/m3
		5 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	TLV	108 mg/m3
		25 ppm

Poland. Maximum permissible concentrations and intensities of harmful factors in the work environment (Dz.U.Poz. 1286/2018, Annex 1)

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	400 mg/m3
	TWA	200 mg/m3
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	200 mg/m3
	TWA	100 mg/m3

Portugal. Decree-Law No. 24/2012, Occupational Exposure Limit Values, Annex II, as amended

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
		200 ppm
	TWA	442 mg/m3
		100 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796-2014)

Components	Type	Value
ethylbenzene (CAS 100-41-4)	TWA	20 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm

Romania. OELs. Limit Values of Chemical Agents at Workplace (Regulation 1.218/2006, M.O 845, Annex 1, 3&4, as amended)

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

Romania. OELs. Limit Values of Chemical Agents at Workplace (Regulation 1.218/2006, M.O 845, Annex 1, 3&4, as amended)

Components	Type	Value
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

Slovakia. OELs. Maximum permissible exposure limits for chemical factors in workplace air (Regulation No 355/2006, Annex 1, Table 1, as amended)

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
		200 ppm
	TWA	442 mg/m3
		100 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

Slovenia. OELs. Occupational Exposure Limits of Chemicals at Workplace (Reg. on Protection of Workers from Risks due to Exp. to Chemicals at Work, Annex I), as amended

Components	Type	Value
ethylbenzene (CAS 100-41-4)	TWA	442 mg/m3
		100 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	TWA	221 mg/m3
		50 ppm

Spain. OELs. INSST, Límites de Exposición Profesional Para Agentes Químicos, Table 1-Valores Límites Ambientales (VLAs)

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
		200 ppm
	TWA	441 mg/m3
		100 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

Sweden. OELs (Annex 1). Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2018:1), as amended

Components	Type	Value
ethylbenzene (CAS 100-41-4)	Ceiling	884 mg/m3
		200 ppm
	TWA	220 mg/m3
		50 ppm

Sweden. OELs (Annex 1). Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2018:1), as amended

Components	Type	Value
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Ceiling	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz: Aktuelle MAK-Werte

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	220 mg/m3
		50 ppm
	TWA	220 mg/m3
		50 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	870 mg/m3
		200 ppm
	TWA	435 mg/m3
		100 ppm

UK. OELs. Workplace Exposure Limits (WELs) (EH40/2005 (Fourth Edition 2020)), Table 1

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	552 mg/m3
		125 ppm
	TWA	441 mg/m3
		100 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	441 mg/m3
		100 ppm
	TWA	220 mg/m3
		50 ppm

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU

Components	Type	Value
ethylbenzene (CAS 100-41-4)	STEL	884 mg/m3
		200 ppm
	TWA	442 mg/m3
		100 ppm
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	STEL	442 mg/m3
		100 ppm
	TWA	221 mg/m3
		50 ppm

Biological limit values

Croatia. BELs (BGV). Regulation on Protection of Workers against Exposure to Dangerous Chemicals at Work, OELs and BELs, Annex IV (NN 91/2018), 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	*

Croatia. BELs (BGV). Regulation on Protection of Workers against Exposure to Dangerous Chemicals at Work, OELs and BELs, Annex IV (NN 91/2018), as amended

Components	Value	Determinant	Specimen	Sampling Time
	1,12 mol/mol	Mandelic acid	Creatinine in urine	*
	14,1 umol/l	ethylbenzene	Blood	*
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	1,5 g/g	Methylhippuric acids	Creatinine in urine	*
	1,5 mg/l	xylene	Blood	*
	0,88 mol/mol	Methylhippuric acids	Creatinine in urine	*
	14,13 umol/l	xylene	Blood	*

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

Czech Republic. BELs. Government Decree 432/2003 Sb., as amended

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	*
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (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, Social Affairs and Ministry of Health

Components	Value	Determinant	Specimen	Sampling Time
ethylbenzene (CAS 100-41-4)	5,2 mmol/l	Mandelic acid	Urine	*
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (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	*
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (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)	250 mg/g	Mandelsäure plus Phenylglyoxylsäure	Creatinine in urine	*
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	2000 mg/l	Methylhippur-(Tolur-) säure (alle Isomere)	Urine	*

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

Hungary. BELs. Decree on protection of workers exposed to chemical agents (5/2020. (II.6)), Annex 3&4, as amended

Components	Value	Determinant	Specimen	Sampling Time
ethylbenzene (CAS 100-41-4)	1110 µmol/mmol	mandelic acid	Creatinine in urine	*
	1500 mg/g	mandelic acid	Creatinine in urine	*

Hungary. BELs. Decree on protection of workers exposed to chemical agents (5/2020. (II.6)), Annex 3&4, as amended

Components	Value	Determinant	Specimen	Sampling Time
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	860 µmol/mmol	methyl hippuric acids	Creatinine in urine	*
	1500 mg/g	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 and 4-ethylphenol	Creatinine in urine	*
	12 mg/l	2 and 4-ethylphenol	Urine	*
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (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. BELs. INSST, Límites de Exposición Profesional Para Agentes Químicos, Table 3-Valores Límite Biológicos (VLB)

Components	Value	Determinant	Specimen	Sampling Time
ethylbenzene (CAS 100-41-4)	700 mg/g	Suma del acido mandélico y el ácido fenilglioxílico	Creatinine in urine	*
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	1 g/g	Ácidos metilhipúricos	Creatinine in urine	*

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

Switzerland. SUVA Grenzwerte am Arbeitsplatz: Aktuelle BAT-Werte

Components	Value	Determinant	Specimen	Sampling Time
ethylbenzene (CAS 100-41-4)	600 mg/g	Mandelsäure + Phenylglyoxylsäure	Creatinine in urine	*
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	2 g/l	Methylhippursäuren	Urine	*

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

UK. BELs. Biological Monitoring Guidance Values (BMGVs) (EH40/2005 (Fourth Edition 2020)), Table 2

Components	Value	Determinant	Specimen	Sampling Time
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (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

Austria MAK: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Belgium OELs: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.

o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Bulgaria OELs: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Croatia ELVs: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Czech Republic PELs: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Denmark GV: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Estonia OELs: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

EU Exposure Limit Values: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Finland Exposure Limit Values: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

France INRS: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

France Mandatory OELs (VLEP): Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Germany DFG MAK (advisory): Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Germany TRGS 900 Limit Values: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Greece OEL: Skin designation

o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Hungary OELs: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Iceland OELs: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Ireland Exposure Limit Values: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Italy OELs: Skin designation

ethylbenzene (CAS 100-41-4)	Danger of cutaneous absorption
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Danger of cutaneous absorption

Latvia OELs: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.

o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Lithuania OELs: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Luxembourg OELs: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Malta OELs: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Netherlands OELs (binding): Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Norway Exposure Limit Values: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Portugal OELs: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Romania OELs: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Slovakia OELs: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (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.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Spain OELs: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Sweden Threshold Limit Values: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

Switzerland SUVA Limit Values at the Workplace: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Can be absorbed through the skin.

UK EH40 WEL: Skin designation

ethylbenzene (CAS 100-41-4)	Can be absorbed through the skin.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (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

Wear safety glasses with side shields (or goggles). Face shield is recommended.

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.
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. Contaminated work clothing should not be allowed out of the workplace.
Environmental exposure controls	Inform appropriate managerial or supervisory personnel of all environmental releases. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Form	Liquid.
Color	Colorless to light yellow.
Odor	Aromatic. Hydrocarbon-like.
Melting point/freezing point	Not available.
Boiling point or initial boiling point and boiling range	280,4 °F (138 °C)
Flammability	Not applicable.
Flash point	150,0 °F (65,6 °C) Pensky-Martens Closed Cup
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
pH	7
Kinematic viscosity	Not available.
Solubility	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water) (log value)	Not available.
Vapor pressure	5,6 hPa estimated
Density and/or relative density	Not available.
Vapor density	3,5
Particle characteristics	Not available.

9.2. Other information

9.2.1. Information with regard to physical hazard classes	No relevant additional information available.

9.2.2. Other safety characteristics

Evaporation rate	0,6
Specific gravity	1,2
VOC	52 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 oxidizing agents.
10.6. Hazardous decomposition products	Carbon oxides.

SECTION 11: Toxicological information

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

Information on likely routes of exposure

Inhalation Prolonged inhalation may be harmful.

Skin contact Harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction.

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 Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity Harmful in contact with skin.

Components	Species	Test Results
ethylbenzene (CAS 100-41-4)		
Acute		
Dermal		
LD50	Rabbit	17800 mg/kg
Oral		
LD50	Rat	3500 mg/kg
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (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 sensitization Due to partial or complete lack of data the classification is not possible.

Skin sensitization May cause an allergic skin reaction.

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.

IARC Monographs. Overall Evaluation of Carcinogenicity

ethylbenzene (CAS 100-41-4)	2B Possibly carcinogenic to humans.
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity Due to partial or complete lack of data the classification is not possible.

Specific target organ toxicity - single exposure Due to partial or complete lack of data the classification is not possible.

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.

11.2. Information on other hazards

Endocrine disrupting properties This mixture does not contain any substances having endocrine disrupting properties with respect to human health as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.

Other information Not available.

SECTION 12: Ecological information

12.1. Toxicity Harmful to aquatic life with long lasting effects. Due to partial or complete lack of data the classification for hazardous to the aquatic environment, acute hazard, is not possible.

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)	
ethylbenzene	3,15
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	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 This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.

12.6. Endocrine disrupting properties This mixture does not contain any substances having endocrine disrupting properties with respect to the environment as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.

12.7. Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

12.8. Additional information

Estonia Dangerous substances in soil Data

ethylbenzene (CAS 100-41-4)	ETHYLBENZENE 0,1 MG/KG ETHYLBENZENE 5 MG/KG ETHYLBENZENE 50 MG/KG
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	Chemical pesticides (As the total sum of the active substances) 0,5 MG/KG Chemical pesticides (As the total sum of the active substances) 20 MG/KG Chemical pesticides (As the total sum of the 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	UN3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy Resin)
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
Hazard No. (ADR)	90
Tunnel restriction code	E
14.4. Packing group	III
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	UN3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy Resin)
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9

14.4. Packing group	III
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	UN3082
14.2. UN proper shipping name	Environmentally Hazardous Liquid, N.o.s. (Epoxy Resin)
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

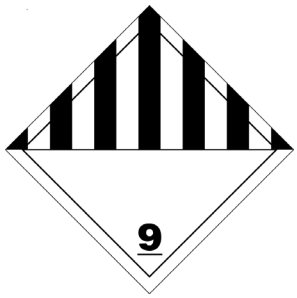
14.1. UN number	UN3082
14.2. UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Epoxy Resin)
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
14.4. Packing group	III
14.5. Environmental hazards	Yes
ERG Code	9L
14.6. Special precautions for user	Read safety instructions, 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	UN3082
14.2. UN proper shipping name	Environmentally hazardous substances, liquid, n.o.s. (Epoxy Resin), MARINE POLLUTANT
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
14.4. Packing group	III
14.5. Environmental hazards	
Marine pollutant	Yes
EmS	Not assigned.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

14.7. Maritime transport in bulk according to IMO instruments Not established.

ADN; ADR; IATA; IMDG; RID



Marine pollutant

General information IMDG Regulated Marine Pollutant.

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 (EU) 2019/1021 On persistent organic pollutants (recast), 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

ethylbenzene (CAS 100-41-4)
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

UFI:

Austria: 61D0-Q0F3-F001-EJPQ
Belgium: 61D0-Q0F3-F001-EJPQ
Bulgaria: 61D0-Q0F3-F001-EJPQ
Croatia: 61D0-Q0F3-F001-EJPQ
Cyprus: 61D0-Q0F3-F001-EJPQ
Czech Republic: 61D0-Q0F3-F001-EJPQ
Denmark: 61D0-Q0F3-F001-EJPQ
Estonia: 61D0-Q0F3-F001-EJPQ
EU: 61D0-Q0F3-F001-EJPQ
Finland: 61D0-Q0F3-F001-EJPQ
France: 61D0-Q0F3-F001-EJPQ
Germany: 61D0-Q0F3-F001-EJPQ
Greece: 61D0-Q0F3-F001-EJPQ
Hungary: 61D0-Q0F3-F001-EJPQ
Iceland: 61D0-Q0F3-F001-EJPQ
Ireland: 61D0-Q0F3-F001-EJPQ
Italy: 61D0-Q0F3-F001-EJPQ
Latvia: 61D0-Q0F3-F001-EJPQ
Lithuania: 61D0-Q0F3-F001-EJPQ
Luxembourg: 61D0-Q0F3-F001-EJPQ
Malta: 61D0-Q0F3-F001-EJPQ
Netherlands: 61D0-Q0F3-F001-EJPQ
Norway: 61D0-Q0F3-F001-EJPQ
Poland: 61D0-Q0F3-F001-EJPQ
Portugal: 61D0-Q0F3-F001-EJPQ
Romania: 61D0-Q0F3-F001-EJPQ
Slovakia: 61D0-Q0F3-F001-EJPQ
Slovenia: 61D0-Q0F3-F001-EJPQ
Spain: 61D0-Q0F3-F001-EJPQ
Sweden: 61D0-Q0F3-F001-EJPQ

Authorizations

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 - Conditions of restriction given for the associated entry number should be considered

ethylbenzene (CAS 100-41-4)	40
o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4] (CAS 1330-20-7)	75

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 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 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. Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

France regulations

France INRS Table of Occupational Diseases

Epoxy Resin: Reaction product of bisphenol A and epichlorohydrin (refer to epichlorohydrin) (CAS 25068-38-6)	Maladies professionnelles provoquées par les résines époxydiques et leurs constituants 51
ethylbenzene (CAS 100-41-4)	Affections engendrées par les solvants organiques liquides à usage professionnel : hydrocarbures liquides aliphatiques ou cycliques saturés ou insaturés et leurs mélanges; hydrocarbures halogénés liquides; dérivés nitrés des hydrocarbures aliphatiques; al 84

Product registration number

Austria	UFI: 61D0-Q0F3-F001-EJPQ
Belgium	UFI: 61D0-Q0F3-F001-EJPQ
Czech Republic	UFI: 61D0-Q0F3-F001-EJPQ
Denmark	UFI: 61D0-Q0F3-F001-EJPQ
European Union	UFI: 61D0-Q0F3-F001-EJPQ
Finland	UFI: 61D0-Q0F3-F001-EJPQ
France	UFI: 61D0-Q0F3-F001-EJPQ
Germany	UFI: 61D0-Q0F3-F001-EJPQ
Greece	UFI: 61D0-Q0F3-F001-EJPQ
Hungary	UFI: 61D0-Q0F3-F001-EJPQ
Italy	UFI: 61D0-Q0F3-F001-EJPQ
Netherlands	UFI: 61D0-Q0F3-F001-EJPQ
Norway	UFI: 61D0-Q0F3-F001-EJPQ
Poland	UFI: 61D0-Q0F3-F001-EJPQ
Portugal	UFI: 61D0-Q0F3-F001-EJPQ
Slovakia	UFI: 61D0-Q0F3-F001-EJPQ
Slovenia	UFI: 61D0-Q0F3-F001-EJPQ
Spain	UFI: 61D0-Q0F3-F001-EJPQ
Sweden	UFI: 61D0-Q0F3-F001-EJPQ
Switzerland	UFI: 61D0-Q0F3-F001-EJPQ

15.2. Chemical safety assessment No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.
AGW: Occupational threshold limit value (Arbeitsplatzgrenzwert – Germany).
CAS: Chemical Abstract Service.
CEN: European Committee for Standardization.
IATA: International Air Transport Association.
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.
IMDG: International Maritime Dangerous Goods.
MAC: Maximum Allowed Concentration.
MARPOL: International Convention for the Prevention of Pollution from Ships.
PBT: Persistent, bioaccumulative and toxic.
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.
STEL: Short term exposure limit.

	TLV: Threshold Limit Value. TWA: Time Weighted Average. VLE: Exposure Limit Value. VME: Exposure Average Value. vPvB: Very persistent and very bioaccumulative.
References	Not available.
Information on evaluation method leading to the classification of mixture	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
Full text of any statements, which are not written out in full under sections 2 to 15	H225 Highly flammable liquid and vapor. H226 Flammable liquid and vapor. H304 May be fatal if swallowed and enters airways. H312 Harmful in contact with skin. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H351 Suspected of causing cancer. H373 May cause damage to organs through prolonged or repeated exposure. H411 Toxic to aquatic life with long lasting effects.
Revision information	Physical & Chemical Properties: Multiple Properties
Training information	Follow training instructions when handling this material.
Disclaimer	ITW Performance Polymers cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.