

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 3/31/2026 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form	: Substance (UVCB)
Trade name	: ORLEsol ^{110/170 D}
Chemical name	: naphtha (petroleum), hydrodesulphurized heavy; Low boiling point hydrogen treated naphtha; [A complex combination of hydrocarbons obtained from a catalytic hydrodesulfurization process. It consists of hydrocarbons having carbon numbers predominantly in the range of C7 through C12 and boiling in the range of approximately 90°C to 230°C (194°F to 446 °F).]
EC Index-No.	: 649-330-00-2
EC-No.	: 265-185-4
CAS-No.	: 64742-82-1
REACH registration No.	: 01-2119490979-12-0005
Product group	: Trade product

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

Main use category	: Industrial use
Industrial/Professional use spec	: Chemical processes general Intermediate Used in closed systems

Uses advised against

Restrictions on use	: Professional uses, Consumer uses, Use in Cleaning Agents, Uses in Coatings
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1.3. Details of the supplier of the safety data sheet**Manufacturer**

ORLEN Południe S.A.
Fabryczna 22
32-540 Trzebinia
Poland
T +48 24 201 00 00, F +48 24 367 74 14
E-mail address of competent person responsible for the SDS : reach.poludnie@orlen.pl

1.4. Emergency telephone number

Emergency number	: +48 24 201 00 00 Emergency number 112
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SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Flammable liquids, Category 2	H225
Skin corrosion/irritation, Category 2	H315
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336
Specific target organ toxicity – Repeated exposure, Category 1	H372
Aspiration hazard, Category 1	H304
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411

Full text of H- and EUH-statements: see section 16

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Adverse physicochemical, human health and environmental effects

Highly flammable liquid and vapour. Causes damage to organs through prolonged or repeated exposure. May cause drowsiness or dizziness. Causes skin irritation. May be fatal if swallowed and enters airways. Toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazard statements (CLP)

- : H225 - Highly flammable liquid and vapour.
 - H304 - May be fatal if swallowed and enters airways.
 - H315 - Causes skin irritation.
 - H336 - May cause drowsiness or dizziness.
 - H372 - Causes damage to organs (central nervous system) through prolonged or repeated exposure.
 - H411 - Toxic to aquatic life with long lasting effects.
- Precautionary statements (CLP)
- : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 - P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
 - P264 - Wash hands, forearms and face thoroughly after handling.
 - P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 - P301+P310+P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.
 - P312 - Call a POISON CENTRE or doctor if you feel unwell.
 - P314 - Get medical advice/attention if you feel unwell.
 - P321 - Specific treatment (see supplemental first aid instruction on this label).
 - P391 - Collect spillage.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
 This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
 Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component

Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	ORLEsol 110/170 D (64742-82-1)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	ORLEsol 110/170 D (64742-82-1)

The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

- Comments : The full UVCB ingredient list is not known
- Substance type : UVCB
- CAS-No. : 64742-82-1
- EC-No. : 265-185-4
- EC Index-No. : 649-330-00-2

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ORLEsol 110/170 D (Note P)	CAS-No.: 64742-82-1 EC-No.: 265-185-4 EC Index-No.: 649-330-00-2 REACH-no: 01-2119490979-12-0005	≈ 100	See Section 2.1
Xylene (Component)	CAS-No.: 1330-20-7 EC-No.: 215-535-7	< 15	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 (ATE=1100 mg/kg bodyweight) Acute Tox. 4 (Inhalation:dust,mist), H332 (ATE=1.5 mg/l/4h) Skin Irrit. 2, H315 Aquatic Chronic 2, H411
Ethylbenzene (Component)	CAS-No.: 100-41-4 EC-No.: 202-849-4	< 3	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
1,2,4-trimethylbenzene (Component)	CAS-No.: 95-63-6 EC-No.: 202-436-9	< 1	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Mesitylene (Component)	CAS-No.: 108-67-8 EC-No.: 203-604-4	< 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
1,2,3-Trimethylbenzene (Component)	CAS-No.: 526-73-8	< 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 Aquatic Chronic 2, H411
Cumene (Component)	CAS-No.: 98-82-8 EC-No.: 202-704-5	< 0.1	Flam. Liq. 3, H226 Carc. 1B, H350 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Benzene (Component)	CAS-No.: 71-43-2 EC-No.: 200-753-7	≤ 0.01	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Muta. 1B, H340 Carc. 1A, H350 STOT RE 1, H372 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Full text of H- and EUH-statements: see section 16

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Note P: Note P : The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0,1 % w/w benzene (EINECS No 200-753-7). When the substance is not classified as a carcinogen at least the precautionary statements (P102-)P260-P262- P301 + P310-P331 (Table 3.1) or the S-phrases (2-)23-24-62 (Table 3.2) shall apply. This note applies only to certain complex oil-derived substances in Part 3.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Do not induce vomiting. Do not leave affected person unattended. Never give anything by mouth to an unconscious person. Medical personnel should be made aware of substance(s) involved and take measures for self protection. Get medical advice/attention if you feel unwell. Use protective clothing. Wear suitable respiratory protection.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If experiencing respiratory symptoms: Call a poison center or a doctor. Keep warm and in a quiet place.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention. Be careful, the product may remain trapped under clothing, footwear or a wrist-watch. The hot liquid may cause severe skin burns.
First-aid measures after eye contact	: Remove contact lenses, if present and easy to do. Continue rinsing. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Do not induce vomiting. Call a physician immediately. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.

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

Symptoms/effects	: May cause drowsiness or dizziness. May be fatal if swallowed and enters airways.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after ingestion	: Risk of lung oedema.

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

Treat symptomatically. If possible, show the doctor this safety data sheet. Failing this, show the doctor the packaging or label. Keep victim under observation. Move the affected person away from the contaminated area and into the fresh air.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Strong water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Highly flammable liquid and vapour.
Explosion hazard	: Can form explosive mixtures with air.
Hazardous decomposition products in case of fire	: Toxic fumes may be released. Carbon dioxide. Carbon monoxide. fume.

5.3. Advice for firefighters

Precautionary measures fire	: Evacuate area. Stop leak if safe to do so. Keep container tightly closed and away from heat, sparks and flame. Wear suitable respiratory protection. Eliminate all ignition sources if safe to do so. Fight fire remotely due to the risk of explosion.
Firefighting instructions	: Evacuate area. Eliminate all ignition sources if safe to do so. Fight fire remotely due to the risk of explosion. Exercise caution when fighting any chemical fire.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Remove ignition sources. Do not breathe vapours. Notify authorities if product enters sewers or public waters. Avoid contact with skin and eyes. Use special care to avoid static electric charges.

For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. In case of contamination of soil or water bodies notify the competent authorities. Do not allow run-off from fire-fighting to enter drains or water courses. Do not breathe vapours.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent liquid from entering sewers, watercourses, underground or low areas. Toxic to aquatic life with long lasting effects. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage. Contain large spillage with sand or earth.
 Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
 Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13. Section 15: Regulatory information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : In use, may form flammable vapour-air mixture. Product to be handled in a closed system. No flames, no sparks. Eliminate all sources of ignition.
 Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.
 Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment. Store in a well-ventilated place. Keep container tightly closed.
 Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
 Incompatible materials : Strong oxidizing agents.
 Heat and ignition sources : No open flames, no sparks, and no smoking. Keep away from any flames or sparking source.
 Storage area : Store in a well-ventilated place. Store away from heat. Protect from sunlight.
 Special rules on packaging : Keep only in original container. Store in a closed container.

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Germany

Storage class (LGK, TRGS 510)

: LGK 3 - Flammable liquids

Joint storage table

LGK 1	LGK 2A	LGK 2B	LGK 3	LGK 4.1A
LGK 4.1B	LGK 4.2	LGK 4.3	LGK 5.1A	LGK 5.1B
LGK 5.1C	LGK 5.2	LGK 6.1A	LGK 6.1B	LGK 6.1C
LGK 6.1D	LGK 6.2	LGK 7	LGK 8A	LGK 8B
LGK 10	LGK 11	LGK 12	LGK 13	LGK 10-13

Joint storage not permitted for

: LGK 1, LGK 2A, LGK 4.1A, LGK 4.1B, LGK 4.2, LGK 4.3, LGK 5.1A, LGK 5.1C, LGK 5.2, LGK 6.1B, LGK 6.2, LGK 7

Joint storage with restrictions permitted for

: LGK 5.1B, LGK 6.1D, LGK 11, LGK 10-13

Joint storage permitted for

: LGK 2B, LGK 3, LGK 6.1A, LGK 6.1C, LGK 8A, LGK 8B, LGK 10, LGK 12, LGK 13

Switzerland

Storage class (LK)

: LK 3 - Flammable liquids

7.3. Specific end use(s)

No additional information.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

ORLEsol 110/170 D (64742-82-1)

EU - Indicative Occupational Exposure Limit (IOEL)

Local name	White spirit Type 1
IOEL TWA	116 mg/m ³
	20 ppm
IOEL STEL	290 mg/m ³
	50 ppm
Remark	Skin. (Year of adoption 2007)
Regulatory reference	SCOEL Recommendations

EU - Binding Occupational Exposure Limit (BOEL)

Local name	Benzene
BOEL TWA	0.66 mg/m ³ (Limit value from 5 April 2026)
	1.65 mg/m ³ (Limit value until 5 April 2026)
	0.2 ppm (Limit value from 5 April 2026)
	0.5 ppm (Limit value until 5 April 2026)
Notes	Skin (Substantial contribution to the total body burden via dermal exposure possible)
Regulatory reference	DIRECTIVE (EU) 2022/431 (amending Directive 2004/37/EC)

EU - Biological Limit Value (BLV)

Local name	Benzene
BLV	28 µg/l Parameter: benzene - Medium: blood - Sampling time: immediately end of shift 46 µg/g creatinine Parameter: phenylmercapturic - Medium: urine - Sampling time: end of exposure/shift
Regulatory reference	SCOEL List of recommended health-based BLVs and BGVs

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ORLEsol 110/170 D (64742-82-1)

Albania - Occupational Exposure Limits

Local name	Trimetil-1,2,4-benzen
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	VENDIM Nr. 522, datë 6.8.2014 PËR MIRATIMIN E RREGULLORES "PËR MBROJTJEN E SIGURISË DHE SHËNDËTIT TË PUNËMARRËSVE NGA RISQET E LIDHURA ME AGJENTËT KIMIKË NË PUNË"

Austria - Occupational Exposure Limits

Local name	Benzol
MAK (OEL TWA)	0.66 mg/m ³ (gilt ab 6.4.2026) 1.65 mg/m ³
	0.2 ppm (gilt ab 6.4.2026) 0.5 ppm
MAK (OEL STEL)	2.56 mg/m ³ (4x 15(Miw) min) (gilt ab 6.4.2026) 6.4 mg/m ³ (4x 15(Miw) min)
	0.8 ppm (4x 15(Miw) min) (gilt ab 6.4.2026) 2 ppm (4x 15(Miw) min)
Remark	H. Krebserzeugend: III A1
Regulatory reference	BGBl. II Nr. 330/2024

Austria - Biological limit values

Local name	Benzol
BLV	10 g/dl Parameter: Hämoglobin - Untersuchungsmaterial: Blut - Mitarbeiter/innen: Frauen 12 g/dl Parameter: Hämoglobin - Untersuchungsmaterial: Blut - Mitarbeiter/innen: Männer 1.6 mg/l Parameter: t,t-Muconsäure - Untersuchungsmaterial: Harn
Remark	Eignung: Blut: MCV: 79-97 fl; Erythrozyten: 3,2 Millionen/µl für Frauen, 3,8 Millionen/µl für Männer; Leukozyten: unterer Grenzwert: 4.000/µl (davon 2.000 Granulozyten) bzw. 3.700/µl bei nicht pathologischem Differentialblutbild, oberer Grenzwert: 13.000/µl; Thrombozyten: 150.000 bzw. 130.000/µl bei nicht pathologischem Differentialblutbild Eignung mit vorzeitiger Folgeuntersuchung: Bei Unterschreiten bzw. Überschreiten der Grenzwerte im Blut (ausgenommen Differentialblutbild) oder im Harn sowie bei atypischen Morphologien im Blut. Der Zeitabstand zwischen den Untersuchungen beträgt bei Eignung: ein Jahr; bei Arbeiten in Kokereien: drei Monate, für die Blutuntersuchung sechs Monate; bei Eignung mit vorzeitiger Folgeuntersuchung: drei Monate; bei Arbeiten in Kokereien: sechs Wochen
Regulatory reference	Verordnung über die Gesundheitsüberwachung am Arbeitsplatz 2024 (VGÜ)

Belgium - Occupational Exposure Limits

Local name	Benzène # Benzeen
OEL TWA	0.66 mg/m ³ (à partir du 5 avril 2026) # (vanaf 5 april 2026) 1.65 mg/m ³ (jusqu'au 5 avril 2026) # (tot 5 april 2026)
	0.2 ppm (à partir du 5 avril 2026) # (vanaf 5 april 2026) 0.5 ppm (jusqu'au 5 avril 2026) # (tot 5 april 2026)

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ORLEsol 110/170 D (64742-82-1)	
Remark	C: la mention "C" signifie que l'agent en question relève du champ d'application du titre 2 relatif aux agents cancérigènes, mutagènes et reprotoïques du livre VI du code de bien-être au travail, D: la mention "D" signifie que la résorption de l'agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l'exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l'agent dans l'air. # C: de vermelding "C" betekent dat het betrokken agens valt onder het toepassingsgebied van titel 2 betreffende kankerverwekkende, mutagene en reprotoxische agentia van boek VI van de codex over het welzijn op het werk, D: de vermelding "D" betekent dat de opname van het agens via de huid, de slijmvliezen of de ogen een belangrijk deel van de totale blootstelling vormt. Deze opname kan het gevolg zijn van zowel direct contact als zijn aanwezigheid in de lucht.
Regulatory reference	Koninklijk besluit/Arrêté royal 16/11/2023
Bulgaria - Occupational Exposure Limits	
Local name	Бензен
OEL TWA	0.66 mg/m ³ (Измерено като елементарен въглерод) 0.2 ppm (Измерено като елементарен въглерод)
Remark	Кожа (Възможен е значителен принос за общото натрупване в тялото чрез кожна експозиция)
Regulatory reference	Наредба № 10 от 26.09.2003 г. за защита на работещите от рискове, свързани с експозиция на канцерогени и мутагени при работа (изм. и доп. ДВ. бр. 28 от 2 Април 2024г.)
Bulgaria - Biological limit values	
Local name	Бензен
BLV	2 mg/l Биомаркер за експозиция/биомаркер за ефект: Trans, trans-муконова киселина - Биологична среда: урина - Време на пробовземане: В края на експозицията или в края на работната смяна - Специфични ефекти: Кожа (възможна е значителна резорбция чрез кожата) 0.045 mg/g creatinine Биомаркер за експозиция/биомаркер за ефект: S-фенилмеркаптурова киселина - Биологична среда: урина - Време на пробовземане: В края на експозицията или в края на работната смяна - Специфични ефекти: Кожа (възможна е значителна резорбция чрез кожата)
Regulatory reference	Наредба № 10 от 26.09.2003 г. за защита на работещите от рискове, свързани с експозиция на канцерогени и мутагени при работа (изм. и доп. ДВ. бр. 28 от 2 Април 2024г.)
Croatia - Occupational Exposure Limits	
Local name	Benzen
GVI (OEL TWA)	0.66 mg/m ³ 1.65 mg/m ³ do 5. travnja 2026. 0.2 ppm 0.5 ppm do 5. travnja 2026.
Remark	Direktiva: 2022/431/EU. Napomena: Koža (razvrstana kao tvar koja nadražuje kožu (H315)), Karc 1A, Muta 1B
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 148/2023)
Croatia - Biological limit values	
Local name	Benzen

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ORLEsol 110/170 D (64742-82-1)	
BLV	0.36 µmol/l Karakteristični pokazatelj: benzen - Biološki uzorak: krv - Vrijeme uzorkovanja: odmah na kraju radne smjene 28 µg/l Karakteristični pokazatelj: benzen - Biološki uzorak: krv - Vrijeme uzorkovanja: odmah na kraju radne smjene 21.7 µmol/mol creatinine Karakteristični pokazatelj: S-fenilmerkaptorna kiselina - Biološki uzorak: mokraća - Vrijeme uzorkovanja: na kraju radne smjene 46 µg/g creatinine Karakteristični pokazatelj: S-fenilmerkaptorna kiselina - Biološki uzorak: mokraća - Vrijeme uzorkovanja: na kraju radne smjene
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 91/2018)
Cyprus - Occupational Exposure Limits	
Local name	Βενζόλιο
OEEL TWA	0.66 mg/m ³ 1.65 mg/m ³ (Οριακή τιμή έως την 5η Απριλίου 2026)
	0.2 ppm 0.5 ppm (Οριακή τιμή έως την 5η Απριλίου 2026)
Remark	Δέρμα. Καρκινογόνοι και Μεταλλαξιογόνοι Παράγοντες
Regulatory reference	Κανονισμοί του 2023 (Κ.Δ.Π. 220/2023)
Czech Republic - Occupational Exposure Limits	
Local name	Benzen
PEL (OEEL TWA)	0.66 mg/m ³ (od 5. 4. 2026) 1.65 mg/m ³ (do 4. 4. 2026)
	0.2 ppm (od 5. 4. 2026) 0.5 ppm (do 4. 4. 2026)
Remark	B - u látky je zaveden biologický expoziční test (BET) v moči nebo krvi, D - při expozici se významně uplatňuje pronikání faktoru kůže, I - dráždí sliznice (oči, dýchací cesty), resp. kůže, K - karcinogen kategorie 1A a 1B (s větou H350, H350i), M - mutagen v zárodečných buňkách kategorie 1A a 1B (s větou H340), P - u látky nelze vyloučit závažné pozdní účinky (s větou H372, H373).
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 20/2025 Sb.)
Czech Republic - Biological limit values	
Local name	Benzen
BLV	0.05 mg/g creatinine Ukazatel: S-Fenylmerkapturová kyselina - Biologický vzorek: moči - Doba odběru: konec směny 0.024 µmol/mmol Creatinine Ukazatel: S-Fenylmerkapturová kyselina - Biologický vzorek: moči - Doba odběru: konec směny 1.5 mg/g creatinine Ukazatel: t,t-Mukonová kyselina - Biologický vzorek: moči - Doba odběru: konec směny 1.2 µmol/mmol Creatinine Ukazatel: t,t-Mukonová kyselina - Biologický vzorek: moči - Doba odběru: konec směny
Regulatory reference	Vyhláška č. 107/2013 Sb. (kterou se mění vyhláška č. 432/2003 Sb.)
Denmark - Occupational Exposure Limits	
Local name	Benzen
OEEL TWA	0.66 mg/m ³ Fra den 5. april 2026 1.6 mg/m ³
	0.2 ppm Fra den 5. april 2026 0.5 ppm

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ORLEsol 110/170 D (64742-82-1)	
Remark	E (betyder, at stoffet har en EU-grænseværdi); H (betyder, at stoffet kan optages gennem huden); K (betyder, at stoffet anses for at kunne være kræftfremkaldende og omfattet af bekendtgørelse om foranstaltninger til forebyggelse af risici ved arbejde med stoffer og materialer, der kan være kræftfremkaldende, mutagene eller reproduktionstoksiske)
Regulatory reference	BEK nr 1619 af 19/12/2024
Estonia - Occupational Exposure Limits	
Local name	Benseen
OEL TWA	0.66 mg/m ³ (kehtib alates 06.04.2026) 1.5 mg/m ³ (kehtib kuni 05.04.2026)
	0.2 ppm (kehtib alates 06.04.2026) 0.5 ppm (kehtib kuni 05.04.2026)
OEL STEL	9 mg/m ³ (kehtib kuni 05.04.2026) 3 ppm (kehtib kuni 05.04.2026)
Remark	A (Naha kaudu kergesti imenduv aine), C (Kantserogeenne aine)
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 02.04.2024, 13)
Finland - Occupational Exposure Limits	
Local name	Bentseeni
BOEL TWA	0.66 mg/m ³ Raja-arvoa sovelletaan 5.4.2026 alkaen 1.65 mg/m ³
	0.2 ppm Raja-arvoa sovelletaan 5.4.2026 alkaen 0.5 ppm
Remark	Iho. Syöpäsairauden vaaraa aiheuttavat ja perimää vaurioittavat tekijät
Regulatory reference	HTP-ARVOT 2025 (Sosiaali- ja terveystieteiden ministeriö)
Finland - Biological limit values	
Local name	Etyylibentseeni
BLV	5.2 mmol/l Parametri: Virtsan mantelihappo - Näytteenottoajankohta: Työvuoron päätyttyä työviikon tai altistumisjakson loputtua
Regulatory reference	HTP-ARVOT 2025 (Sosiaali- ja terveystieteiden ministeriö)
France - Occupational Exposure Limits	
Local name	Benzène
VME (OEL TWA)	0.66 mg/m ³ (À partir du 5 avril 2026) 1.65 mg/m ³
	0.2 ppm (À partir du 5 avril 2026) 0.5 ppm
Remark	Valeurs réglementaires contraignantes. Cancérogène de catégorie 1A, Mutagène de catégorie 1B, Risque de pénétration percutanée
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 6443, 2022; Outil65; Décret n° 2019-1487; Décret n° 2020-1546; Décret n° 2021-434; Décret n° 2021-1849; Décret n° 2024-307)
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	1,2,4-Trimethylbenzol
AGW (OEL TWA)	100 mg/m ³ 20 ppm

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ORLEsol 110/170 D (64742-82-1)	
Peak exposure limitation factor	2(II)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); EU - Europäische Union (Von der EU wurde ein Luftgrenzwert festgelegt: Abweichungen bei Wert und Spitzenbegrenzung sind möglich); Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Regulatory reference	TRGS900
Germany - Occupational Exposure Limits (TRGS 910)	
Local name	Benzol
Acceptable concentration (Volume conc.)	0.06 ppm
Acceptable concentration (Weight conc.)	0.2 mg/m ³
Notes	b) Akzeptanzkonzentration assoziiert mit Risiko 4:10000
Tolerance concentration (Volume conc.)	0.6 ppm
Tolerance concentration (Weight conc.)	1.9 mg/m ³
Tolerance concentration excess factor	8
Remark	H - Hautresorptiv
Equivalence value for acceptable concentration	0.8 µg/l (3) 3 µg/g creatinine (3)
Equivalence value for tolerance concentration	5 µg/l 25 µg/g creatinine 500 µg/g creatinine
Parameter	Benzol S-Phenylmerkaptursäure Trans, trans-Muconsäure
Testing material	U - Urin
Testing time	b - Expositionsende bzw. Schichtende
Regulatory reference	TRGS 910
Gibraltar - Occupational Exposure Limits	
Local name	Benzene
OEL TWA	3.25 mg/m ³ 1 ppm
Remark	Skin
Regulatory reference	Factories (Control of Carcinogens and mutagens at Work) Regulations 2003 (LN. 2020/47)
Greece - Occupational Exposure Limits	
Local name	Βενζόλιο
OEL TWA	0.66 mg/m ³ Οριακή τιμή έκθεσης έως την 4η Απριλίου 2026 1.65 mg/m ³ 0.2 ppm Οριακή τιμή έκθεσης έως την 4η Απριλίου 2026 0.5 ppm
Remark	Δέρμα (Είναι πιθανή η σημαντική αύξηση της συνολικής επιβάρυνσης του λόγω δερματικής έκθεσης)

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Regulatory reference	Π.Δ. 48/2024 - Προστασία των εργαζομένων από τους κινδύνους που συνδέονται με την έκθεση σε καρκινογόνους παράγοντες, μεταλλαξιογόνους παράγοντες ή τοξικές για την αναπαραγωγή ουσίες κατά την εργασία
Hungary - Occupational Exposure Limits	
Local name	BENZOL
AK (OEL TWA)	1.65 mg/m ³ 1 ppm
Remark	k(1A) (rákkeltő), b (Bőrön át is felszívódik), i (ingerlő anyag, amely izgatja a bőrt, nyálkahártyát, szemet vagy mindhármát), BEM (biológiai expozíciós mutató); EU6 (2019/130 EU irányelvben közölt érték); T (Azok az anyagok, amelyek egészségkárosító hatása TARTÓS expozíciót követően jelentkezik)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Hungary - Biological Exposure Indices	
Local name	Benzol
BEI	0.04 mg/g creatinine Biológiai expozíciós (hatás) mutató: S-fenilmerkaptursav - Biológiai minta: vizeletben - Mintavétel ideje: m.v. (műszak végén) 0.22 μmol/mmol Creatinine Biológiai expozíciós (hatás) mutató: S-fenilmerkaptursav - Biológiai minta: vizeletben - Mintavétel ideje: m.v. (műszak végén)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Ireland - Occupational Exposure Limits	
Local name	Benzene
OEL TWA	0.66 mg/m ³ Llimit value from 5th April 2026 1.65 mg/m ³ Limit value until 5th April 2026 0.2 ppm Llimit value from 5th April 2026 0.5 ppm Limit value until 5th April 2026
Remark	BOELV (Binding Occupational Exposure Limit Values), Skin (Substances which have the capacity to penetrate intact skin when they come in contact with it and be absorbed into the body. A substantial contribution to the total body burden via dermal exposure is possible), Carc.1A (Substances known to have carcinogenic potential for humans), Muta.1B (Substances which should be regarded as if they induce heritable mutations in the germ cells of humans)
Regulatory reference	Chemical Agents Code of Practice 2024
Ireland - Biological limit values	
Local name	Benzene
BMGV	25 μg/g creatinine Parameter: S-Phenylmercapturic acid - Medium: urine - Sampling time: End of shift - Notations: B (Background) 50 μg/g creatinine Parameter: t,t-Muconic acid - Medium: urine - Sampling time: End of shift - Notations: B (Background)
Regulatory reference	Biological Monitoring Guidelines (HSA, 2011)
Italy - Occupational Exposure Limits	
Local name	Benzene
OEL TWA	0.66 mg/m ³ 1.65 mg/m ³ Valore limite fino al 5 aprile 2026

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ORLEsol ^{110/170 D} (64742-82-1)	
	0.2 ppm 0.5 ppm Valore limite fino al 5 aprile 2026
Remark	Cute
Regulatory reference	Allegato XLIII del D.Lgs. 9 aprile 2008, n. 81 e s.m.i. (D.Lgs. 4 settembre 2024, n. 135)
Lithuania - Occupational Exposure Limits	
Local name	Benzenas (benzolas)
IPRV (OEL TWA)	0.66 mg/m ³ (įsigalioja 2026 m. balandžio 5 d.) 1.65 mg/m ³
	0.2 ppm (įsigalioja 2026 m. balandžio 5 d.) 0.5 ppm
TPRV (OEL STEL)	19 mg/m ³
	6 ppm
Remark	K (kancerogeninis poveikis); M (mutageninis poveikis); O (medžiaga į organizmą gali prasiskverbti pro nepažeistą odą)
Regulatory reference	LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-82/A1-57, 2024-01-23)
Luxembourg - Occupational Exposure Limits	
Local name	Benzène
OEL TWA	3.25 mg/m ³
	1 ppm
Remark	Peau
Regulatory reference	Mémorial A N° 223 de 2021 concernant la protection des salariés contre les risques liés à l'exposition à des agents cancérigènes ou mutagènes au travail
Malta - Occupational Exposure Limits	
Local name	Benzene # Benzen
OEL TWA	1.65 mg/m ³ (Limit value until 5 April 2026 # Valur limitu sal-5 ta' April 2026)
	0.5 ppm (Limit value until 5 April 2026 # Valur limitu sal-5 ta' April 2026)
Remark	Skin # Ġilda
Regulatory reference	S.L. 424.22 - Exposure to Carcinogens, Mutagens or Reprotoxic Substances at Work Regulations (L.N. 102 of 2024) # L.S. 424.22 - Regolamenti dwar Espożizzjoni għall-Carcinogens, Mutagens jew Reprotoxic Substances fuq il-Post tax-Xogħol (A.L. 102 tal-2024)
Netherlands - Occupational Exposure Limits	
Local name	Benzeen
TGG-8u (OEL TWA)	0.7 mg/m ³
	0.2 ppm
Remark	Kankerverwekkende stof. H (Huidopname) Stoffen die relatief gemakkelijk door de huid kunnen worden opgenomen, hetgeen een substantiële bijdrage kan betekenen aan de totale inwendige blootstelling, hebben in de lijst een H-aanduiding. Bij deze stoffen moeten naast maatregelen tegen inademing ook adequate maatregelen ter voorkoming van huidcontact worden genomen.
Regulatory reference	Arbidsomstandighedenregeling 2024

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Poland - Occupational Exposure Limits	
Portugal - Indicative Occupational Exposure Limit (IOEL)	
Local name	Etilbenzeno
IOEL TWA	442 mg/m ³
	100 ppm
IOEL STEL	884 mg/m ³
	200 ppm
Remark	Cutânea.
Regulatory reference	Decreto-Lei n.º 1/2021 de 6 de janeiro
Portugal - Occupational Exposure Limits	
Local name	Benzeno
OEL TWA	0.5 ppm
OEL STEL	2.5 ppm
Remark	P (Toxicidade percutânea); A1 (Agente carcinogénico confirmado no Homem); IBE (Índice biológico de exposição)
Regulatory reference	Norma Portuguesa NP 1796:2014
Portugal - Biological Exposure Indices	
Local name	Benzeno
BEI	25 µg/g creatinine Parâmetro: Ácido s-fenilmercaptúrico - Meio: urina - Momento da amostragem: Fim do turno - Notação: Vb (Valor basal) 500 µg/g creatinine Parâmetro: Ácido t,t-mucónico - Meio: urina - Momento da amostragem: Fim do turno - Notação: Vb (Valor basal)
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Benzen
OEL TWA	0.66 mg/m ³
	1.65 mg/m ³ Valoare-limită până la 5 aprilie 2026
	0.2 ppm 0.5 ppm Valoare-limită până la 5 aprilie 2026
Remark	P - posibilitatea unei penetrări cutanate importante; C1A - poate provoca apariția cancerului; M1B - poate provoca anomalii genetice
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 179/2024)
Romania - Biological limit values	
Local name	Benzen
BLV	25 µg/g creatinine Indicatorul biologic: Acid s-fenil mercapturic - Material biologic: urină - Momentul recoltării: sfârșit de schimb 50 mg/l Indicatorul biologic: Fenoli totali - Material biologic: urină - Momentul recoltării: sfârșit de schimb 500 µg/g creatinine Indicatorul biologic: Acid t,t muconic - Material biologic: urină - Momentul recoltării: sfârșit de schimb
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 179/2024)

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ORLEsol 110/170 D (64742-82-1)	
Serbia - Occupational Exposure Limits	
Local name	бензен
OEL TWA	3 mg/m ³
	1 ppm
Remark	EУ0 – напомена да се ради о хемијским материјама за које су утврђене обавезујуће граничне вредности изложености према Директиви 1999/38/ЕЗ и Директиви 98/24/ЕЗ
Regulatory reference	ПРАВИЛНИК о превентивним мерама за безбедан и здрав рад при излагању хемијским материјама („Службени гласник РС”, бр. 106/09, 117/17 и 107/21)
Slovakia - Occupational Exposure Limits	
Local name	Benzén
NPHV (OEL TWA)	0.66 mg/m ³ NPEL sa uplatňuje od 6. apríla 2026 1.65 mg/m ³ NPEL sa uplatňuje do 5. apríla 2026
	0.2 ppm NPEL sa uplatňuje od 6. apríla 2026 0.5 ppm NPEL sa uplatňuje do 5. apríla 2026
Remark	Kategória karcinogénnych faktorov 1A – Dokázaný karcinogén pre ľudí; Kategória mutagénnych faktorov 1B – Mutagén cicavčích zárodočných buniek; K – prienik cez kožu: K celkovému zaťaženiu organizmu môže významne prispieť expozícia cez kožu.
Regulatory reference	Nariadenie vlády č. 356/2006 Z. z. (121/2024 Z. z.)
Slovakia - Biological limit values	
Local name	Etylbenzén
BLV	12 mg/l Zisťovaný faktor: 2- a 4-Etylfenol - Vyšetovaný materiál: moč - Čas odberu vzorky: b) koniec expozície alebo pracovnej zmeny, c) pri dlhodobej expozícii; po viacerých pracovných zmenách 1600 mg/l Zisťovaný faktor: Kyselina mandľová a kyselina fenyglyoxylová - Vyšetovaný materiál: moč - Čas odberu vzorky: b) koniec expozície alebo pracovnej zmeny, c) pri dlhodobej expozícii; po viacerých pracovných zmenách
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (122/2024 Z. z.)
Slovenia - Occupational Exposure Limits	
Local name	benzen
OEL TWA	0.66 mg/m ³ 1.65 mg/m ³
	0.2 ppm 0.5 ppm
Remark	Rakotvorne snovi – kategorija 1A, Mutagene snovi za zarodne celice – kategorija 1B. EU, K (Lastnost lažjega prehajanja snovi v organizem skozi kožo), BAT (Biološka mejna vrednost)
Regulatory reference	Uradni list RS, št. 26/2025 z dne 18.4.2025 - Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti rakotvornim ali mutagenim snovem pri delu
Spain - Occupational Exposure Limits	
Local name	White spirit (nafta de petróleo)
VLA-ED (OEL TWA)	290 mg/m ³
	50 ppm
VLA-EC (OEL STEL)	580 mg/m ³
	100 ppm

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ORLEsol ^{110/170 D} (64742-82-1)	
Remark	j (De acuerdo con la información disponible, el white spirit que se comercializa en España contiene menos del 0,1% de benceno, por lo cual no está clasificado como carcinogénico), vía dérmica (Indica que, en las exposiciones a esta sustancia, la aportación por la vía cutánea puede resultar significativa para el contenido corporal total si no se adoptan medidas para prevenir la absorción. En estas situaciones, es aconsejable la utilización del control biológico para poder cuantificar la cantidad global absorbida del contaminante).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2025. INSHT
Spain - Biological limit values	
Local name	Benceno
BLV	8 µg/g creatinine Parámetro: Ácido S-Fenilmercaptúrico - Medio: Orina - Momento de muestreo: Final de la jornada laboral (Entrada en vigor el 5 de abril de 2026) 22 µg/g creatinine Parámetro: Ácido S-Fenilmercaptúrico - Medio: Orina - Momento de muestreo: Final de la jornada laboral
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2025. INSHT
Sweden - Occupational Exposure Limits	
Local name	Bensen
NGV (OEL TWA)	0.66 mg/m ³ (Gäller från och med den 5 april 2026) 1.5 mg/m ³
	0.2 ppm (Gäller från och med den 5 april 2026) 0.5 ppm
KGV (OEL STEL)	9 mg/m ³ 3 ppm
Remark	C (Ämnet är cancerframkallande); H (Ämnet tas lätt upp genom huden. Gränsvärdet bedöms ge tillräckligt skydd om huden är skyddad); 24 (Ämnet har ett bindande EU-gränsvärde)
Regulatory reference	Arbetsmiljöverkets föreskrifter och allmänna råd (AFS 2023:14) om gränsvärden för luftvägsexponering i arbetsmiljön
United Kingdom - Occupational Exposure Limits	
Local name	Benzene
WEL TWA (OEL TWA)	3.25 mg/m ³ 1 ppm
Remark	Carc (Capable of causing cancer and/or heritable genetic damage), Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Iceland - Occupational Exposure Limits	
Local name	Bensen
OEL TWA	0.66 mg/m ³ 0.2 ppm
Remark	H (efnið getur auðveldlega borist inn í líkamann gegnum húð), K (efnið er krabbameinsvaldandi)
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 1309/2023)

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ORLEsol ^{110/170 D} (64742-82-1)	
Norway - Occupational Exposure Limits	
Local name	Benzen
Grenseverdi (OEL TWA)	0.33 mg/m ³ Fra april 2028 0.66 mg/m ³ Fram til april 2028
	0.1 ppm Fra april 2028 0.2 ppm Fram til april 2028
Remark	H: Kjemikalier som kan tas opp gjennom huden; K: Kjemikalier som skal betraktes som kreftfremkallende; M: Kjemikalier som skal betraktes som mutagene; G: EU har fastsatt en bindende grenseverdi og/eller anmerkning for stoffet.
Regulatory reference	FOR-2024-04-05-581
North Macedonia - Occupational Exposure Limits	
Local name	Бензен
OEL TWA	3.25 mg/m ³
	1 ppm
KTV	4
Short time value [mg/m ³]	13 mg/m ³
Short time value [ppm]	4 ppm
Remark	(KTV) краткотрајна вредност (КТВ) значи концентрација на опасни хемиски супстанции во воздухот на работното место внатре во зона на дишење, на која работникот без опасност по здравјето може да е изложен на покусо време. Изложеноста на краткотрајни вредности може да трае највеќе 15 минути и не смее да се повтори повеќе од четирипати во работната смена, при што меѓу две изложености на оваа концентрација мора да измине најмалку 60 минути. Краткотрајната вредност е изразена во mg/m ³ или во ml/m ³ (ppm) а е дадена како многукратни дозволени пречекорувања на граничната вредност; (K) својство на полесно пренесување на супстанците во организмот преку кожата; (TDK) техничко достигнување на концентрацијата – е дадено за канцерогените супстанции и значи концентрација на супстанции во воздухот на работното место, кои можат да се достигнат со достапните техники; (EKA) поврзаноста помеѓу концентрацијата на канцерогени супстанции во воздухот на работното место и износ на количината на канцерогените супстанции и/или нивните метаболити во организмот – дадена за канцерогени супстанции (канцерогени); (BAT) биолошка гранична вредност – праг на биолошка гранична вредност, што значи предупредување на опасна хемиска супстанца и нејзини метаболити во ткивата, телесните течности или издишувањето на воздухот, без оглед на тоа, дали опасната хемиска супстанца е внесена во организмот со вдишување, голтање или преку кожата; (EU) European Union – гранична вредност, определена на ниво на Европската унија
Regulatory reference	Правилник за минималните барања за безбедност и здравје при работа на вработени од ризици поврзани со изложување на хемиски супстанции („Службен весник на Република Македонија“ бр.46/10) и Правилник за минималните барања за безбедност и здравје при работа на вработени од ризици поврзани со изложување на канцерогени, мутагени или супстанции („Службен весник на Република Македонија“ бр.110/10)
Switzerland - Occupational Exposure Limits	
Local name	Benzène / Benzol
MAK (OEL TWA)	0.7 mg/m ³
	0.2 ppm
Notation	R, C1 _A , M1 _B , B / H, C1 _A , M1 _B , B

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ORLEsol 110/170 D (64742-82-1)	
Remark	HSE, NIOSH, DFG, BG
Regulatory reference	www.suva.ch, 18.06.2025
Switzerland - BAT	
Local name	Benzène / Benzol
BAT	8 µg/g creatinine (0.004 µmol/mmol cr.; Paramètre biologique: Acide S-phénylmercapturique; Substrat d'examen: Urine; Moment du prélèvement: Fin de l'exposition, de la période de travail.) / (0.004 µmol/mmol cr.; Biologischer Parameter: S-Phenylmerkaptursäure; Untersuchungsmaterial: Urin; Probennahmezeitpunkt: Expositionsende, bzw. Schichtende.)
Remark	Influence de l'environnement. / Umwelteinflüsse.
Regulatory reference	Ordonnance 832.30 (OPA), article 50 al. 3, www.suva.ch/valeurs-limites / Verordnung 832.30 (VUV), Art. 50 Abs. 3, www.suva.ch/grenzwerte
Benzene (71-43-2)	
EU - Binding Occupational Exposure Limit (BOEL)	
Local name	Benzene
BOEL TWA	0.66 mg/m ³ (Limit value from 5 April 2026) 1.65 mg/m ³ (Limit value until 5 April 2026) 0.2 ppm (Limit value from 5 April 2026) 0.5 ppm (Limit value until 5 April 2026)
Notes	Skin (Substantial contribution to the total body burden via dermal exposure possible)
Regulatory reference	DIRECTIVE (EU) 2022/431 (amending Directive 2004/37/EC)
EU - Biological Limit Value (BLV)	
Local name	Benzene
BLV	28 µg/l Parameter: benzene - Medium: blood - Sampling time: immediately end of shift 46 µg/g creatinine Parameter: phenylmercapturic - Medium: urine - Sampling time: end of exposure/shift
Regulatory reference	SCOEL List of recommended health-based BLVs and BGVs
Austria - Occupational Exposure Limits	
Local name	Benzol
MAK (OEL TWA)	0.66 mg/m ³ (gilt ab 6.4.2026) 1.65 mg/m ³ 0.2 ppm (gilt ab 6.4.2026) 0.5 ppm
MAK (OEL STEL)	2.56 mg/m ³ (4x 15(Miw) min) (gilt ab 6.4.2026) 6.4 mg/m ³ (4x 15(Miw) min) 0.8 ppm (4x 15(Miw) min) (gilt ab 6.4.2026) 2 ppm (4x 15(Miw) min)
Remark	H. Krebszeugend: III A1
Regulatory reference	BGBI. II Nr. 330/2024
Austria - Biological limit values	
Local name	Benzol

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Benzene (71-43-2)	
BLV	10 g/dl Parameter: Hämoglobin - Untersuchungsmaterial: Blut - Mitarbeiter/innen: Frauen 12 g/dl Parameter: Hämoglobin - Untersuchungsmaterial: Blut - Mitarbeiter/innen: Männer 1.6 mg/l Parameter: t,t-Muconsäure - Untersuchungsmaterial: Harn
Remark	Eignung: Blut: MCV: 79-97 fl; Erythrozyten: 3,2 Millionen/ μ l für Frauen, 3,8 Millionen/ μ l für Männer; Leukozyten: unterer Grenzwert: 4.000/ μ l (davon 2.000 Granulozyten) bzw. 3.700/ μ l bei nicht pathologischem Differentialblutbild, oberer Grenzwert: 13.000/ μ l; Thrombozyten: 150.000 bzw. 130.000/ μ l bei nicht pathologischem Differentialblutbild Eignung mit vorzeitiger Folgeuntersuchung: Bei Unterschreiten bzw. Überschreiten der Grenzwerte im Blut (ausgenommen Differentialblutbild) oder im Harn sowie bei atypischen Morphologien im Blut. Der Zeitabstand zwischen den Untersuchungen beträgt bei Eignung: ein Jahr; bei Arbeiten in Kokereien: drei Monate, für die Blutuntersuchung sechs Monate; bei Eignung mit vorzeitiger Folgeuntersuchung: drei Monate; bei Arbeiten in Kokereien: sechs Wochen
Regulatory reference	Verordnung über die Gesundheitsüberwachung am Arbeitsplatz 2024 (VGÜ)
Belgium - Occupational Exposure Limits	
Local name	Benzène # Benzeen
OEL TWA	0.66 mg/m ³ (à partir du 5 avril 2026) # (vanaf 5 april 2026) 1.65 mg/m ³ (jusqu'au 5 avril 2026) # (tot 5 april 2026) 0.2 ppm (à partir du 5 avril 2026) # (vanaf 5 april 2026) 0.5 ppm (jusqu'au 5 avril 2026) # (tot 5 april 2026)
Remark	C: la mention "C" signifie que l'agent en question relève du champ d'application du titre 2 relatif aux agents cancérigènes, mutagènes et reprotoiques du livre VI du code de bien-être au travail, D: la mention "D" signifie que la résorption de l'agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l'exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l'agent dans l'air. # C: de vermelding "C" betekent dat het betrokken agens valt onder het toepassingsgebied van titel 2 betreffende kankerverwekkende, mutagene en reprotoxische agentia van boek VI van de codex over het welzijn op het werk, D: de vermelding "D" betekent dat de opname van het agens via de huid, de slijmvliezen of de ogen een belangrijk deel van de totale blootstelling vormt. Deze opname kan het gevolg zijn van zowel direct contact als zijn aanwezigheid in de lucht.
Regulatory reference	Koninklijk besluit/Arrêté royal 16/11/2023
Bulgaria - Occupational Exposure Limits	
Local name	Бензен
OEL TWA	0.66 mg/m ³ (Измерено като елементарен въглерод) 0.2 ppm (Измерено като елементарен въглерод)
Remark	Кожа (Възможен е значителен принос за общото натрупване в тялото чрез кожна експозиция)
Regulatory reference	Наредба № 10 от 26.09.2003 г. за защита на работещите от рискове, свързани с експозиция на канцерогени и мутагени при работа (изм. и доп. ДВ. бр. 28 от 2 Април 2024г.)
Bulgaria - Biological limit values	
Local name	Бензен

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Benzene (71-43-2)	
BLV	2 mg/l Биомаркер за експозиция/биомаркер за ефект: Trans, trans-муконова киселина - Биологична среда: урина - Време на пробовземане: В края на експозицията или в края на работната смяна - Специфични ефекти: Кожа (възможна е значителна резорбция чрез кожата) 0.045 mg/g creatinine Биомаркер за експозиция/биомаркер за ефект: S-фенилмеркаптурова киселина - Биологична среда: урина - Време на пробовземане: В края на експозицията или в края на работната смяна - Специфични ефекти: Кожа (възможна е значителна резорбция чрез кожата)
Regulatory reference	Наредба № 10 от 26.09.2003 г. за защита на работещите от рискове, свързани с експозиция на канцерогени и мутагени при работа (изм. и доп. ДВ. бр. 28 от 2 Април 2024г.)
Croatia - Occupational Exposure Limits	
Local name	Benzen
GVI (OEL TWA)	0.66 mg/m ³ 1.65 mg/m ³ do 5. travnja 2026. 0.2 ppm 0.5 ppm do 5. travnja 2026.
Remark	Direktiva: 2022/431/EU. Napomena: Koža (razvrstana kao tvar koja nadražuje kožu (H315)), Karc 1A, Muta 1B
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, граничним vrijednostima izloženosti i biološkim граничним vrijednostima (NN 148/2023)
Croatia - Biological limit values	
Local name	Benzen
BLV	0.36 µmol/l Karakteristični pokazatelj: benzen - Biološki uzorak: krv - Vrijeme uzorkovanja: odmah na kraju radne smjene 28 µg/l Karakteristični pokazatelj: benzen - Biološki uzorak: krv - Vrijeme uzorkovanja: odmah na kraju radne smjene 21.7 µmol/mol creatinine Karakteristični pokazatelj: S-fenilmerkaptorna kiselina - Biološki uzorak: mokraća - Vrijeme uzorkovanja: na kraju radne smjene 46 µg/g creatinine Karakteristični pokazatelj: S-fenilmerkaptorna kiselina - Biološki uzorak: mokraća - Vrijeme uzorkovanja: na kraju radne smjene
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, граничним vrijednostima izloženosti i biološkim граничним vrijednostima (NN 91/2018)
Cyprus - Occupational Exposure Limits	
Local name	Βενζόλιο
OEL TWA	0.66 mg/m ³ 1.65 mg/m ³ (Οριακή τιμή έως την 5η Απριλίου 2026) 0.2 ppm 0.5 ppm (Οριακή τιμή έως την 5η Απριλίου 2026)
Remark	Δέρμα. Καρκινογόνοι και Μεταλλαξιογόνοι Παράγοντες
Regulatory reference	Κανονισμοί του 2023 (Κ.Δ.Π. 220/2023)
Czech Republic - Occupational Exposure Limits	
Local name	Benzen
PEL (OEL TWA)	0.66 mg/m ³ (od 5. 4. 2026) 1.65 mg/m ³ (do 4. 4. 2026) 0.2 ppm (od 5. 4. 2026) 0.5 ppm (do 4. 4. 2026)

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Benzene (71-43-2)	
Remark	B - u látky je zaveden biologický expoziční test (BET) v moči nebo krvi, D - při expozici se významně uplatňuje pronikání faktoru kůží, I - dráždí sliznice (oči, dýchací cesty), resp. kůži, K - karcinogen kategorie 1A a 1B (s větou H350, H350i), M - mutagen v zárodečných buňkách kategorie 1A a 1B (s větou H340), P - u látky nelze vyloučit závažné pozdní účinky (s větou H372, H373).
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 20/2025 Sb.)
Czech Republic - Biological limit values	
Local name	Benzen
BLV	0.05 mg/g creatinine Ukazatel: S-Fenylmerkapturová kyselina - Biologicky vzorek: moči - Doba odběru: konec směny 0.024 μmol/mmol Creatinine Ukazatel: S-Fenylmerkapturová kyselina - Biologicky vzorek: moči - Doba odběru: konec směny 1.5 mg/g creatinine Ukazatel: t,t-Mukonová kyselina - Biologicky vzorek: moči - Doba odběru: konec směny 1.2 μmol/mmol Creatinine Ukazatel: t,t-Mukonová kyselina - Biologicky vzorek: moči - Doba odběru: konec směny
Regulatory reference	Vyhláška č. 107/2013 Sb. (kterou se mění vyhláška č. 432/2003 Sb.)
Denmark - Occupational Exposure Limits	
Local name	Benzen
OEL TWA	0.66 mg/m ³ Fra den 5. april 2026 1.6 mg/m ³ 0.2 ppm Fra den 5. april 2026 0.5 ppm
Remark	E (betyder, at stoffet har en EU-grænseværdi); H (betyder, at stoffet kan optages gennem huden); K (betyder, at stoffet anses for at kunne være kræftfremkaldende og omfattet af bekendtgørelse om foranstaltninger til forebyggelse af risici ved arbejde med stoffer og materialer, der kan være kræftfremkaldende, mutagene eller reproduktionstoksiske)
Regulatory reference	BEK nr 1619 af 19/12/2024
Estonia - Occupational Exposure Limits	
Local name	Benseen
OEL TWA	0.66 mg/m ³ (kehtib alates 06.04.2026) 1.5 mg/m ³ (kehtib kuni 05.04.2026) 0.2 ppm (kehtib alates 06.04.2026) 0.5 ppm (kehtib kuni 05.04.2026)
OEL STEL	9 mg/m ³ (kehtib kuni 05.04.2026) 3 ppm (kehtib kuni 05.04.2026)
Remark	A (Naha kaudu kergesti imenduv aine), C (Kantserogeenne aine)
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 02.04.2024, 13)
Finland - Occupational Exposure Limits	
Local name	Bentseeni
BOEL TWA	0.66 mg/m ³ Raja-arvoa sovelletaan 5.4.2026 alkaen 1.65 mg/m ³ 0.2 ppm Raja-arvoa sovelletaan 5.4.2026 alkaen 0.5 ppm
Remark	Iho. Syöpäsairauden vaaraa aiheuttavat ja perimää vaurioittavat tekijät

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Benzene (71-43-2)	
Regulatory reference	HTP-ARVOT 2025 (Sosiaali- ja terveysministeriö)
France - Occupational Exposure Limits	
Local name	Benzène
VME (OEL TWA)	0.66 mg/m ³ (À partir du 5 avril 2026) 1.65 mg/m ³
	0.2 ppm (À partir du 5 avril 2026) 0.5 ppm
Remark	Valeurs réglementaires contraignantes. Cancérogène de catégorie 1A, Mutagène de catégorie 1B, Risque de pénétration percutanée
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 6443, 2022; Outil65; Décret n° 2019-1487; Décret n° 2020-1546; Décret n° 2021-434; Décret n° 2021-1849; Décret n° 2024-307)
Germany - Occupational Exposure Limits (TRGS 910)	
Local name	Benzol
Acceptable concentration (Volume conc.)	0.06 ppm
Acceptable concentration (Weight conc.)	0.2 mg/m ³
Notes	b) Akzeptanzkonzentration assoziiert mit Risiko 4:10000
Tolerance concentration (Volume conc.)	0.6 ppm
Tolerance concentration (Weight conc.)	1.9 mg/m ³
Tolerance concentration excess factor	8
Remark	H - Hautresorptiv
Equivalence value for acceptable concentration	0.8 µg/l (3) 3 µg/g creatinine (3)
Equivalence value for tolerance concentration	5 µg/l 25 µg/g creatinine 500 µg/g creatinine
Parameter	Benzol S-Phenylmerkaptursäure Trans, trans-Muconsäure
Testing material	U - Urin
Testing time	b - Expositionsende bzw. Schichtende
Regulatory reference	TRGS 910
Gibraltar - Occupational Exposure Limits	
Local name	Benzene
OEL TWA	3.25 mg/m ³ 1 ppm
Remark	Skin
Regulatory reference	Factories (Control of Carcinogens and mutagens at Work) Regulations 2003 (LN. 2020/47)
Greece - Occupational Exposure Limits	
Local name	Βενζόλιο

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Benzene (71-43-2)	
OEL TWA	0.66 mg/m ³ Οριακή τιμή έκθεσης έως την 4η Απριλίου 2026 1.65 mg/m ³
	0.2 ppm Οριακή τιμή έκθεσης έως την 4η Απριλίου 2026 0.5 ppm
Remark	Δέρμα (Είναι πιθανή η σημαντική αύξηση της συνολικής επιβάρυνσης του λόγω δερματικής έκθεσης)
Regulatory reference	Π.Δ. 48/2024 - Προστασία των εργαζομένων από τους κινδύνους που συνδέονται με την έκθεση σε καρκινογόνους παράγοντες, μεταλλαξιογόνους παράγοντες ή τοξικές για την αναπαραγωγή ουσίες κατά την εργασία
Hungary - Occupational Exposure Limits	
Local name	BENZOL
AK (OEL TWA)	1.65 mg/m ³ 1 ppm
Remark	k(1A) (rákkeltő), b (Bőrön át is felszívódik), i (ingerlő anyag, amely izgatja a bőrt, nyálkahártyát, szemet vagy mindhármát), BEM (biológiai expozíciós mutató); EU6 (2019/130 EU irányelvben közölt érték); T (Azok az anyagok, amelyek egészségkárosító hatása TARTÓS expozíciót követően jelentkezik)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Hungary - Biological Exposure Indices	
Local name	Benzol
BEI	0.04 mg/g creatinine Biológiai expozíciós (hatás) mutató: S-fenilmerkaptursav - Biológiai minta: vizeletben - Mintavétel ideje: m.v. (műszak végén) 0.22 μmol/mmol Creatinine Biológiai expozíciós (hatás) mutató: S-fenilmerkaptursav - Biológiai minta: vizeletben - Mintavétel ideje: m.v. (műszak végén)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Ireland - Occupational Exposure Limits	
Local name	Benzene
OEL TWA	0.66 mg/m ³ Llimit value from 5th April 2026 1.65 mg/m ³ Limit value until 5th April 2026
	0.2 ppm Llimit value from 5th April 2026 0.5 ppm Limit value until 5th April 2026
Remark	BOELV (Binding Occupational Exposure Limit Values), Skin (Substances which have the capacity to penetrate intact skin when they come in contact with it and be absorbed into the body. A substantial contribution to the total body burden via dermal exposure is possible), Carc.1A (Substances known to have carcinogenic potential for humans), Muta.1B (Substances which should be regarded as if they induce heritable mutations in the germ cells of humans)
Regulatory reference	Chemical Agents Code of Practice 2024
Ireland - Biological limit values	
Local name	Benzene
BMGV	25 μg/g creatinine Parameter: S-Phenylmercapturic acid - Medium: urine - Sampling time: End of shift - Notations: B (Background) 50 μg/g creatinine Parameter: t,t-Muconic acid - Medium: urine - Sampling time: End of shift - Notations: B (Background)

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Benzene (71-43-2)	
Regulatory reference	Biological Monitoring Guidelines (HSA, 2011)
Italy - Occupational Exposure Limits	
Local name	Benzene
OEL TWA	0.66 mg/m ³ 1.65 mg/m ³ Valore limite fino al 5 aprile 2026
	0.2 ppm 0.5 ppm Valore limite fino al 5 aprile 2026
Remark	Cute
Regulatory reference	Allegato XLIII del D.Lgs. 9 aprile 2008, n. 81 e s.m.i. (D.Lgs. 4 settembre 2024, n. 135)
Latvia - Occupational Exposure Limits	
Local name	Benzols
OEL TWA	0.66 mg/m ³ 1.65 mg/m ³ AER līdz 2026.gada 5.aprīlim.
	0.2 ppm
Remark	Āda. Carc. 1A; Muta. 1B
Regulatory reference	Ministru kabineta 2008. gada 29. septembra noteikumi Nr. 803 (Grozījumi Ministru kabineta 2024. gada 26. martā noteikumiem Nr. 190).
Lithuania - Occupational Exposure Limits	
Local name	Benzenas (benzolas)
IPRV (OEL TWA)	0.66 mg/m ³ (įsigalioja 2026 m. balandžio 5 d.) 1.65 mg/m ³
	0.2 ppm (įsigalioja 2026 m. balandžio 5 d.) 0.5 ppm
TPRV (OEL STEL)	19 mg/m ³
	6 ppm
Remark	K (kancerogeninis poveikis); M (mutageninis poveikis); O (medžiaga į organizmą gali prasiskverbti pro nepažeistą odą)
Regulatory reference	LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-82/A1-57, 2024-01-23)
Luxembourg - Occupational Exposure Limits	
Local name	Benzène
OEL TWA	3.25 mg/m ³
	1 ppm
Remark	Peau
Regulatory reference	Mémorial A N° 223 de 2021 concernant la protection des salariés contre les risques liés à l'exposition à des agents cancérigènes ou mutagènes au travail
Malta - Occupational Exposure Limits	
Local name	Benzene # Benžen
OEL TWA	1.65 mg/m ³ (Limit value until 5 April 2026 # Valur limitu sal-5 ta' April 2026)
	0.5 ppm (Limit value until 5 April 2026 # Valur limitu sal-5 ta' April 2026)
Remark	Skin # Ġilda

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Benzene (71-43-2)	
Regulatory reference	S.L. 424.22 - Exposure to Carcinogens, Mutagens or Reprotoxic Substances at Work Regulations (L.N. 102 of 2024) # L.S. 424.22 - Regolamenti dwar Espożizzjoni għall-Carcinogens, Mutagens jew Reprotoxic Substances fuq il-Post tax-Xogħol (A.L. 102 tal-2024)
Netherlands - Occupational Exposure Limits	
Local name	Benzeen
TGG-8u (OEL TWA)	0.7 mg/m ³ 0.2 ppm
Remark	Kankerverwekkende stof. H (Huidopname) Stoffen die relatief gemakkelijk door de huid kunnen worden opgenomen, hetgeen een substantiële bijdrage kan betekenen aan de totale inwendige blootstelling, hebben in de lijst een H-aanduiding. Bij deze stoffen moeten naast maatregelen tegen inademing ook adequate maatregelen ter voorkoming van huidcontact worden genomen.
Regulatory reference	Arbeidsomstandighedenregeling 2024
Poland - Occupational Exposure Limits	
Local name	Benzen
NDS (OEL TWA)	0.66 mg/m ³ 0.2 ppm
Remark	Skóra (Oznakowanie substancji notacją „skóra” oznacza, że wchłanianie substancji przez skórę może być tak samo istotne jak przy narażeniu drogą oddechową).
Regulatory reference	Dz. U. 2024 poz. 1017 wraz z późn. zm.
Portugal - Occupational Exposure Limits	
Local name	Benzeno
OEL TWA	0.5 ppm
OEL STEL	2.5 ppm
Remark	P (Toxicidade percutânea); A1 (Agente carcinogénico confirmado no Homem); IBE (Índice biológico de exposição)
Regulatory reference	Norma Portuguesa NP 1796:2014
Portugal - Biological Exposure Indices	
Local name	Benzeno
BEI	25 µg/g creatinine Parâmetro: Ácido s-fenilmercaptúrico - Meio: urina - Momento da amostragem: Fim do turno - Notação: Vb (Valor basal) 500 µg/g creatinine Parâmetro: Ácido t,t-mucónico - Meio: urina - Momento da amostragem: Fim do turno - Notação: Vb (Valor basal)
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Benzen
OEL TWA	0.66 mg/m ³ 1.65 mg/m ³ Valoare-limită până la 5 aprilie 2026 0.2 ppm 0.5 ppm Valoare-limită până la 5 aprilie 2026
Remark	P - posibilitatea unei penetrări cutanate importante; C1A - poate provoca apariția cancerului; M1B - poate provoca anomalii genetice

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Benzene (71-43-2)	
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 179/2024)
Romania - Biological limit values	
Local name	Benzen
BLV	25 µg/g creatinine Indicatorul biologic: Acid s-fenil mercapturic - Material biologic: urină - Momentul recoltării: sfârşit de schimb 50 mg/l Indicatorul biologic: Fenoli totali - Material biologic: urină - Momentul recoltării: sfârşit de schimb 500 µg/g creatinine Indicatorul biologic: Acid t,t muconic - Material biologic: urină - Momentul recoltării: sfârşit de schimb
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 179/2024)
Serbia - Occupational Exposure Limits	
Local name	бензен
OEL TWA	3 mg/m ³ 1 ppm
Remark	EУО – напомена да се ради о хемијским материјама за које су утврђене обавезујуће граничне вредности изложености према Директиви 1999/38/ЕЗ и Директиви 98/24/ЕЗ
Regulatory reference	ПРАВИЛНИК о превентивним мерама за безбедан и здрав рад при излагању хемијским материјама („Службени гласник РС”, бр. 106/09, 117/17 и 107/21)
Slovakia - Occupational Exposure Limits	
Local name	Benzén
NPHV (OEL TWA)	0.66 mg/m ³ NPEL sa uplatňuje od 6. apríla 2026 1.65 mg/m ³ NPEL sa uplatňuje do 5. apríla 2026 0.2 ppm NPEL sa uplatňuje od 6. apríla 2026 0.5 ppm NPEL sa uplatňuje do 5. apríla 2026
Remark	Kategória karcinogénnych faktorov 1A – Dokázaný karcinogén pre ľudí; Kategória mutagénnych faktorov 1B – Mutagén cicavčích zárodočných buniek; K – prienik cez kožu: K celkovému zaťaženiu organizmu môže významne prispieť expozícia cez kožu.
Regulatory reference	Nariadenie vlády č. 356/2006 Z. z. (121/2024 Z. z.)
Slovenia - Occupational Exposure Limits	
Local name	benzen
OEL TWA	0.66 mg/m ³ 1.65 mg/m ³ 0.2 ppm 0.5 ppm
Remark	Rakotvorne snovi – kategorija 1A, Mutagene snovi za zarodne celice – kategorija 1B. EU, K (Lastnost lažjega prehajanja snovi v organizem skozi kožo), BAT (Biološka mejna vrednost)
Regulatory reference	Uradni list RS, št. 26/2025 z dne 18.4.2025 - Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti rakotvornim ali mutagenim snovem pri delu
Spain - Occupational Exposure Limits	
Local name	Benceno
VLA-ED (OEL TWA)	0.66 mg/m ³ Entrada en vigor el 5 de abril de 2026 1.65 mg/m ³ 0.2 ppm Entrada en vigor el 5 de abril de 2026 0.5 ppm

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Benzene (71-43-2)	
Remark	C1A (Carcinógeno para el hombre), M1B (Sustancias de las que se considera que inducen mutaciones hereditarias en las células germinales humanas), vía dérmica (Indica que, en las exposiciones a esta sustancia, la aportación por la vía cutánea puede resultar significativa para el contenido corporal total si no se adoptan medidas para prevenir la absorción. En estas situaciones, es aconsejable la utilización del control biológico para poder cuantificar la cantidad global absorbida del contaminante), VLB® (Agente químico que tiene Valor Límite Biológico), v (Real Decreto 1124/2000, de 16 de junio (BOE nº 145 de 17 de junio de 2000), por el que se modifica el Real Decreto 665/1997, de 12 de mayo, sobre la protección de los trabajadores contra los riesgos relacionados con la exposición a agentes cancerígenos durante el trabajo), r (Esta sustancia tiene establecidas restricciones a la fabricación, la comercialización o el uso en los términos especificados en el "Reglamento (CE) nº 1907/2006 sobre Registro, Evaluación, Autorización y Restricción de sustancias y preparados químicos" (REACH) de 18 de diciembre de 2006 (DOUE L 369 de 30 de diciembre de 2006). Las restricciones de una sustancia pueden aplicarse a todos los usos o sólo a usos concretos. El anexo XVII del Reglamento REACH contiene la lista de todas las sustancias restringidas y especifica los usos que se han restringido), v (Agente cancerígeno, mutágeno o reprotóxico con valor límite vinculante recogido en el anexo III del Real Decreto 665/1997 y en sus modificaciones posteriores).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2025. INSHT
Spain - Biological limit values	
Local name	Benceno
BLV	8 µg/g creatinine Parámetro: Ácido S-Fenilmercaptúrico - Medio: Orina - Momento de muestreo: Final de la jornada laboral (Entrada en vigor el 5 de abril de 2026) 22 µg/g creatinine Parámetro: Ácido S-Fenilmercaptúrico - Medio: Orina - Momento de muestreo: Final de la jornada laboral
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2025. INSHT
Sweden - Occupational Exposure Limits	
Local name	Bensen
NGV (OEL TWA)	0.66 mg/m ³ (Gäller från och med den 5 april 2026) 1.5 mg/m ³
	0.2 ppm (Gäller från och med den 5 april 2026) 0.5 ppm
KGV (OEL STEL)	9 mg/m ³
	3 ppm
Remark	C (Ämnet är cancerframkallande); H (Ämnet tas lätt upp genom huden. Gränsvärdet bedöms ge tillräckligt skydd om huden är skyddad); 24 (Ämnet har ett bindande EU-gränsvärde)
Regulatory reference	Arbetsmiljöverkets föreskrifter och allmänna råd (AFS 2023:14) om gränsvärden för luftvägsexponering i arbetsmiljön
United Kingdom - Occupational Exposure Limits	
Local name	Benzene
WEL TWA (OEL TWA)	3.25 mg/m ³
	1 ppm
Remark	Carc (Capable of causing cancer and/or heritable genetic damage), Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

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Benzene (71-43-2)	
Iceland - Occupational Exposure Limits	
Local name	Bensen
OEL TWA	0.66 mg/m ³
	0.2 ppm
Remark	H (efnið getur auðveldlega borist inn í líkamann gegnum húð), K (efnið er krabbameinsvaldandi)
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 1309/2023)
Norway - Occupational Exposure Limits	
Local name	Benzen
Grenseverdi (OEL TWA)	0.33 mg/m ³ Fra april 2028
	0.66 mg/m ³ Fram til april 2028
	0.1 ppm Fra april 2028
	0.2 ppm Fram til april 2028
Remark	H: Kjemikalier som kan tas opp gjennom huden; K: Kjemikalier som skal betraktes som kreftfremkallende; M: Kjemikalier som skal betraktes som mutagene; G: EU har fastsatt en bindende grenseverdi og/eller anmerkning for stoffet.
Regulatory reference	FOR-2024-04-05-581
North Macedonia - Occupational Exposure Limits	
Local name	Бензен
OEL TWA	3.25 mg/m ³
	1 ppm
KTV	4
Short time value [mg/m ³]	13 mg/m ³
Short time value [ppm]	4 ppm
Remark	(KTV) краткотрајна вредност (КТВ) значи концентрација на опасни хемиски супстанции во воздухот на работното место внатре во зона на дишење, на која работникот без опасност по здравјето може да е изложен на покусо време. Изложеноста на краткотрајни вредности може да трае највеќе 15 минути и не смее да се повтори повеќе од четирипати во работната смена, при што меѓу две изложености на оваа концентрација мора да измине најмалку 60 минути. Краткотрајната вредност е изразена во mg/m ³ или во ml/m ³ (ppm) а е дадена како многукратни дозволени пречекорувања на граничната вредност; (K) својство на полесно пренесување на супстанците во организмот преку кожата; (TDK) техничко достигнување на концентрацијата – е дадено за канцерогените супстанции и значи концентрација на супстанции во воздухот на работното место, кои можат да се достигнат со достапните техники; (EKA) поврзаноста помеѓу концентрацијата на канцерогени супстанции во воздухот на работното место и износ на количината на канцерогените супстанции и/или нивните метаболити во организмот – дадена за канцерогени супстанции (канцерогени); (BAT) биолошка гранична вредност – праг на биолошка гранична вредност, што значи предупредување на опасна хемиска супстанца и нејзини метаболити во ткивата, телесните течности или издишувањето на воздухот, без оглед на тоа, дали опасната хемиска супстанца е внесена во организмот со вдишување, голтање или преку кожата; (EU) European Union – гранична вредност, определена на ниво на Европската унија

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Benzene (71-43-2)	
Regulatory reference	Правилник за минималните барања за безбедност и здравје при работа на вработени од ризици поврзани со изложување на хемиски супстанции („Службен весник на Република Македонија“ бр.46/10) и Правилник за минималните барања за безбедност и здравје при работа на вработени од ризици поврзани со изложување на канцерогени, мутагени или супстанции („Службен весник на Република Македонија“ бр.110/10)
Switzerland - Occupational Exposure Limits	
Local name	Benzène / Benzol
MAK (OEL TWA)	0.7 mg/m ³
	0.2 ppm
Notation	R, C _{1A} , M _{1B} , B / H, C _{1A} , M _{1B} , B
Remark	HSE, NIOSH, DFG, BG
Regulatory reference	www.suva.ch, 18.06.2025
Switzerland - BAT	
Local name	Benzène / Benzol
BAT	8 µg/g creatinine (0.004 µmol/mmol cr.; Paramètre biologique: Acide S-phénylmercapturique; Substrat d'examen: Urine; Moment du prélèvement: Fin de l'exposition, de la période de travail.) / (0.004 µmol/mmol cr.; Biologischer Parameter: S-Phenylmerkaptursäure; Untersuchungsmaterial: Urin; Probennahmezeitpunkt: Expositionsende, bzw. Schichtende.)
Remark	Influence de l'environnement. / Umwelteinflüsse.
Regulatory reference	Ordonnance 832.30 (OPA), article 50 al. 3, www.suva.ch/valeurs-limites / Verordnung 832.30 (VUV), Art. 50 Abs. 3, www.suva.ch/grenzwerte
Cumene (98-82-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	2-Phenylpropane (Cumene)
IOEL TWA	50 mg/m ³
	10 ppm
IOEL STEL	250 mg/m ³
	50 ppm
Remark	Skin. During exposure monitoring, account should be taken of relevant biological monitoring values as suggested by the Scientific Committee on Occupational Exposure Limits for Chemicals Agents (SCOEL)
Regulatory reference	COMMISSION DIRECTIVE (EU) 2019/1831
Austria - Occupational Exposure Limits	
Local name	Isopropylbenzol (Cumol)
MAK (OEL TWA)	50 mg/m ³
	10 ppm
MAK (OEL STEL)	250 mg/m ³ (4x 15(Miw) min)
	50 ppm (4x 15(Miw) min)
Remark	H. Krebszeugend: III A2
Regulatory reference	BGBI. II Nr. 330/2024

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Cumene (98-82-8)	
Belgium - Occupational Exposure Limits	
Local name	Cumène (2-phénylpropane) # Cumeen (2-fenylpropan)
OEL TWA	50 mg/m ³
	10 ppm
OEL STEL	250 mg/m ³
	50 ppm
Remark	D: la mention "D" signifie que la résorption de l'agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l'exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l'agent dans l'air. Lors du suivi de l'exposition, il convient de tenir compte des valeurs de suivi biologique appropriées, comme le suggère le Comité scientifique en matière de limites d'exposition professionnelle à des agents chimiques (SCOEL). # D: de vermelding "D" betekent dat de opname van het agens via de huid, de slijmvliezen of de ogen een belangrijk deel van de totale blootstelling vormt. Deze opname kan het gevolg zijn van zowel direct contact als zijn aanwezigheid in de lucht.) Tijdens de monitoring van de blootstelling moet rekening worden gehouden met de relevante, door het Wetenschappelijk Comité inzake grenswaarden voor beroepsmatige blootstelling aan chemische agentia (SCOEL) voorgestelde, biologische monitoringwaarden.
Regulatory reference	Koninklijk besluit/Arrêté royal 16/11/2023
Bulgaria - Occupational Exposure Limits	
Local name	2-Фенилпропан (Кумен)
OEL TWA	50 mg/m ³
	10 ppm
OEL STEL	250 mg/m ³
	50 ppm
Remark	Кожа (възможна е значителна резорбция чрез кожата); • (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност); При мониторинга на експозицията следва да се вземат под внимание съответните методи за биологичен мониторинг на Научния комитет за граничните стойности на професионална експозиция (SCOEL - НКГСПЕ) съгласно приложение № 2.
Regulatory reference	Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр. 28 от 2024 г., в сила от 05.04.2024 г.)
Bulgaria - Biological limit values	
Local name	2-Фенилпропан (Кумен)
BLV	7 mg/g creatinine Биомаркер за експозиция/биомаркер за ефект: 2-фенол-2 пропанол - Биологична среда: урина - Време на пробовземане: До 2 часа след края на работната смяна - Специфични ефекти: Кожа - възможна е значителна резорбция чрез кожата
Remark	• Химични агенти, за които са определени биологични гранични стойности за Европейската общност. Биологичните гранични стойности на тези химични агенти, определени с наредбата, са съобразени със съответните стойности, приети за Европейската общност, като могат да бъдат равни или по-ниски от тях.
Regulatory reference	Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр. 28 от 2024 г., в сила от 05.04.2024 г.)

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Cumene (98-82-8)

Croatia - Occupational Exposure Limits

Local name	2-Fenilpropan (kumen)
GVI (OEL TWA)	50 mg/m ³
	10 ppm
KGVII (OEL STEL)	250 mg/m ³
	50 ppm
Remark	Direktiva: 2019/1831. Napomena: Koža (razvrstana kao tvar koja nadražuje kožu (H315))
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 148/2023)

Cyprus - Occupational Exposure Limits

Local name	Κουμένιο
OEL TWA	100 mg/m ³
	20 ppm
OEL STEL	250 mg/m ³
	50 ppm
Remark	δέρμα
Regulatory reference	Κανονισμοί του 2007 (Κ.Δ.Π. 295/2007)

Estonia - Occupational Exposure Limits

Local name	2-fenüülpropan (kumeen)
OEL TWA	50 mg/m ³
	10 ppm
OEL STEL	250 mg/m ³
	50 ppm
Remark	A (Naha kaudu kergesti imenduv aine)
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 02.04.2024, 13)

Finland - Occupational Exposure Limits

Local name	Kumeeni
HTP (OEL TWA)	50 mg/m ³
	10 ppm
HTP (OEL STEL)	250 mg/m ³
	50 ppm
Remark	Iho
Regulatory reference	HTP-ARVOT 2025 (Sosiaali- ja terveysministeriö)

Germany - Occupational Exposure Limits (TRGS 900)

Local name	Cumol
AGW (OEL TWA)	50 mg/m ³
	10 ppm
Peak exposure limitation factor	4(II)

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Cumene (98-82-8)	
Remark	AGS - Ausschuss für Gefahrstoffe; DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); EU - Europäische Union (Von der EU wurde ein Luftgrenzwert festgelegt: Abweichungen bei Wert und Spitzenbegrenzung sind möglich); H - hautresorptiv; X - Krebserzeugender Stoff der Kat. 1A oder 1B oder krebserzeugende Tätigkeit oder Verfahren nach § 2 Absatz 3 Nr. 4 der Gefahrstoffverordnung – es ist zusätzlich § 10 GefStoffV zu beachten; Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Regulatory reference	TRGS900
Germany - Biological limit values (TRGS 903)	
Local name	Cumol (Iso-Propylbenzol)
Biological limit value	10 mg/g creatinine Parameter: 2-Phenyl-2-propanol (nach Hydrolyse) - Untersuchungsmaterial: U = Urin - Probenahmezeitpunkt: b) Expositionsende, bzw. Schichtende - Festlegung/Begründung: 05/2015 DFG
Regulatory reference	TRGS 903
Gibraltar - Occupational Exposure Limits	
Local name	Cumene
OEL TWA	100 mg/m ³
	20 ppm
OEL STEL	250 mg/m ³
	50 ppm
Remark	Skin
Regulatory reference	Factories (Control of Chemical Agents at Work) Regulations 2003 (LN. 2018/181)
Greece - Occupational Exposure Limits	
Local name	Φαινυλοπροπάνιο (κουμένιο)
OEL TWA	50 mg/m ³
	10 ppm
OEL STEL	250 mg/m ³
	50 ppm
Remark	Η ένδειξη «δέρμα» στις οριακές τιμές επαγγελματικής έκθεσης επισημαίνει το ενδεχόμενο σημαντικής διείσδυσης μέσω του δέρματος.
Regulatory reference	Π.Δ. 72/2021 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους
Hungary - Occupational Exposure Limits	
Local name	KUMOL
AK (OEL TWA)	50 mg/m ³
	10 ppm
CK (OEL STEL)	250 mg/m ³
	50 ppm
Remark	b (Bőrön át is felszívódik), i (ingerlő anyag, amely izgatja a bőrt, nyálkahártyát, szemet vagy mindhármát); EU8 (2019/1831 EU irányelvben közölt érték); R (Azok az anyagok, amelyek egészségkárosító hatása RÖVID expozíció hatására jelentkezik)

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Cumene (98-82-8)	
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Ireland - Occupational Exposure Limits	
Local name	Isopropyl benzene (Cumene)
OEL TWA	50 mg/m ³
	10 ppm
OEL STEL	250 mg/m ³
	50 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values), Skin (Substances which have the capacity to penetrate intact skin when they come in contact with it and be absorbed into the body. A substantial contribution to the total body burden via dermal exposure is possible), Carc.1B (Substances presumed to have carcinogenic potential for humans)
Regulatory reference	Chemical Agents Code of Practice 2024
Lithuania - Occupational Exposure Limits	
Local name	Izopropilbenzenas, 2-fenilpropanas (kumenas)
IPRV (OEL TWA)	50 mg/m ³
	10 ppm
TPRV (OEL STEL)	170 mg/m ³
	35 ppm
Remark	O (medžiaga į organizmą gali prasiskverbti pro nepažeistą odą); Atliekant poveikio stebėseną, be orientacinių profesinio poveikio ribinių verčių reikia atsižvelgti į biologinės stebėsenos vertes
Regulatory reference	LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-14/A1-11, 2021-01-06)
Luxembourg - Occupational Exposure Limits	
Local name	2-Phénylpropane (cumène)
OEL TWA	50 mg/m ³
	10 ppm
OEL STEL	250 mg/m ³
	50 ppm
Remark	Peau
Regulatory reference	Mémorial A N° 226 de 2021 concernant la protection de la sécurité et de la santé des salariés contre les risques liés à des agents chimiques sur le lieu de travail
Malta - Occupational Exposure Limits	
Local name	2-Phenyl-propane (Cumene)
OEL TWA	50 mg/m ³
	10 ppm
OEL STEL	250 mg/m ³
	50 ppm
Remark	Skin. During exposure monitoring, account should be taken of relevant biological monitoring values as suggested by the Scientific Committee on Occupational Exposure Limits for Chemical Agents (SCOEL). # Ġilda

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Cumene (98-82-8)	
Regulatory reference	S.L. 424.24 - Chemical Agents at Work Regulations (L.N. 356 of 2021) # L.S. 424.24 - Regolamenti dwar Agenti Kimiči fuq il-Post tax-Xogħol (A.L. 356 tal-2021)
Netherlands - Occupational Exposure Limits	
Local name	2-Fenylpropan (cumeen)
TGG-8u (OEL TWA)	50 mg/m ³
	10 ppm
TGG-15min (OEL STEL)	250 mg/m ³
	50 ppm
Remark	Bij het beoordelen van de blootstelling wordt rekening gehouden met de relevante, door het Wetenschappelijk Comité inzake grenswaarden voor beroepsmatige blootstelling aan chemische agentia (SCOEL) voorgestelde, biologische-monitoringwaarden. H (Huidopname) Stoffen die relatief gemakkelijk door de huid kunnen worden opgenomen, hetgeen een substantiële bijdrage kan betekenen aan de totale inwendige blootstelling, hebben in de lijst een H-aanduiding. Bij deze stoffen moeten naast maatregelen tegen inademing ook adequate maatregelen ter voorkoming van huidcontact worden genomen.
Regulatory reference	Arbeidsomstandighedenregeling 2024
Portugal - Indicative Occupational Exposure Limit (IOEL)	
Local name	2 -Fenilpropano (Cumeno)
IOEL TWA	10 mg/m ³ Fração inalável
	50 ppm Fração inalável
IOEL STEL	250 mg/m ³ Fração inalável
	50 ppm Fração inalável
Remark	Cutânea.
Regulatory reference	Decreto-Lei n.º 1/2021 de 6 de janeiro
Portugal - Occupational Exposure Limits	
Local name	Cumeno
OEL TWA	50 ppm
Regulatory reference	Norma Portuguesa NP 1796:2014
Serbia - Occupational Exposure Limits	
Local name	2-фенил-пропан (кумен)
OEL TWA	50 mg/m ³
	10 ppm
OEL STEL	250 mg/m ³
	50 ppm
Remark	ЕУ***** – напомена да се ради о хемијским материјама за које су утврђене индикативне граничне вредности изложености према Директиви ЕУ 2019/1831 (пета листа); К – напомена да хемијска материја може штетно деловати на кожу
Regulatory reference	ПРАВИЛНИК о превентивним мерама за безбедан и здрав рад при излагању хемијским материјама („Службени гласник РС”, бр. 106/09, 117/17 и 107/21)
Slovenia - Biological limit values	
Local name	kumen

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Cumene (98-82-8)	
BLV	10 mg/g creatinine Parameter: 2-fenil-2-propanol (po hidrolizi) - Biološki vzorec: urin - Čas vzorčenja: ob koncu delovne izmene
Regulatory reference	Uradni list RS, št. 26/2025 z dne 18.4.2025 - Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu
Spain - Occupational Exposure Limits	
Local name	Cumeno
VLA-ED (OEL TWA)	50 mg/m ³ 10 ppm
VLA-EC (OEL STEL)	250 mg/m ³ 50 ppm
Remark	C1B (Supuesto carcinógeno para el hombre), Vía dérmica (Indica que, en las exposiciones a esta sustancia, la aportación por la vía cutánea puede resultar significativa para el contenido corporal total si no se adoptan medidas para prevenir la absorción. En estas situaciones, es aconsejable la utilización del control biológico para poder cuantificar la cantidad global absorbida del contaminante), VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo), VLB® (Agente químico que tiene Valor Límite Biológico).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2025. INSHT
Spain - Biological limit values	
Local name	Cumeno
BLV	7 mg/g creatinine Parámetro: 2-Fenil-2-propanol - Medio: Orina - Momento de muestreo: Final de la jornada laboral - Notas: Con hidrólisis
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2025. INSHT
Sweden - Occupational Exposure Limits	
Local name	Isopropylbensen (Kumen)
NGV (OEL TWA)	50 mg/m ³ 10 ppm
KGV (OEL STEL)	250 mg/m ³ 50 ppm
Remark	H (Ämnet tas lätt upp genom huden. Gränsvärdet bedöms ge tillräckligt skydd om huden är skyddad); 23 (Ämnet har ett indikativt EU-gränsvärde)
Regulatory reference	Arbetsmiljöverkets föreskrifter och allmänna råd (AFS 2023:14) om gränsvärden för luftvägsexponering i arbetsmiljön
United Kingdom - Occupational Exposure Limits	
Local name	Cumene
WEL TWA (OEL TWA)	125 mg/m ³ 25 ppm
WEL STEL (OEL STEL)	250 mg/m ³ 50 ppm
Remark	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

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Cumene (98-82-8)	
Iceland - Occupational Exposure Limits	
Local name	Kúmen (ísóprópylbensen)
OEL TWA	50 mg/m ³
	10 ppm
OEL STEL	250 mg/m ³
	50 ppm
Remark	H (efnið getur auðveldlega borist inn í líkamann gegnum húð)
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 631/2021)
North Macedonia - Occupational Exposure Limits	
Local name	кумен
OEL TWA	100 mg/m ³
	20 ppm
KTV	2.5
Short time value [mg/m ³]	250 mg/m ³
Short time value [ppm]	50 ppm
Remark	(KTV) краткотрајна вредност (КТВ) значи концентрација на опасни хемиски супстанции во воздухот на работното место внатре во зона на дишење, на која работникот без опасност по здравјето може да е изложен на покусо време. Изложеноста на краткотрајни вредности може да трае највеќе 15 минути и не смее да се повтори повеќе од четирипати во работната смена, при што меѓу две изложености на оваа концентрација мора да измине најмалку 60 минути. Краткотрајната вредност е изразена во mg/m ³ или во ml/m ³ (ppm) а е дадена како многукратни дозволени пречекорувања на граничната вредност; (K) својство на полесно пренесување на супстанците во организмот преку кожата; (EU) European Union – гранична вредност, определена на ниво на Европската унија
Regulatory reference	Правилник за минималните барања за безбедност и здравје при работа на вработени од ризици поврзани со изложување на хемиски супстанции („Службен весник на Република Македонија“ бр.46/10)
Switzerland - Occupational Exposure Limits	
Local name	Isopropylbenzène [Cumène] / iso-Propylbenzol [Cumol, Isopropylbenzol, 2-Phenylpropan]
MAK (OEL TWA)	100 mg/m ³
	20 ppm
KZGW (OEL STEL)	400 mg/m ³
	80 ppm
Notation	R, C2, SS _c , B / H, C2, SS _c , B
Remark	INRS, NIOSH
Regulatory reference	www.suva.ch, 18.06.2025
Switzerland - BAT	
Local name	Isopropylbenzène / iso-Propylbenzol

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Cumene (98-82-8)	
BAT	20 mg/g creatinine (16.6 µmol/mmol cr.; Paramètre biologique: 2-Phényl-2-propanol (après hydrolyse); Substrat d'examen: Urine; Moment du prélèvement: Fin de l'exposition, de la période de travail.) / (16.6 µmol/mmol cr.; Biologischer Parameter: 2-Phenyl-2-propanol (nach Hydrolyse); Untersuchungsmaterial: Urin; Probennahmezeitpunkt: Expositionsende, bzw. Schichtende.)
Regulatory reference	Ordonnance 832.30 (OPA), article 50 al. 3, www.suva.ch/valeurs-limites / Verordnung 832.30 (VUV), Art. 50 Abs. 3, www.suva.ch/grenzwerte
1,2,4-trimethylbenzene (95-63-6)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	1,2,4-Trimethylbenzene
IOEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
Albania - Occupational Exposure Limits	
Local name	Trimetil-1,2,4-benzen
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	VENDIM Nr. 522, datë 6.8.2014 PËR MIRATIMIN E RREGULLORES "PËR MBROJTJEN E SIGURISË DHE SHËNDETIT TË PUNËMARRËSVE NGA RISQET E LIDHURA ME AGJENTËT KIMIKË NË PUNË"
Bulgaria - Occupational Exposure Limits	
Local name	1,2,4-Триметилбензен
OEL TWA	100 mg/m ³
	20 ppm
Remark	• (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност)
Regulatory reference	Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр. 28 от 2024 г., в сила от 05.04.2024 г.)
Croatia - Occupational Exposure Limits	
Local name	1,2,4 Trimetilbenzen
GVI (OEL TWA)	100 mg/m ³
	20 ppm
Remark	Direktiva: 2000/39/EZ
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 148/2023)
Cyprus - Occupational Exposure Limits	
Local name	1,2,4-Τριμεθυλοβενζόλιο
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	Κανονισμοί του 2007 (Κ.Δ.Π. 295/2007)

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1,2,4-trimethylbenzene (95-63-6)

Czech Republic - Occupational Exposure Limits

Local name	1,2,4-Trimethylbenzen (Pseudokumen)
PEL (OEL TWA)	100 mg/m ³
	20 ppm
NPK-P (OEL C)	250 mg/m ³
	50 ppm
Remark	I - dráždí sliznice (oči, dýchací cesty), resp. kůži.
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 20/2025 Sb.)

Denmark - Occupational Exposure Limits

Local name	1,2,4-Trimethylbenzen
OEL TWA	100 mg/m ³
	20 ppm
Remark	E (betyder, at stoffet har en EU-grænseværdi)
Regulatory reference	BEK nr 1619 af 19/12/2024

Estonia - Occupational Exposure Limits

Local name	1,2,4-trimetüülbenseen
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 02.04.2024, 13)

Finland - Occupational Exposure Limits

Local name	1,2,4-Trimetyylibentseeni
HTP (OEL TWA)	100 mg/m ³
	20 ppm
Regulatory reference	HTP-ARVOT 2025 (Sosiaali- ja terveystieteiden ministeriö)

France - Occupational Exposure Limits

Local name	1,2,4-Triméthylbenzène
VME (OEL TWA)	100 mg/m ³
	20 ppm
VLE (OEL C/STEL)	250 mg/m ³
	50 ppm
Remark	Valeurs réglementaires contraignantes
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 6443, 2022; Outil65; Décret n° 2019-1487; Décret n° 2020-1546; Décret n° 2021-434; Décret n° 2021-1849; Décret n° 2024-307)

Germany - Occupational Exposure Limits (TRGS 900)

Local name	1,2,4-Trimethylbenzol
AGW (OEL TWA)	100 mg/m ³
	20 ppm
Peak exposure limitation factor	2(II)

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1,2,4-trimethylbenzene (95-63-6)	
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); EU - Europäische Union (Von der EU wurde ein Luftgrenzwert festgelegt: Abweichungen bei Wert und Spitzenbegrenzung sind möglich); Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Regulatory reference	TRGS900
Gibraltar - Occupational Exposure Limits	
Local name	1,2,4-Trimethylbenzene
OEL TWA	100 mg/m ³ 20 ppm
Regulatory reference	Factories (Control of Chemical Agents at Work) Regulations 2003 (LN. 2018/181)
Greece - Occupational Exposure Limits	
Local name	Τριμεθυλο-βενζόλιο, 1,2,4-
OEL TWA	125 mg/m ³ 25 ppm
Regulatory reference	Π.Δ. 90/1999 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους
Hungary - Occupational Exposure Limits	
Local name	1,2,4-TRIMETILBENZOL
AK (OEL TWA)	100 mg/m ³ 20 ppm
Remark	EU1 (2000/39/EK irányelvben közölt érték); T (Azok az anyagok, amelyek egészségkárosító hatása TARTÓS expozíciót követően jelentkezik)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Ireland - Occupational Exposure Limits	
Local name	1,2,4-Trimethylbenzene
OEL TWA	100 mg/m ³ 20 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2024
Italy - Occupational Exposure Limits	
Local name	1,2,4-Trimetilbenzene
OEL TWA	100 mg/m ³ 20 ppm
Regulatory reference	Allegato XXXVIII del D.Lgs. 9 aprile 2008, n. 81 e s.m.i. (D.Lgs. 4 settembre 2024, n. 135)
Latvia - Occupational Exposure Limits	
Local name	1,2,4-Trimetilbenzols (pseudokumols)
OEL TWA	100 mg/m ³ 20 ppm

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1,2,4-trimethylbenzene (95-63-6)	
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325 (Grozījumi Ministru kabineta 2024. gada 26. martā noteikumiem Nr. 191).
Luxembourg - Occupational Exposure Limits	
Local name	1,2,4-Triméthylbenzène
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	Mémorial A N° 226 de 2021 concernant la protection de la sécurité et de la santé des salariés contre les risques liés à des agents chimiques sur le lieu de travail
Malta - Occupational Exposure Limits	
Local name	1,2,4-Trimethylbenzene
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	S.L. 424.24 - Chemical Agents at Work Regulations (L.N. 356 of 2021) # L.S. 424.24 - Regolamenti dwar Aġenti Kimiċi fuq il-Post tax-Xogħol (A.L. 356 tal-2021)
Netherlands - Occupational Exposure Limits	
Local name	1,2,4-Trimethylbenzeen
TGG-8u (OEL TWA)	100 mg/m ³
	20 ppm
TGG-15min (OEL STEL)	200 mg/m ³
	40 ppm
Regulatory reference	Arbeidsomstandighedenregeling 2024
Romania - Occupational Exposure Limits	
Local name	1,2,4-trimetilbenzen
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 179/2024)
Serbia - Occupational Exposure Limits	
Local name	1,2,4-триметилбензен
OEL TWA	100 mg/m ³
	20 ppm
Remark	EУ* – напомена да се ради о хемијским материјама за које су утврђене индикативне граничне вредности изложености према Директиви 2000/39/ЕЗ (прва листа)
Regulatory reference	ПРАВИЛНИК о превентивним мерама за безбедан и здрав рад при излагању хемијским материјама („Службени гласник РС”, бр. 106/09, 117/17 и 107/21)
Slovakia - Occupational Exposure Limits	
Local name	Trimetylbenzén (mezitylén) všetky izoméry
NPHV (OEL TWA)	100 mg/m ³
	20 ppm
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (122/2024 Z. z.)

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1,2,4-trimethylbenzene (95-63-6)

Slovenia - Occupational Exposure Limits

Local name	1,2,4-trimetilbenzen
OEL TWA	100 mg/m ³
	20 ppm
OEL STEL	200 mg/m ³
	40 ppm
Remark	Y (Snovi, pri katerih ni nevarnosti za zarodek ob upoštevanju mejnih vrednosti in bat vrednosti), BAT (Biološka mejna vrednost), EU
Regulatory reference	Uradni list RS, št. 26/2025 z dne 18.4.2025 - Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu

Spain - Occupational Exposure Limits

Local name	1,2,4-Trimetilbenceno
VLA-ED (OEL TWA)	100 mg/m ³
	20 ppm
Remark	VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2025. INSHT

Sweden - Occupational Exposure Limits

Local name	1,2,4-Trimetylbenzen
NGV (OEL TWA)	100 mg/m ³
	20 ppm
KGV (OEL STEL)	170 mg/m ³
	35 ppm
Regulatory reference	Arbetsmiljöverkets föreskrifter och allmänna råd (AFS 2023:14) om gränsvärden för luftvägsexponering i arbetsmiljön

Iceland - Occupational Exposure Limits

Local name	Trímetylbenzen
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)

Norway - Occupational Exposure Limits

Local name	1,2,4-trimetylbenzen
Grenseverdi (OEL TWA)	100 mg/m ³
	20 ppm
Remark	E: EU har en veiledende grenseverdi og/eller anmerkning for stoffet.
Regulatory reference	FOR-2024-04-05-581

North Macedonia - Occupational Exposure Limits

Local name	1,2,4-триметилбензен
OEL TWA	100 mg/m ³

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1,2,4-trimethylbenzene (95-63-6)	
	20 ppm
Remark	(EU) European Union – гранична вредност, определена на ниво на Европската унија
Regulatory reference	Правилник за минималните барања за безбедност и здравје при работа на вработени од ризици поврзани со изложување на хемиски супстанции („Службен весник на Република Македонија” бр.46/10)
USA - ACGIH - Occupational Exposure Limits	
Local name	1,2,4-Trimethyl benzene
ACGIH® TLV® TWA	10 ppm
Remark (ACGIH®)	TLV® Basis: CNS impair; Hematologic eff
Regulatory reference	ACGIH 2025
Mesitylene (108-67-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Mesitylene (Trimethylbenzenes)
IOEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
Albania - Occupational Exposure Limits	
Local name	Mesitilen (Trimetilbenzenët)
OEL TWA	100 mg/m ³
	20 ppm
Remark	10) Gjatë përzgjedhjes së një metode të përshtatshme për monitorimin e ekspozimit, merren parasysh kufizimet potenciale dhe interferencat që mund të shfaqen në praninë e përbërjeve të tjera të sqfurit
Regulatory reference	VENDIM Nr. 522, datë 6.8.2014 PËR MIRATIMIN E RREGULLORES “PËR MBROJTJEN E SIGURISË DHE SHËNDETIT TË PUNËMARRËSVE NGA RISQET E LIDHURA ME AGJENTËT KIMIKË NË PUNË”
Belgium - Occupational Exposure Limits	
Local name	Mésitylène (triméthylbenzènes) # Mesityleen (trimethylbenzenen)
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	Koninklijk besluit/Arrêté royal 16/11/2023
Bulgaria - Occupational Exposure Limits	
Local name	Мезитилен (триметилбензен)
OEL TWA	100 mg/m ³
	20 ppm
Remark	• (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност)
Regulatory reference	Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр. 28 от 2024 г., в сила от 05.04.2024 г.)

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Mesitylene (108-67-8)	
Croatia - Occupational Exposure Limits	
Local name	Mezitolen; 1,3,5-trimetilbenzen
GVI (OEL TWA)	100 mg/m ³
	20 ppm
Remark	Direktiva: 2000/39/EZ
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 148/2023)
Cyprus - Occupational Exposure Limits	
Local name	Μεσιτυλένιο
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	Κανονισμοί του 2007 (Κ.Δ.Π. 295/2007)
Czech Republic - Occupational Exposure Limits	
Local name	1,3,5-Trimethylbenzen (Mesitylen)
PEL (OEL TWA)	100 mg/m ³
	20 ppm
NPK-P (OEL C)	250 mg/m ³
	50 ppm
Remark	I - dráždí sliznice (oči, dýchací cesty), resp. kůži.
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 20/2025 Sb.)
Denmark - Occupational Exposure Limits	
Local name	1,3,5-Trimethylbenzen
OEL TWA	100 mg/m ³
	20 ppm
Remark	E (betyder, at stoffet har en EU-grænseværdi)
Regulatory reference	BEK nr 1619 af 19/12/2024
Finland - Occupational Exposure Limits	
Local name	Mesityleeni
HTP (OEL TWA)	100 mg/m ³
	20 ppm
Regulatory reference	HTP-ARVOT 2025 (Sosiaali- ja terveysministeriö)
France - Occupational Exposure Limits	
Local name	1,3,5-Triméthylbenzène (Mésitylène)
VME (OEL TWA)	100 mg/m ³
	20 ppm
VLE (OEL C/STEL)	250 mg/m ³
	50 ppm
Remark	Valeurs réglementaires contraignantes

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Mesitylene (108-67-8)	
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 6443, 2022; Outil65; Décret n° 2019-1487; Décret n° 2020-1546; Décret n° 2021-434; Décret n° 2021-1849; Décret n° 2024-307)
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Mesitylen
AGW (OEL TWA)	100 mg/m ³
	20 ppm
Peak exposure limitation factor	2(II)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); EU - Europäische Union (Von der EU wurde ein Luftgrenzwert festgelegt: Abweichungen bei Wert und Spitzenbegrenzung sind möglich); Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Regulatory reference	TRGS900
Gibraltar - Occupational Exposure Limits	
Local name	Mesitylene (Trimethylbenzenes)
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	Factories (Control of Chemical Agents at Work) Regulations 2003 (LN. 2018/181)
Greece - Occupational Exposure Limits	
Local name	Μεσιτυλένιο
OEL TWA	125 mg/m ³
	25 ppm
Regulatory reference	Π.Δ. 90/1999 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους
Hungary - Occupational Exposure Limits	
Local name	MEZITILÉN (1,3,5-trimetilbenzol)
AK (OEL TWA)	100 mg/m ³
	20 ppm
Remark	i (ingerlő anyag, amely izgatja a bőrt, nyálkahártyát, szemet vagy mindhármát); EU1 (2000/39/EK irányelvben közölt érték); T (Azok az anyagok, amelyek egészségkárosító hatása TARTÓS expozíciót követően jelentkezik)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Ireland - Occupational Exposure Limits	
Local name	Mesitylene (Trimethylbenzene)
OEL TWA	100 mg/m ³
	20 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2024
Italy - Occupational Exposure Limits	
Local name	Mesitilene (1,3,5-Trimetilbenzene)

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Mesitylene (108-67-8)	
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	Allegato XXXVIII del D.Lgs. 9 aprile 2008, n. 81 e s.m.i. (D.Lgs. 4 settembre 2024, n. 135)
Latvia - Occupational Exposure Limits	
Local name	Mezītilēns (1,3,5-trimetilbenzols)
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325 (Grozījumi Ministru kabineta 2024. gada 26. martā noteikumiem Nr. 191).
Lithuania - Occupational Exposure Limits	
Local name	Mezītilēnas (trimetilbenzenas)
IPRV (OEL TWA)	100 mg/m ³
	20 ppm
TPRV (OEL STEL)	150 mg/m ³
	30 ppm
Regulatory reference	LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-695/A1-272, 2018-06-12)
Luxembourg - Occupational Exposure Limits	
Local name	Mésitylène (Triméthylbenzènes)
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	Mémorial A N° 226 de 2021 concernant la protection de la sécurité et de la santé des salariés contre les risques liés à des agents chimiques sur le lieu de travail
Malta - Occupational Exposure Limits	
Local name	Mesitylene (Trimethylbenzenes)
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	S.L. 424.24 - Chemical Agents at Work Regulations (L.N. 356 of 2021) # L.S. 424.24 - Regolamenti dwar Aġenti Kimiċi fuq il-Post tax-Xogħol (A.L. 356 tal-2021)
Portugal - Indicative Occupational Exposure Limit (IOEL)	
Local name	Mesitileno (1,3,5-Trimetilbenzeno)
IOEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	Decreto-Lei n.º 1/2021 de 6 de janeiro
Romania - Occupational Exposure Limits	
Local name	Mesitilenă/1,3,5-trimetilbenzen
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 179/2024)

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Mesitylene (108-67-8)	
Serbia - Occupational Exposure Limits	
Local name	мезитилен (триметилбензен)
OEL TWA	100 mg/m ³
	20 ppm
Remark	EУ* – напомена да се ради о хемијским материјама за које су утврђене индикативне граничне вредности изложености према Директиви 2000/39/ЕЗ (прва листа)
Regulatory reference	ПРАВИЛНИК о превентивним мерама за безбедан и здрав рад при излагању хемијским материјама („Службени гласник РС”, бр. 106/09, 117/17 и 107/21)
Slovakia - Occupational Exposure Limits	
Local name	Trimetylbenzén (mezitylén) všetky izoméry
NPHV (OEL TWA)	100 mg/m ³
	20 ppm
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (122/2024 Z. z.)
Slovenia - Occupational Exposure Limits	
Local name	mezitilen (1,3,5-trimetilbenzen)
OEL TWA	100 mg/m ³
	20 ppm
OEL STEL	200 mg/m ³
	40 ppm
Remark	Y (Snovi, pri katerih ni nevarnosti za zarodek ob upoštevanju mejnih vrednosti in bat vrednosti), BAT (Biološka mejna vrednost), EU
Regulatory reference	Uradni list RS, št. 26/2025 z dne 18.4.2025 - Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu
Spain - Occupational Exposure Limits	
Local name	1,3,5-Trimetilbenceno (Mesityleno)
VLA-ED (OEL TWA)	100 mg/m ³
	20 ppm
Remark	VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2025. INSHT
Sweden - Occupational Exposure Limits	
Local name	1,3,5-Trimetylbensen
NGV (OEL TWA)	100 mg/m ³
	20 ppm
KGV (OEL STEL)	170 mg/m ³
	35 ppm
Regulatory reference	Arbetsmiljöverkets föreskrifter och allmänna råd (AFS 2023:14) om gränsvärden för luftvägsexponering i arbetsmiljön
Iceland - Occupational Exposure Limits	
Local name	Trímetylþensen
OEL TWA	100 mg/m ³

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Mesitylene (108-67-8)	
	20 ppm
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)
Norway - Occupational Exposure Limits	
Local name	Mesitylen (Trimetylbenzener; Trimetylbenzen (alle isomere))
Grenseverdi (OEL TWA)	100 mg/m ³
	20 ppm
Remark	E: EU har en veiledende grenseverdi og/eller anmerkning for stoffet.
Regulatory reference	FOR-2024-04-05-581
North Macedonia - Occupational Exposure Limits	
Local name	мезитилен (1,3,5-триметилбензен)
OEL TWA	100 mg/m ³
	20 ppm
Remark	(EU) European Union – гранична вредност, определена на ниво на Европската унија
Regulatory reference	Правилник за минималните барања за безбедност и здравје при работа на вработени од ризици поврзани со изложување на хемиски супстанции („Службен весник на Република Македонија“ бр.46/10)
Ethylbenzene (100-41-4)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Ethylbenzene
IOEL TWA	442 mg/m ³
	100 ppm
IOEL STEL	884 mg/m ³
	200 ppm
Remark	Skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
Albania - Occupational Exposure Limits	
Local name	Etilbenzen
OEL TWA	442 mg/m ³
	100 ppm
OEL STEL	884 mg/m ³
	200 ppm
Remark	Lëkurë (tregon mundësinë e një marrjeje të rëndësishme nëpërmjet lëkurës)
Regulatory reference	VENDIM Nr. 522, datë 6.8.2014 PËR MIRATIMIN E RREGULLORES “PËR MBROJTJEN E SIGURISË DHE SHËNDETIT TË PUNËMARRËSVE NGA RISQET E LIDHURA ME AGJENTËT KIMIKË NË PUNË”
Austria - Occupational Exposure Limits	
Local name	Ethylbenzol
MAK (OEL TWA)	440 mg/m ³
	100 ppm

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Ethylbenzene (100-41-4)	
MAK (OEL STEL)	880 mg/m ³ (8x 5(Mow) min) 200 ppm (8x 5(Mow) min)
Remark	H
Regulatory reference	BGBI. II Nr. 330/2024
Bulgaria - Occupational Exposure Limits	
Local name	Етилбензен
OEL TWA	435 mg/m ³
OEL STEL	545 mg/m ³
Remark	Кожа (възможна е значителна резорбция чрез кожата); • (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност)
Regulatory reference	Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр. 28 от 2024 г., в сила от 05.04.2024 г.)
Bulgaria - Biological limit values	
Local name	Етилбензен
BLV	2000 mg/g creatinine Биомаркер за експозиция/биомаркер за ефект: бадемена киселина и фенилглиоксалова киселина - сумарно - Биологична среда: урина - Време на пробовземане: В края на експозицията или в края на работната смяна - Специфични ефекти: Кожа – възможна е значителна резорбция чрез кожата
Regulatory reference	Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр. 28 от 2024 г., в сила от 05.04.2024 г.)
Croatia - Occupational Exposure Limits	
Local name	Etilbenzen
GVI (OEL TWA)	442 mg/m ³ 100 ppm
KGVI (OEL STEL)	884 mg/m ³ 200 ppm
Remark	Direktiva: 2000/39/EZ. Napomena: Koža (razvrstana kao tvar koja nadražuje kožu (H315))
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, граничним vrijednostima izloženosti i biološkim граничним vrijednostima (NN 148/2023)
Croatia - Biological limit values	
Local name	Etilbenzen
BLV	14.1 µmol/l Karakteristični pokazatelj: etilbenzen - Biološki uzorak: krv - Vrijeme uzorkovanja: za vrijeme izloženosti 1.5 mg/l Karakteristični pokazatelj: etilbenzen - Biološki uzorak: krv - Vrijeme uzorkovanja: za vrijeme izloženosti 1.12 mol/mol Creatinine Karakteristični pokazatelj: bademova kiselina - Biološki uzorak: mokraća - Vrijeme uzorkovanja: na kraju radne smjene i na kraju radnog tjedna 1.5 g/g creatinine Karakteristični pokazatelj: bademova kiselina - Biološki uzorak: mokraća - Vrijeme uzorkovanja: na kraju radne smjene i na kraju radnog tjedna
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, граничним vrijednostima izloženosti i biološkim граничним vrijednostima (NN 91/2018)

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Ethylbenzene (100-41-4)	
Cyprus - Occupational Exposure Limits	
Local name	Αιθυλοβενζένιο
OEL TWA	442 mg/m ³
	100 ppm
OEL STEL	884 mg/m ³
	200 ppm
Remark	δέρμα
Regulatory reference	Κανονισμοί του 2007 (Κ.Δ.Π. 295/2007)
Czech Republic - Occupational Exposure Limits	
Local name	Ethylbenzen
PEL (OEL TWA)	200 mg/m ³
	45.33 ppm
NPK-P (OEL C)	500 mg/m ³
	113.32 ppm
Remark	D - při expozici se významně uplatňuje pronikání faktoru kůží, B - u látky je zaveden biologický expoziční test (BET) v moči nebo krvi, P - u látky nelze vyloučit závažné pozdní účinky (s větou H372, H373).
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 20/2025 Sb.)
Czech Republic - Biological limit values	
Local name	Ethylbenzen
BLV	1500 mg/g creatinine Ukazatel: Mandlová kyselina - Biologicky vzorek: moči - Doba odběru: konec směny 1100 μmol/mmol Creatinine Ukazatel: Mandlová kyselina - Biologicky vzorek: moči - Doba odběru: konec směny
Regulatory reference	Vyhláška č. 107/2013 Sb. (kterou se mění vyhláška č. 432/2003 Sb.)
Denmark - Occupational Exposure Limits	
Local name	Ethylbenzen
OEL TWA	217 mg/m ³
	50 ppm
OEL STEL	434 mg/m ³
	100 ppm
Remark	E (betyder, at stoffet har en EU-grænseværdi); H (betyder, at stoffet kan optages gennem huden); K (betyder, at stoffet anses for at kunne være kræftfremkaldende og omfattet af bekendtgørelse om foranstaltninger til forebyggelse af risici ved arbejde med stoffer og materialer, der kan være kræftfremkaldende, mutagene eller reproduktionstoksiske)
Regulatory reference	BEK nr 1619 af 19/12/2024
Estonia - Occupational Exposure Limits	
Local name	Etüülbenseen
OEL TWA	442 mg/m ³
	100 ppm
OEL STEL	884 mg/m ³

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Ethylbenzene (100-41-4)	
	200 ppm
Remark	A (Naha kaudu kergesti imenduv aine), S (Sensibiliseeriv aine)
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 02.04.2024, 13)
Finland - Occupational Exposure Limits	
Local name	Etyyliibentseeni
HTP (OEL TWA)	220 mg/m ³
	50 ppm
HTP (OEL STEL)	880 mg/m ³
	200 ppm
Remark	lho
Regulatory reference	HTP-ARVOT 2025 (Sosiaali- ja terveystministeriö)
Finland - Biological limit values	
Local name	Etyyliibentseeni
BLV	5.2 mmol/l Parametri: Virtsan mantelihappo - Näytteenottoajankohta: Työvuoron päätyttyä työviikon tai altistumisjakson loputtua
Regulatory reference	HTP-ARVOT 2025 (Sosiaali- ja terveystministeriö)
France - Occupational Exposure Limits	
Local name	Ethylbenzène
VME (OEL TWA)	88.4 mg/m ³
	20 ppm
VLE (OEL C/STEL)	442 mg/m ³
	100 ppm
Remark	Valeurs réglementaires contraignantes. Risque de pénétration percutanée
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 6443, 2022; Outil65; Décret n° 2019-1487; Décret n° 2020-1546; Décret n° 2021-434; Décret n° 2021-1849; Décret n° 2024-307)
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Ethylbenzol
AGW (OEL TWA)	88 mg/m ³
	20 ppm
Peak exposure limitation factor	2(II)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); H - hautresorptiv; Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden; EU - Europäische Union (Von der EU wurde ein Luftgrenzwert festgelegt: Abweichungen bei Wert und Spitzenbegrenzung sind möglich)
Regulatory reference	TRGS900
Germany - Biological limit values (TRGS 903)	
Local name	Ethylbenzol

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Ethylbenzene (100-41-4)	
Biological limit value	250 mg/g creatinine Parameter: Mandelsäure plus Phenylglyoxylsäure - Untersuchungsmaterial: U = Urin - Probenahmezeitpunkt: b) Expositionsende, bzw. Schichtende - Festlegung/Begründung: 11/2016 DFG
Regulatory reference	TRGS 903
Gibraltar - Occupational Exposure Limits	
Local name	Ethylbenzene
OEL TWA	442 mg/m ³
	100 ppm
OEL STEL	884 mg/m ³
	200 ppm
Remark	Skin
Regulatory reference	Factories (Control of Chemical Agents at Work) Regulations 2003 (LN. 2018/181)
Greece - Occupational Exposure Limits	
Local name	Αιθυλοβενζόλιο
OEL TWA	435 mg/m ³
	100 ppm
OEL STEL	545 mg/m ³
	125 ppm
Regulatory reference	Π.Δ. 90/1999 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους
Hungary - Occupational Exposure Limits	
Local name	ETILBENZOL
AK (OEL TWA)	442 mg/m ³
	100 ppm
CK (OEL STEL)	884 mg/m ³
	200 ppm
Remark	b (Bőrön át is felszívódik), i (ingerlő anyag, amely izgatja a bőrt, nyálkahártyát, szemet vagy mindhármat), BEM (biológiai expozíciós mutató); EU1 (2000/39/EK irányelvben közölt érték); T (Azok az anyagok, amelyek egészségkárosító hatása TARTÓS expozíciót követően jelentkezik)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Hungary - Biological Exposure Indices	
Local name	Etilbenzol
BEI	1500 mg/g creatinine Biológiai expozíciós (hatás) mutató: mandulasav - Biológiai minta: vizeletben - Mintavétel ideje: mhv., m.v. (munkahét végén, műszak végén) 1110 μmol/mmol Creatinine Biológiai expozíciós (hatás) mutató: mandulasav - Biológiai minta: vizeletben - Mintavétel ideje: mhv., m.v. (munkahét végén, műszak végén)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Ireland - Occupational Exposure Limits	
Local name	Ethylbenzene

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Ethylbenzene (100-41-4)	
OEL TWA	442 mg/m ³
	100 ppm
OEL STEL	884 mg/m ³
	200 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values), Skin (Substances which have the capacity to penetrate intact skin when they come in contact with it and be absorbed into the body. A substantial contribution to the total body burden via dermal exposure is possible)
Regulatory reference	Chemical Agents Code of Practice 2024
Ireland - Biological limit values	
Local name	Ethyl benzene
BMGV	0.7 g/g creatinine Parameter: mandelic acid and phenylglyoxylic acid - Medium: urine - Sampling time: End of shift at end of workweek - Notations: Ns (Non-specific), Sq (Semi-quantitative) Parameter: ethylbenzene - Medium: end-exhaled air - Sampling time: Not critical - Notations: Sq (Semi-quantitative)
Regulatory reference	Biological Monitoring Guidelines (HSA, 2011)
Italy - Occupational Exposure Limits	
Local name	Etilbenzene
OEL TWA	442 mg/m ³
	100 ppm
OEL STEL	884 mg/m ³
	200 ppm
Remark	Cute
Regulatory reference	Allegato XXXVIII del D.Lgs. 9 aprile 2008, n. 81 e s.m.i. (D.Lgs. 4 settembre 2024, n. 135)
Latvia - Occupational Exposure Limits	
Local name	Etilbenzols
OEL TWA	442 mg/m ³
	100 ppm
OEL STEL	884 mg/m ³
	200 ppm
Remark	Āda; letekme uz dzirdi
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325 (Grozījumi Ministru kabineta 2024. gada 26. martā noteikumiem Nr. 191).
Lithuania - Occupational Exposure Limits	
Local name	Etilbenzenas
IPRV (OEL TWA)	442 mg/m ³
	100 ppm
TPRV (OEL STEL)	884 mg/m ³
	200 ppm
Remark	O (medžiaga į organizmą gali prasiskverbti pro nepažeistą odą)

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Ethylbenzene (100-41-4)	
Regulatory reference	LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-695/A1-272, 2018-06-12)
Luxembourg - Occupational Exposure Limits	
Local name	Ethylbenzène
OEL TWA	442 mg/m ³
	100 ppm
OEL STEL	884 mg/m ³
	200 ppm
Remark	Peau
Regulatory reference	Mémorial A N° 226 de 2021 concernant la protection de la sécurité et de la santé des salariés contre les risques liés à des agents chimiques sur le lieu de travail
Malta - Occupational Exposure Limits	
Local name	Ethylbenzene
OEL TWA	442 mg/m ³
	100 ppm
OEL STEL	884 mg/m ³
	200 ppm
Remark	Skin # Ġilda
Regulatory reference	S.L. 424.24 - Chemical Agents at Work Regulations (L.N. 356 of 2021) # L.S. 424.24 - Regolamenti dwar Aġenti Kimiċi fuq il-Post tax-Xogħol (A.L. 356 tal-2021)
Netherlands - Occupational Exposure Limits	
Local name	Ethylbenzeen
TGG-8u (OEL TWA)	215 mg/m ³
	48.6 ppm
TGG-15min (OEL STEL)	430 mg/m ³
	97.3 ppm
Remark	H (Huidopname) Stoffen die relatief gemakkelijk door de huid kunnen worden opgenomen, hetgeen een substantiële bijdrage kan betekenen aan de totale inwendige blootstelling, hebben in de lijst een H-aanduiding. Bij deze stoffen moeten naast maatregelen tegen inademing ook adequate maatregelen ter voorkoming van huidcontact worden genomen.
Regulatory reference	Arbeidsomstandighedenregeling 2024
Poland - Occupational Exposure Limits	
Local name	Etylobenzen
NDS (OEL TWA)	200 mg/m ³
NDSch (OEL STEL)	400 mg/m ³
Remark	Skóra (Oznakowanie substancji notacją „skóra” oznacza, że wchłanianie substancji przez skórę może być tak samo istotne jak przy narażeniu drogą oddechową).
Regulatory reference	Dz. U. 2024 poz. 1017 wraz z późn. zm.
Portugal - Indicative Occupational Exposure Limit (IOEL)	
Local name	Etilbenzeno
IOEL TWA	442 mg/m ³

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Ethylbenzene (100-41-4)	
	100 ppm
IOEL STEL	884 mg/m ³
	200 ppm
Remark	Cutânea.
Regulatory reference	Decreto-Lei n.º 1/2021 de 6 de janeiro
Portugal - Occupational Exposure Limits	
Local name	Etilbenzeno
OEL TWA	20 ppm
Remark	A3 (Agente carcinogénico confirmado nos animais de laboratório com relevância desconhecida no Homem); IBE (Índice biológico de exposição)
Regulatory reference	Norma Portuguesa NP 1796:2014
Portugal - Biological Exposure Indices	
Local name	Etilbenzeno
BEI	0.7 g/g creatinine Parâmetro: Soma do ácido mandélico e do ácido fenilfloxílico - Meio: urina - Momento da amostragem: Fim do turno - Notação: Ne (Não específico)
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Etilbenzen
OEL TWA	442 mg/m ³
	100 ppm
OEL STEL	884 mg/m ³
	200 ppm
Remark	P - posibilitatea unei penetrări cutanate importante
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 179/2024)
Romania - Biological limit values	
Local name	Etilbenzen
BLV	1.5 g/g creatinine Indicatorul biologic: Acid mandelic - Material biologic: urină - Momentul recoltării: sfârșit de săptămână
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 179/2024)
Serbia - Occupational Exposure Limits	
Local name	етилбензен
OEL TWA	442 mg/m ³
	100 ppm
OEL STEL	884 mg/m ³
	200 ppm
Remark	EУ* – напомена да се ради о хемијским материјама за које су утврђене индикативне граничне вредности изложености према Директиви 2000/39/ЕЗ (прва листа); К – напомена да хемијска материја може штетно деловати на кожу
Regulatory reference	ПРАВИЛНИК о превентивним мерама за безбедан и здрав рад при излагању хемијским материјама („Службени гласник РС”, бр. 106/09, 117/17 и 107/21)

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Ethylbenzene (100-41-4)

Slovakia - Occupational Exposure Limits

Local name	Etylbenzén
NPHV (OEL TWA)	442 mg/m ³
	100 ppm
NPHV (OEL STEL)	884 mg/m ³
	200 ppm
Remark	K – znamená, že faktor môže byť ľahko absorbovaný kožou
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (122/2024 Z. z.)

Slovakia - Biological limit values

Local name	Etylbenzén
BLV	12 mg/l Zisťovaný faktor: 2- a 4-Etylfenol - Vyšetovaný materiál: moč - Čas odberu vzorky: b) koniec expozície alebo pracovnej zmeny, c) pri dlhodobej expozícii; po viacerých pracovných zmenách 1600 mg/l Zisťovaný faktor: Kyselina mandľová a kyselina fenylglyoxylová - Vyšetovaný materiál: moč - Čas odberu vzorky: b) koniec expozície alebo pracovnej zmeny, c) pri dlhodobej expozícii; po viacerých pracovných zmenách
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (122/2024 Z. z.)

Slovenia - Occupational Exposure Limits

Local name	etilbenzen
OEL TWA	442 mg/m ³
	100 ppm
OEL STEL	884 mg/m ³
	200 ppm
Remark	K (Lastnost lažjega prehajanja snovi v organizem skozi kožo), Y (Snovi, pri katerih ni nevarnosti za zarodek ob upoštevanju mejnih vrednosti in bat vrednosti), BAT (Biološka mejna vrednost), EU
Regulatory reference	Uradni list RS, št. 26/2025 z dne 18.4.2025 - Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu

Slovenia - Biological limit values

Local name	etilbenzen
BLV	250 mg/g creatinine Parameter: mandljeva kislina in fenilglioksilna kislina - Biološki vzorec: urin - Čas vzorčenja: ob koncu delovne izmene
Regulatory reference	Uradni list RS, št. 26/2025 z dne 18.4.2025 - Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu

Spain - Occupational Exposure Limits

Local name	Etilbenceno
VLA-ED (OEL TWA)	441 mg/m ³
	100 ppm
VLA-EC (OEL STEL)	884 mg/m ³
	200 ppm

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Ethylbenzene (100-41-4)	
Remark	Vía dérmica (Indica que, en las exposiciones a esta sustancia, la aportación por la vía cutánea puede resultar significativa para el contenido corporal total si no se adoptan medidas para prevenir la absorción. En estas situaciones, es aconsejable la utilización del control biológico para poder cuantificar la cantidad global absorbida del contaminante), VLB® (Agente químico que tiene Valor Límite Biológico), VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2025. INSHT
Sweden - Occupational Exposure Limits	
Local name	Etylbensen
NGV (OEL TWA)	220 mg/m ³
	50 ppm
KGV (OEL STEL)	884 mg/m ³
	200 ppm
Remark	H (Ämnet tas lätt upp genom huden. Gränsvärdet bedöms ge tillräckligt skydd om huden är skyddad); 23 (Ämnet har ett indikativt EU-gränsvärde)
Regulatory reference	Arbetsmiljöverkets föreskrifter och allmänna råd (AFS 2023:14) om gränsvärden för luftvägsexponering i arbetsmiljön
United Kingdom - Occupational Exposure Limits	
Local name	Ethylbenzene
WEL TWA (OEL TWA)	441 mg/m ³
	100 ppm
WEL STEL (OEL STEL)	552 mg/m ³
	125 ppm
Remark	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Iceland - Occupational Exposure Limits	
Local name	Etylbensen
OEL TWA	200 mg/m ³
	50 ppm
OEL STEL	884 mg/m ³
	200 ppm
Remark	H (efnið getur auðveldlega borist inn í líkamann gegnum húð)
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)
Norway - Occupational Exposure Limits	
Local name	Etylbenzen
Grenseverdi (OEL TWA)	20 mg/m ³
	5 ppm
Remark	H: Kjemikalier som kan tas opp gjennom huden; K: Kjemikalier som skal betraktes som kreftfremkallende; E: EU har en veiledende grenseverdi og/eller anmerkning for stoffet.
Regulatory reference	FOR-2024-04-05-581

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Ethylbenzene (100-41-4)	
North Macedonia - Occupational Exposure Limits	
Local name	етилбензен
OEL TWA	442 mg/m ³
	100 ppm
KTV	2
Short time value [mg/m ³]	884 mg/m ³
Short time value [ppm]	200 ppm
Remark	(KTV) краткотрајна вредност (КТВ) значи концентрација на опасни хемиски супстанции во воздухот на работното место внатре во зона на дишење, на која работникот без опасност по здравјето може да е изложен на покусно време. Изложеноста на краткотрајни вредности може да трае највеќе 15 минути и не смее да се повтори повеќе од четирипати во работната смена, при што меѓу две изложености на оваа концентрација мора да измине најмалку 60 минути. Краткотрајната вредност е изразена во mg/m ³ или во ml/m ³ (ppm) а е дадена како многукратни дозволени пречекорувања на граничната вредност; (K) својство на полесно пренесување на супстанците во организмот преку кожата; (BAT) биолошка гранична вредност – праг на биолошка гранична вредност, што значи предупредување на опасна хемиска супстанца и нејзини метаболити во ткивата, телесните течности или издишувањето на воздухот, без оглед на тоа, дали опасната хемиска супстанца е внесена во организмот со вдишување, голтање или преку кожата; (EU) European Union – гранична вредност, определена на ниво на Европската унија
Regulatory reference	Правилник за минималните барања за безбедност и здравје при работа на вработени од ризици поврзани со изложување на хемиски супстанции („Службен весник на Република Македонија” бр.46/10)
Switzerland - Occupational Exposure Limits	
Local name	Ethylbenzène / Ethylbenzol
MAK (OEL TWA)	220 mg/m ³
	50 ppm
KZGW (OEL STEL)	220 mg/m ³
	50 ppm
Notation	R, O ^B , B / H, O ^L , B
Remark	NIOSH
Regulatory reference	www.suva.ch, 18.06.2025
Switzerland - BAT	
Local name	Ethylbenzène / Ethylbenzol
BAT	600 mg/g creatinine (Paramètre biologique: Acide mandélique + acide phénylglyoxylique; Substrat d'examen: Urine; Moment du prélèvement: Fin de l'exposition, de la période de travail.) / (Biologischer Parameter: Mandelsäure + Phenylglyoxylsäure; Untersuchungsmaterial: Urin; Probennahmezeitpunkt: Expositionsende, bzw. Schichtende.)
Remark	v. aussi styrène / s. auch Styrol
Regulatory reference	Ordonnance 832.30 (OPA), article 50 al. 3, www.suva.ch/valeurs-limites / Verordnung 832.30 (VUV), Art. 50 Abs. 3, www.suva.ch/grenzwerte

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Xylene (1330-20-7)

EU - Indicative Occupational Exposure Limit (IOEL)

Local name	Xylene, mixed isomers, pure
IOEL TWA	221 mg/m ³
	50 ppm
IOEL STEL	442 mg/m ³
	100 ppm
Remark	Skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC

Albania - Occupational Exposure Limits

Local name	Ksilen, izomere të përziera, i pastër
OEL TWA	221 mg/m ³
	50 ppm
OEL STEL	442 mg/m ³
	100 ppm
Remark	Lëkurë (tregon mundësinë e një marrjeje të rëndësishme nëpërmjet lëkurës)
Regulatory reference	VENDIM Nr. 522, datë 6.8.2014 PËR MIRATIMIN E RREGULLORES "PËR MBROJTJEN E SIGURISË DHE SHËNDETIT TË PUNËMARRËSVE NGA RISQET E LIDHURA ME AGJENTËT KIMIKË NË PUNË"

Belgium - Occupational Exposure Limits

Local name	Xylène, isomères mixtes, purs # Xyleen, mengsel van isomeren, zuiver
OEL TWA	221 mg/m ³
	50 ppm
OEL STEL	442 mg/m ³
	100 ppm
Remark	D: la mention "D" signifie que la résorption de l'agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l'exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l'agent dans l'air. # D: de vermelding "D" betekent dat de opname van het agens via de huid, de slijmvliezen of de ogen een belangrijk deel van de totale blootstelling vormt. Deze opname kan het gevolg zijn van zowel direct contact als zijn aanwezigheid in de lucht.
Regulatory reference	Koninklijk besluit/Arrêté royal 16/11/2023

Bulgaria - Occupational Exposure Limits

Local name	Ксилен (смес от изомери), чист
OEL TWA	221 mg/m ³
	50 ppm
OEL STEL	442 mg/m ³
	100 ppm
Remark	Кожа (възможна е значителна резорбция чрез кожата); • (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност)

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Xylene (1330-20-7)	
Regulatory reference	Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр. 28 от 2024 г., в сила от 05.04.2024 г.)
Croatia - Occupational Exposure Limits	
Local name	Ksilen (svi izomeri)
GVI (OEL TWA)	221 mg/m ³ 50 ppm
KGVI (OEL STEL)	442 mg/m ³ 100 ppm
Remark	Direktiva: 2000/39/EZ. Napomena: Koža (razvrstana kao tvar koja nadražuje kožu (H315))
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, граничним vrijednostima izloženosti i biološkim граничним vrijednostima (NN 148/2023)
Croatia - Biological limit values	
Local name	Ksilen
BLV	14.13 µmol/l Karakteristični pokazatelj: ksilen - Biološki uzorak: krv - Vrijeme uzorkovanja: na kraju radne smjene - Napomena: uzimanje alkohola prije izloženosti ksilenu povisuje nalaz 1.5 mg/l Karakteristični pokazatelj: ksilen - Biološki uzorak: krv - Vrijeme uzorkovanja: na kraju radne smjene - Napomena: uzimanje alkohola prije izloženosti ksilenu povisuje nalaz 0.88 mol/mol Creatinine Karakteristični pokazatelj: metilhipurna kiselina - Biološki uzorak: mokraća - Vrijeme uzorkovanja: na kraju radne smjene 1.5 g/g creatinine Karakteristični pokazatelj: metilhipurna kiselina - Biološki uzorak: mokraća - Vrijeme uzorkovanja: na kraju radne smjene
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, граничним vrijednostima izloženosti i biološkim граничним vrijednostima (NN 91/2018)
Cyprus - Occupational Exposure Limits	
Local name	Ξυλένιο, μικτά ισομερή, καθάρá
OEL TWA	221 mg/m ³ 50 ppm
OEL STEL	442 mg/m ³ 100 ppm
Remark	δέρμα
Regulatory reference	Κανονισμοί του 2007 (Κ.Δ.Π. 295/2007)
Czech Republic - Occupational Exposure Limits	
Local name	Xylen technická směs isomerů a všechny isomery
PEL (OEL TWA)	200 mg/m ³ 45.33 ppm
NPK-P (OEL C)	400 mg/m ³ 90.66 ppm
Remark	B - u látky je zaveden biologický expoziční test (BET) v moči nebo krvi, D - při expozici se významně uplatňuje pronikání faktoru kůže, I - dráždí sliznice (oči, dýchací cesty), resp. kůži.
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 20/2025 Sb.)

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Xylene (1330-20-7)	
Czech Republic - Biological limit values	
Local name	Xyleny
BLV	1400 mg/g creatinine Ukazatel: Methylhippurová kyselina - Biologicky vzorek: moči - Doba odběru: konec směny 820 µmol/mmol Creatinine Ukazatel: Methylhippurová kyselina - Biologicky vzorek: moči - Doba odběru: konec směny
Regulatory reference	Vyhláška č. 107/2013 Sb. (kterou se mění vyhláška č. 432/2003 Sb.)
Denmark - Occupational Exposure Limits	
Local name	Xylen (Dimethylbenzen), alle isomere
OEL TWA	109 mg/m ³
	25 ppm
OEL STEL	442 mg/m ³
	100 ppm
Remark	E (betyder, at stoffet har en EU-grænseværdi); H (betyder, at stoffet kan optages gennem huden)
Regulatory reference	BEK nr 1619 af 19/12/2024
Estonia - Occupational Exposure Limits	
Local name	Ksüleen (dimetüülbenseen)
OEL TWA	200 mg/m ³
	50 ppm
OEL STEL	450 mg/m ³
	100 ppm
Remark	A (Naha kaudu kergesti imenduv aine)
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 02.04.2024, 13)
Finland - Occupational Exposure Limits	
Local name	Ksyleeni
HTP (OEL TWA)	220 mg/m ³
	50 ppm
HTP (OEL STEL)	440 mg/m ³
	100 ppm
Remark	lho
Regulatory reference	HTP-ARVOT 2025 (Sosiaali- ja terveysministeriö)
Finland - Biological limit values	
Local name	Ksyleeni
BLV	5 mmol/l Parametri: Virtsan metyylihippuurihappo - Näytteenottoajankohta: Työvuoron päätyttyä
Regulatory reference	HTP-ARVOT 2025 (Sosiaali- ja terveysministeriö)
France - Occupational Exposure Limits	
Local name	Xylène, isomères mixtes, purs
VME (OEL TWA)	221 mg/m ³

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Xylene (1330-20-7)	
	50 ppm
VLE (OEL C/STEL)	442 mg/m ³
	100 ppm
Remark	Valeurs réglementaires contraignantes. Risque de pénétration percutanée
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 6443, 2022; Outil65; Décret n° 2019-1487; Décret n° 2020-1546; Décret n° 2021-434; Décret n° 2021-1849; Décret n° 2024-307)
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Xylol (alle Isomere)
AGW (OEL TWA)	220 mg/m ³
	50 ppm
Peak exposure limitation factor	2(II)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); EU - Europäische Union (Von der EU wurde ein Luftgrenzwert festgelegt: Abweichungen bei Wert und Spitzenbegrenzung sind möglich); H - hautresorptiv
Regulatory reference	TRGS900
Germany - Biological limit values (TRGS 903)	
Local name	Xylol (alle Isomere)
Biological limit value	2000 mg/l Parameter: Methylhippur-(Tolur-) säure (alle Isomere) - Untersuchungsmaterial: U = Urin - Probenahmezeitpunkt: b) Expositionsende, bzw. Schichtende - Festlegung/Begründung: 11/2016 DFG
Regulatory reference	TRGS 903
Gibraltar - Occupational Exposure Limits	
Local name	Xylene, mixed isomers, pure
OEL TWA	221 mg/m ³
	50 ppm
OEL STEL	442 mg/m ³
	100 ppm
Remark	Skin
Regulatory reference	Factories (Control of Chemical Agents at Work) Regulations 2003 (LN. 2018/181)
Greece - Occupational Exposure Limits	
Local name	Ξυλόλια (όλα τα ισομερή)
OEL TWA	435 mg/m ³
	100 ppm
OEL STEL	650 mg/m ³
	150 ppm
Remark	Η ένδειξη «δέρμα» στις οριακές τιμές επαγγελματικής έκθεσης επισημαίνει το ενδεχόμενο σημαντικής διείσδυσης μέσω του δέρματος.
Regulatory reference	Π.Δ. 90/1999 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους

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Xylene (1330-20-7)	
Hungary - Occupational Exposure Limits	
Local name	XILOL izomerek keveréke
AK (OEL TWA)	221 mg/m ³
	50 ppm
CK (OEL STEL)	442 mg/m ³
	100 ppm
Remark	b (Bőrön át is felszívódik), BEM (biológiai expozíciós mutató); EU1 (2000/39/EK irányelvben közölt érték); R (Azok az anyagok, amelyek egészségkárosító hatása RÖVID expozíció hatására jelentkeznek)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Hungary - Biological Exposure Indices	
Local name	Xilol
BEI	1500 mg/g creatinine Biológiai expozíciós (hatás) mutató: metilhippursavak - Biológiai minta: vizeletben - Mintavétel ideje: m.v. (műszak végén) 860 µmol/mmol Creatinine Biológiai expozíciós (hatás) mutató: metilhippursavak - Biológiai minta: vizeletben - Mintavétel ideje: m.v. (műszak végén)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Ireland - Occupational Exposure Limits	
Local name	Xylene, mixed isomers
OEL TWA	221 mg/m ³
	50 ppm
OEL STEL	442 mg/m ³
	100 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values), Skin (Substances which have the capacity to penetrate intact skin when they come in contact with it and be absorbed into the body. A substantial contribution to the total body burden via dermal exposure is possible)
Regulatory reference	Chemical Agents Code of Practice 2024
Ireland - Biological limit values	
Local name	Xylene
BMGV	1.5 g/g creatinine Parameter: methylhippuric acids - Medium: urine - Sampling time: End of Shift
Regulatory reference	Biological Monitoring Guidelines (HSA, 2011)
Italy - Occupational Exposure Limits	
Local name	Xilene, isomeri misti, puro
OEL TWA	221 mg/m ³
	50 ppm
OEL STEL	442 mg/m ³
	100 ppm
Remark	Cute

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Xylene (1330-20-7)	
Regulatory reference	Allegato XXXVIII del D.Lgs. 9 aprile 2008, n. 81 e s.m.i. (D.Lgs. 4 settembre 2024, n. 135)
Latvia - Occupational Exposure Limits	
Local name	Ksilols (o-,m-,p-ksilols, dimetilbenzols)
OEL TWA	221 mg/m ³
	50 ppm
OEL STEL	442 mg/m ³
	100 ppm
Remark	Āda
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325 (Grozījumi Ministru kabineta 2024. gada 26. martā noteikumiem Nr. 191).
Lithuania - Occupational Exposure Limits	
Local name	Ksilenas, mišrūs izomerai, grynas
IPRV (OEL TWA)	221 mg/m ³
	50 ppm
TPRV (OEL STEL)	442 mg/m ³
	100 ppm
Remark	O (medžiaga į organizmą gali prasiskverbti pro nepažeistą odą)
Regulatory reference	LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-695/A1-272, 2018-06-12)
Luxembourg - Occupational Exposure Limits	
Local name	Xylène, isomères mixtes, purs
OEL TWA	221 mg/m ³
	50 ppm
OEL STEL	442 mg/m ³
	100 ppm
Remark	Peau
Regulatory reference	Mémorial A N° 226 de 2021 concernant la protection de la sécurité et de la santé des salariés contre les risques liés à des agents chimiques sur le lieu de travail
Malta - Occupational Exposure Limits	
Local name	Xylene, mixed isomers, pure # Xylene, Isomeri mhallta, puri
OEL TWA	221 mg/m ³
	50 ppm
OEL STEL	442 mg/m ³
	100 ppm
Remark	Skin # Ġilda
Regulatory reference	S.L. 424.24 - Chemical Agents at Work Regulations (L.N. 356 of 2021) # L.S. 424.24 - Regolamenti dwar Aġenti Kimiċi fuq il-Post tax-Xogħol (A.L. 356 tal-2021)
Netherlands - Occupational Exposure Limits	
Local name	Xyleen, o-, m-, p-isomeren
TGG-8u (OEL TWA)	210 mg/m ³

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Xylene (1330-20-7)	
	47.5 ppm
TGG-15min (OEL STEL)	442 mg/m ³
	100 ppm
Remark	H (Huidopname) Stoffen die relatief gemakkelijk door de huid kunnen worden opgenomen, hetgeen een substantiële bijdrage kan betekenen aan de totale inwendige blootstelling, hebben in de lijst een H-aanduiding. Bij deze stoffen moeten naast maatregelen tegen inademing ook adequate maatregelen ter voorkoming van huidcontact worden genomen.
Regulatory reference	Arbeidsomstandighedenregeling 2024
Poland - Occupational Exposure Limits	
Local name	Ksilen – mieszanina izomerów (1,2-; 1,3-; 1,4-)
NDS (OEL TWA)	100 mg/m ³
NDSch (OEL STEL)	200 mg/m ³
Remark	Skóra (Oznakowanie substancji notacją „skóra” oznacza, że wchłanianie substancji przez skórę może być tak samo istotne jak przy narażeniu drogą oddechową).
Regulatory reference	Dz. U. 2024 poz. 1017 wraz z późn. zm.
Portugal - Indicative Occupational Exposure Limit (IOEL)	
Local name	Xilenos, mistura de isómeros, puro
IOEL TWA	221 mg/m ³
	50 ppm
IOEL STEL	442 mg/m ³
	100 ppm
Remark	Cutânea.
Regulatory reference	Decreto-Lei n.º 1/2021 de 6 de janeiro
Portugal - Occupational Exposure Limits	
Local name	Xileno (isómeros)
OEL TWA	100 ppm
OEL STEL	150 ppm
Remark	A4 (Agente não classificável como carcinogénico no Homem); IBE (Índice biológico de exposição)
Regulatory reference	Norma Portuguesa NP 1796:2014
Portugal - Biological Exposure Indices	
Local name	Xilenos (graus técnico e comercial)
BEI	1.5 g/g creatinine Parâmetro: Ácidos (o, m, p)-metilhipúricos - Meio: urina - Momento da amostragem: Fim do turno
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Xilen, izomer mixt, pur
OEL TWA	221 mg/m ³
	50 ppm
OEL STEL	442 mg/m ³

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Xylene (1330-20-7)	
	100 ppm
Remark	P - posibilitatea unei penetrări cutanate importante
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 179/2024)
Romania - Biological limit values	
Local name	Xilen
BLV	3 g/l Indicatorul biologic: Acid metilhipuric - Material biologic: urină - Momentul recoltării: sfârșit de schimb
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 179/2024)
Serbia - Occupational Exposure Limits	
Local name	ксилен, мешани изомери, чист
OEL TWA	221 mg/m ³
	50 ppm
OEL STEL	442 mg/m ³
	100 ppm
Remark	ЕУ* – напомена да се ради о хемијским материјама за које су утврђене индикативне граничне вредности изложености према Директиви 2000/39/ЕЗ (прва листа); К – напомена да хемијска материја може штетно деловати на кожу
Regulatory reference	ПРАВИЛНИК о превентивним мерама за безбедан и здрав рад при излагању хемијским материјама („Службени гласник РС”, бр. 106/09, 117/17 и 107/21)
Slovakia - Occupational Exposure Limits	
Local name	Xylén, zmiešané izoméry
NPHV (OEL TWA)	221 mg/m ³
	50 ppm
NPHV (OEL STEL)	442 mg/m ³
	100 ppm
Remark	K – znamená, že faktor môže byť ľahko absorbovaný kožou
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (122/2024 Z. z.)
Slovakia - Biological limit values	
Local name	Xylén (všetky izoméry)
BLV	1.5 mg/l Zisťovaný faktor: Xylén - Vyšetrovaný materiál: krv - Čas odberu vzorky: b) koniec expozície alebo pracovnej zmeny 2000 mg/l Zisťovaný faktor: Suma kyselín 2,3,4-metylhipurových - Vyšetrovaný materiál: moč - Čas odberu vzorky: b) koniec expozície alebo pracovnej zmeny
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (122/2024 Z. z.)
Slovenia - Occupational Exposure Limits	
Local name	ksilen (mešane izomere)
OEL TWA	221 mg/m ³
	50 ppm
OEL STEL	442 mg/m ³
	100 ppm

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Xylene (1330-20-7)	
Remark	K (Lastnost lažjega prehajanja snovi v organizem skozi kožo), BAT (Biološka mejna vrednost), EU
Regulatory reference	Uradni list RS, št. 26/2025 z dne 18.4.2025 - Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu
Slovenia - Biological limit values	
Local name	ksilen (vse izomere)
BLV	2 g/l Parameter: metilhipurna kislina (vse izomere) - Biološki vzorec: urin - Čas vzorčenja: ob koncu delovne izmene
Regulatory reference	Uradni list RS, št. 26/2025 z dne 18.4.2025 - Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu
Spain - Occupational Exposure Limits	
Local name	Xileno, mezcla isómeros
VLA-ED (OEL TWA)	221 mg/m ³
	50 ppm
VLA-EC (OEL STEL)	442 mg/m ³
	100 ppm
Remark	Vía dérmica (Indica que, en las exposiciones a esta sustancia, la aportación por la vía cutánea puede resultar significativa para el contenido corporal total si no se adoptan medidas para prevenir la absorción. En estas situaciones, es aconsejable la utilización del control biológico para poder cuantificar la cantidad global absorbida del contaminante), VLB® (Agente químico que tiene Valor Límite Biológico), VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2025. INSHT
Sweden - Occupational Exposure Limits	
Local name	Xylen
NGV (OEL TWA)	221 mg/m ³
	50 ppm
KGV (OEL STEL)	442 mg/m ³
	100 ppm
Remark	H (Ämnet tas lätt upp genom huden. Gränsvärdet bedöms ge tillräckligt skydd om huden är skyddad); 23 (Ämnet har ett indikativt EU-gränsvärde)
Regulatory reference	Arbetsmiljöverkets föreskrifter och allmänna råd (AFS 2023:14) om gränsvärden för luftvägsexponering i arbetsmiljön
United Kingdom - Occupational Exposure Limits	
Local name	Xylene
WEL TWA (OEL TWA)	220 mg/m ³ o-,m-,p- or mixed isomers
	50 ppm o-,m-,p- or mixed isomers
WEL STEL (OEL STEL)	441 mg/m ³ o-,m-,p- or mixed isomers
	100 ppm o-,m-,p- or mixed isomers
Remark	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

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Xylene (1330-20-7)	
United Kingdom - Biological limit values	
Local name	Xylene, o-, m-, p- or mixed isomers
BMGV	650 mmol/mol Creatinine Parameter: methyl hippuric acid - Medium: urine - Sampling time: Post shift
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Iceland - Occupational Exposure Limits	
Local name	Xýlen, allir ísómerar (dímetýlbensen)
OEL TWA	109 mg/m ³
	25 ppm
OEL STEL	442 mg/m ³
	100 ppm
Remark	H (efnið getur auðveldlega borist inn í líkamann gegnum húð)
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)
Norway - Occupational Exposure Limits	
Local name	Xylen (alle isomere)
Grenseverdi (OEL TWA)	108 mg/m ³
	25 ppm
Remark	H: Kjemikalier som kan tas opp gjennom huden; E: EU har en veiledende grenseverdi og/eller anmerkning for stoffet.
Regulatory reference	FOR-2024-04-05-581
North Macedonia - Occupational Exposure Limits	
Local name	ксилен (смеша од изомери)
OEL TWA	221 mg/m ³
	50 ppm
KTV	2
Short time value [mg/m ³]	442 mg/m ³
Short time value [ppm]	100 ppm
Remark	(KTV) краткотрајна вредност (КТВ) значи концентрација на опасни хемиски супстанции во воздухот на работното место внатре во зона на дишење, на која работникот без опасност по здравјето може да е изложен на покусо време. Изложеноста на краткотрајни вредности може да трае највеќе 15 минути и не смее да се повтори повеќе од четирипати во работната смена, при што меѓу две изложености на оваа концентрација мора да измине најмалку 60 минути. Краткотрајната вредност е изразена во mg/m ³ или во ml/m ³ (ppm) а е дадена како многукратни дозволени пречекорувања на граничната вредност; (K) својство на полесно пренесување на супстанците во организмот преку кожата; (BAT) биолошка гранична вредност – праг на биолошка гранична вредност, што значи предупредување на опасна хемиска супстанца и нејзини метаболити во ткивата, телесните течности или издишувањето на воздухот, без оглед на тоа, дали опасната хемиска супстанца е внесена во организмот со вдишување, голтање или преку кожата; (EU) European Union – гранична вредност, определена на ниво на Европската унија

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Xylene (1330-20-7)	
Regulatory reference	Правилник за минималните барања за безбедност и здравје при работа на вработени од ризици поврзани со изложување на хемиски супстанции („Службен весник на Република Македонија“ бр.46/10)
Switzerland - Occupational Exposure Limits	
Local name	Xylène (tous les isomères) / Xylol (alle Isomere)
MAK (OEL TWA)	220 mg/m ³
	50 ppm
KZGW (OEL STEL)	440 mg/m ³
	100 ppm
Notation	R, B / H, B
Remark	INRS, NIOSH
Regulatory reference	www.suva.ch, 18.06.2025
Switzerland - BAT	
Local name	Xylène (tous les isomères) / Xylol (alle Isomere)
BAT	2 g/l (Paramètre biologique: Acides méthylhippuriques; Substrat d'examen: Urine; Moment du prélèvement: Fin de l'exposition, de la période de travail.) / (Biologischer Parameter: Methylhippursäuren; Untersuchungsmaterial: Urin; Probennahmezeitpunkt: Expositionsende, bzw. Schichtende.)
Regulatory reference	Ordonnance 832.30 (OPA), article 50 al. 3, www.suva.ch/valeurs-limites / Verordnung 832.30 (VUV), Art. 50 Abs. 3, www.suva.ch/grenzwerte
1,2,3-Trimethylbenzene (526-73-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	1,2,3-Trimethylbenzene
IOEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
Albania - Occupational Exposure Limits	
Local name	Trimetil-1,2,3-benzen
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	VENDIM Nr. 522, datë 6.8.2014 PËR MIRATIMIN E RREGULLORES “PËR MBROJTJEN E SIGURISË DHE SHËNDETIT TË PUNËMARRËSVE NGA RISQET E LIDHURA ME AGJENTËT KIMIKË NË PUNË”
Bulgaria - Occupational Exposure Limits	
Local name	1,2,3-Триметилбензен
OEL TWA	100 mg/m ³
	20 ppm
Remark	• (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност)
Regulatory reference	Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр. 28 от 2024 г., в сила от 05.04.2024 г.)

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1,2,3-Trimethylbenzene (526-73-8)

Croatia - Occupational Exposure Limits

Local name	1,2,3 Trimetilbenzen
GVI (OEL TWA)	100 mg/m ³ 20 ppm
Remark	Direktiva: 2000/39/EZ
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 148/2023)

Cyprus - Occupational Exposure Limits

Local name	1,2,3-Τριμεθυλοβενζόλιο
OEL TWA	100 mg/m ³ 20 ppm
Regulatory reference	Κανονισμοί του 2007 (Κ.Δ.Π. 295/2007)

Czech Republic - Occupational Exposure Limits

Local name	1,2,3-Trimethylbenzen
PEL (OEL TWA)	100 mg/m ³ 20 ppm
NPK-P (OEL C)	250 mg/m ³ 50 ppm
Remark	I - dráždí sliznice (oči, dýchací cesty), resp. kůži.
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 20/2025 Sb.)

Denmark - Occupational Exposure Limits

Local name	1,2,3-Trimethylbenzen
OEL TWA	100 mg/m ³ 20 ppm
Remark	E (betyder, at stoffet har en EU-grænseværdi)
Regulatory reference	BEK nr 1619 af 19/12/2024

Estonia - Occupational Exposure Limits

Local name	1,2,3-trimetüülbenseen
OEL TWA	100 mg/m ³ 20 ppm
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 02.04.2024, 13)

Finland - Occupational Exposure Limits

Local name	1,2,3-Trimetyylibentseeni
HTP (OEL TWA)	100 mg/m ³ 20 ppm
Regulatory reference	HTP-ARVOT 2025 (Sosiaali- ja terveysministeriö)

France - Occupational Exposure Limits

Local name	1,2,3-Triméthylbenzène
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1,2,3-Trimethylbenzene (526-73-8)	
VME (OEL TWA)	100 mg/m ³
	20 ppm
VLE (OEL C/STEL)	250 mg/m ³
	50 ppm
Remark	Valeurs réglementaires contraignantes
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 6443, 2022; Outil65; Décret n° 2019-1487; Décret n° 2020-1546; Décret n° 2021-434; Décret n° 2021-1849; Décret n° 2024-307)
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	1,2,3-Trimethylbenzol
AGW (OEL TWA)	100 mg/m ³
	20 ppm
Peak exposure limitation factor	2(II)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); EU - Europäische Union (Von der EU wurde ein Luftgrenzwert festgelegt: Abweichungen bei Wert und Spitzenbegrenzung sind möglich); Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Regulatory reference	TRGS900
Gibraltar - Occupational Exposure Limits	
Local name	1,2,3-Trimethylbenzene
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	Factories (Control of Chemical Agents at Work) Regulations 2003 (LN. 2018/181)
Greece - Occupational Exposure Limits	
Local name	Τριμεθυλο-βενζόλιο, 1,2,3-
OEL TWA	125 mg/m ³
	25 ppm
Regulatory reference	Π.Δ. 90/1999 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους
Hungary - Occupational Exposure Limits	
Local name	1,2,3-TRIMETILBENZOL
AK (OEL TWA)	100 mg/m ³
	20 ppm
Remark	EU1 (2000/39/EK irányelvben közölt érték); T (Azok az anyagok, amelyek egészségkárosító hatása TARTÓS expozíciót követően jelentkezik)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Ireland - Occupational Exposure Limits	
Local name	1,2,3-Trimethylbenzene
OEL TWA	100 mg/m ³

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1,2,3-Trimethylbenzene (526-73-8)	
	20 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values), Skin (Substances which have the capacity to penetrate intact skin when they come in contact with it and be absorbed into the body. A substantial contribution to the total body burden via dermal exposure is possible)
Regulatory reference	Chemical Agents Code of Practice 2024
Italy - Occupational Exposure Limits	
Local name	1,2,3-Trimetilbenzene
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	Allegato XXXVIII del D.Lgs. 9 aprile 2008, n. 81 e s.m.i. (D.Lgs. 4 settembre 2024, n. 135)
Latvia - Occupational Exposure Limits	
Local name	1,2,3-Trimetilbenzols
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325 (Grozījumi Ministru kabineta 2024. gada 26. martā noteikumiem Nr. 191).
Luxembourg - Occupational Exposure Limits	
Local name	1,2,3-Triméthylbenzène
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	Mémorial A N° 226 de 2021 concernant la protection de la sécurité et de la santé des salariés contre les risques liés à des agents chimiques sur le lieu de travail
Malta - Occupational Exposure Limits	
Local name	1,2,3-Trimethylbenzene
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	S.L. 424.24 - Chemical Agents at Work Regulations (L.N. 356 of 2021) # L.S. 424.24 - Regolamenti dwar Aġenti Kimiċi fuq il-Post tax-Xogħol (A.L. 356 tal-2021)
Netherlands - Occupational Exposure Limits	
Local name	1,2,3-Trimethylbenzeen
TGG-8u (OEL TWA)	100 mg/m ³
	20 ppm
TGG-15min (OEL STEL)	200 mg/m ³
	40 ppm
Regulatory reference	Arbeidsomstandighedenregeling 2024
Portugal - Indicative Occupational Exposure Limit (IOEL)	
Local name	1,2,3-Trimetilbenzeno
IOEL TWA	100 mg/m ³
	20 ppm

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1,2,3-Trimethylbenzene (526-73-8)	
Regulatory reference	Decreto-Lei n.º 1/2021 de 6 de janeiro
Romania - Occupational Exposure Limits	
Local name	1,2,3-trimetilbenzen
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 179/2024)
Serbia - Occupational Exposure Limits	
Local name	1.2.3-триметилбензен
OEL TWA	100 mg/m ³
	20 ppm
Remark	EУ* – напомена да се ради о хемијским материјама за које су утврђене индикативне граничне вредности изложености према Директиви 2000/39/ЕЗ (прва листа)
Regulatory reference	ПРАВИЛНИК о превентивним мерама за безбедан и здрав рад при излагању хемијским материјама („Службени гласник РС”, бр. 106/09, 117/17 и 107/21)
Slovakia - Occupational Exposure Limits	
Local name	Trimetylbenzén (mezitylén) všetky izoméry
NPHV (OEL TWA)	100 mg/m ³
	20 ppm
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (122/2024 Z. z.)
Slovenia - Occupational Exposure Limits	
Local name	1,2,3-trimetilbenzen
OEL TWA	100 mg/m ³
	20 ppm
OEL STEL	200 mg/m ³
	40 ppm
Remark	Y (Snovi, pri katerih ni nevarnosti za zarodek ob upoštevanju mejnih vrednosti in bat vrednosti), BAT (Biološka mejna vrednost), EU
Regulatory reference	Uradni list RS, št. 26/2025 z dne 18.4.2025 - Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu
Spain - Occupational Exposure Limits	
Local name	1,2,3-Trimetilbenceno
VLA-ED (OEL TWA)	100 mg/m ³
	20 ppm
Remark	VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2025. INSHT
Sweden - Occupational Exposure Limits	
Local name	1,2,3-Trimetylbensen
NGV (OEL TWA)	100 mg/m ³
	20 ppm

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1,2,3-Trimethylbenzene (526-73-8)	
KGV (OEL STEL)	170 mg/m ³
	35 ppm
Regulatory reference	Arbetsmiljöverkets föreskrifter och allmänna råd (AFS 2023:14) om gränsvärden för luftvägsexponering i arbetsmiljön
Iceland - Occupational Exposure Limits	
Local name	Trímetýlbensen
OEL TWA	100 mg/m ³
	20 ppm
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)
Norway - Occupational Exposure Limits	
Local name	1,2,3-trimetylbenzen
Grenseverdi (OEL TWA)	100 mg/m ³
	20 ppm
Remark	E: EU har en veiledende grenseverdi og/eller anmerkning for stoffet.
Regulatory reference	FOR-2024-04-05-581
North Macedonia - Occupational Exposure Limits	
Local name	1,2,3-триметилбензен
OEL TWA	100 mg/m ³
	20 ppm
Remark	(EU) European Union – гранична вредност, определена на ниво на Европската унија
Regulatory reference	Правилник за минималните барања за безбедност и здравје при работа на вработени од ризици поврзани со изложување на хемиски супстанции („Службен весник на Република Македонија“ бр.46/10)

DNEL and PNEC

ORLEsol 110/170 D (64742-82-1)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	1286.4 mg/m ³
Acute - local effects, inhalation	1066.67 mg/m ³
Long-term - local effects, inhalation	837.5 mg/m ³
DNEL/DMEL (General population)	
Acute - systemic effects, inhalation	1152 mg/m ³
Acute - local effects, inhalation	640 mg/m ³
Long-term - local effects, inhalation	178.57 mg/m ³
PNEC (additional information)	
Additional information	W tym przypadku nie dotyczy

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8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Do not eat, drink or smoke during use. Do not breathe dust. Keep in a cool place. Use personal protective equipment as required. Always wash hands after handling the product. Provide local exhaust or general room ventilation.

Personal protection equipment

Personal protective equipment:

Protective goggles. EN 374-3.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Safety glasses

Skin protection

Skin and body protection:

Wear suitable protective clothing. Wear impervious rubber safety shoes. Antistatic clothing. Wear protective gloves

Hand protection:

Nitrile rubber gloves. Protective gloves against chemicals (EN 374). Wash your hands

Other skin protection

Materials for protective clothing:

Wear foot protection. Wear protective clothing. Wear protective gloves

Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Thermal hazards

Thermal hazard protection:

Use insulated gloves, impervious apron, long sleeves and other protective clothing when handling this material hot.

Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless. light yellow.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: < -20 °C
Freezing point	: Not available
Boiling point	: > -88 – ≤ 260 °C
Flammability	: Very flammable liquid Highly flammable liquid and vapour.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: < 21 °C

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Auto-ignition temperature	: > 250 (280 – 470) °C
Decomposition temperature	: No data
pH	: Not available
Viscosity, kinematic	: ≥ 0.5 mm ² /s
Solubility	: Not soluble in water alone.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: < 5 (≥ 4 – ≤ 240) kPa
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 0.62 – 0.88 Type: 'relative density' Temp.: 15 °C
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

fume. Carbon dioxide. Carbon monoxide.

SECTION 11: Toxicological information

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

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

ORLEsol 110/170 D (64742-82-1)

LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat	> 5610 mg/m ³ 4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met).
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met).

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Reproductive toxicity	: Not classified
STOT-single exposure	: May cause drowsiness or dizziness.
STOT-repeated exposure	: Causes damage to organs (central nervous system) through prolonged or repeated exposure.
Aspiration hazard	: May be fatal if swallowed and enters airways.

ORLEsol 110/170 D (64742-82-1)

Viscosity, kinematic	≥ 0.5 mm ² /s
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11.2. Information on other hazards

Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties	: The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Toxic to aquatic life with long lasting effects.

ORLEsol 110/170 D (64742-82-1)

LC50 - Fish [1]	8.2 mg/l Pimephales promelas
EC50 - Crustacea [1]	4.5 mg/l daphnia
EC50 72h - Algae [1]	3.1 mg/l Pseudokirchneriella subcapitata
NOEC chronic fish	2.6 mg/l Pimephales promelas
NOEC chronic crustacea	2.6 mg/l Daphnia magna (Water flea)
EL50, aquatic invertebrates, daphnia, acute	4,5 mg/l (48 Hours)

12.2. Persistence and degradability

ORLEsol 110/170 D (64742-82-1)

Persistence and degradability	Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).
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12.3. Bioaccumulative potential

ORLEsol 110/170 D (64742-82-1)

Bioaccumulative potential	W tym przypadku nie dotyczy.
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12.4. Mobility in soil

ORLEsol 110/170 D (64742-82-1)

Mobility in soil	W tym przypadku nie dotyczy
Additional information	W tym przypadku nie dotyczy

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12.5. Results of PBT and vPvB assessment

ORLEsol 110/170 D (64742-82-1)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Component

Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	ORLEsol 110/170 D (64742-82-1)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	ORLEsol 110/170 D (64742-82-1)

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties

: The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation	: Act of 14 December 2012 on waste (J. o L. 2013, item 322 as amended; consolidated text J. o L. 2020, item 797). Act of 13 June 2013 on the management of packaging and packaging waste (J. o L. 2013, item 888 as amended; consolidated text J. o L. 2020, item 1114). Decree of the Minister of Environment of 14 December 2014 on the catalogue of waste (J. o L. 2014, item 1923).
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information	: Flammable vapours may accumulate in the container. Handle empty containers with care because residual vapours are flammable.
HP Code	: HP3 - "Flammable:" – flammable liquid waste: liquid waste having a flash point below 60 °C or waste gas oil, diesel and light heating oils having a flash point > 55 °C and ≤ 75 °C; – flammable pyrophoric liquid and solid waste: solid or liquid waste which, even in small quantities, is liable to ignite within five minutes after coming into contact with air; – flammable solid waste: solid waste which is readily combustible or may cause or contribute to fire through friction; – flammable gaseous waste: gaseous waste which is flammable in air at 20 °C and a standard pressure of 101.3 kPa; – water reactive waste: waste which, in contact with water, emits flammable gases in dangerous quantities; – other flammable waste: flammable aerosols, flammable self-heating waste, flammable organic peroxides and flammable self-reactive waste. HP5 - "Specific Target Organ Toxicity (STOT)/Aspiration Toxicity:" waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration. HP4 - "Irritant – skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye. HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

SECTION 14: Transport information

In accordance with ADR / IMDG / RID

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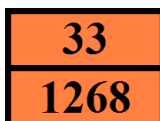
according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

ADR	IMDG	RID
14.1. UN number or ID number		
UN 1268	UN 1268	UN 1268
14.2. UN proper shipping name		
PETROLEUM DISTILLATES, N.O.S. / PETROLEUM PRODUCTS, N.O.S.	PETROLEUM PRODUCTS, N.O.S.	PETROLEUM PRODUCTS, N.O.S.
Transport document description		
UN 1268 PETROLEUM DISTILLATES, N.O.S. / PETROLEUM PRODUCTS, N.O.S., 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS	UN 1268 PETROLEUM PRODUCTS, N.O.S., 3, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1268 PETROLEUM PRODUCTS, N.O.S., 3, II, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)		
3	3	3
14.4. Packing group		
II	II	II
14.5. Environmental hazards		
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes EmS-No. (Fire): F-E EmS-No. (Spillage): S-E	Dangerous for the environment: Yes
No supplementary information available		

14.6. Special precautions for user

Overland transport

Classification code (ADR) : F1
 Special provisions (ADR) : 640D, 664
 Limited quantities (ADR) : 1I
 Excepted quantities (ADR) : E2
 Packing instructions (ADR) : P001, IBC02, R001
 Mixed packing provisions (ADR) : MP19
 Portable tank and bulk container instructions (ADR) : T7
 Portable tank and bulk container special provisions (ADR) : TP1, TP8, TP28
 Tank code (ADR) : LGBF
 Vehicle for tank carriage : FL
 Transport category (ADR) : 2
 Special provisions for carriage - Operation (ADR) : S2, S20
 Hazard identification number (Kemler No.) : 33
 Orange plates :



Tunnel restriction code (ADR) : D/E
 EAC code : 3YE

Transport by sea

Limited quantities (IMDG) : 1 L

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Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP1, TP8, TP28
Stowage category (IMDG)	: B
Properties and observations (IMDG)	: Immiscible with water.

Rail transport

Classification code (RID)	: F1
Special provisions (RID)	: 640D
Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P001, IBC02, R001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T7
Portable tank and bulk container special provisions (RID)	: TP1, TP8, TP28
Tank codes for RID tanks (RID)	: LGBF
Transport category (RID)	: 2
Colis express (express parcels) (RID)	: CE7
Hazard identification number (RID)	: 33

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU-Regulations

Other information, restriction and prohibition regulations : Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 and all its amendments and modifications. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 and all its amendments and modifications.

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)

Reference code	Applicable on	Entry title or description
3(a)	ORLEsol 110/170 D	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F
3(b)	ORLEsol 110/170 D	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	ORLEsol 110/170 D	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1
40.	ORLEsol 110/170 D	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

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REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (2024/590)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

Explosives Precursors Regulation (EU 2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (EC 273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

National regulations

France

Occupational diseases	
Code	Description
RG 4	Hematopathies caused by benzene and all products containing it
RG 4 BIS	Gastrointestinal disorders caused by benzene, toluene, xylenes and all products containing them
RG 59	Occupational poisoning by hexane
RG 84	Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols, glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamine; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

Germany

VOC ordinance (ChemVOCFarbV) :

Employment restrictions :

: Observe restrictions according Act on the Protection of Working Mothers (MuSchG).
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).

Water hazard class (WGK) :

: WGK 3, Highly hazardous to water (Classification according to AwSV; ID No. 9162).

Chemicals Prohibition Ordinance (ChemVerbotsV) :

: This product is subject to ChemVerbotsV Annex 2 Entry 1. The following requirements must be observed: authorization requirement (according to § 6 paragraph 1 sentence 1), basic requirements for carrying out the delivery (according to § 8 paragraph 1, 3 and 4), identification and documentation (according to § 9 paragraph 1 to 3) and exclusion of the shipping route (according to § 10).

Major Accidents Ordinance (12. BImSchV) :

: Is not subject to the Major Accidents Ordinance (12. BImSchV)

Netherlands

ABM category :

: Z(1) - non biodegradable substances with hazardous properties for humans and the environment (carcinogenicity/ mutagenicity/ reprotoxicity/bioaccumulative potential/ toxicity or persistence)

SZW-lijst van kankerverwekkende stoffen :

: is listed

SZW-lijst van mutagene stoffen :

: is listed

SZW-lijst van reprotoxische stoffen – Borstvoeding :

: The substance is not listed

SZW-lijst van reprotoxische stoffen –

: The substance is not listed

Vruchtbaarheid

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SZW-lijst van reprotoxische stoffen – Ontwikkeling : The substance is not listed

Denmark

Class for fire hazard : Class I-1
 Store unit : 1 liter
 Classification remarks : F <Flam. Liq. 2>; Emergency management guidelines for the storage of flammable liquids must be followed
 Danish National Regulations : Young people below the age of 18 years are not allowed to use the product
 Pregnant/breastfeeding women working with the product must not be in direct contact with the product
 The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

Poland

Polish National Regulations : Decree of the Minister of Environment of 14 December 2014 on the catalogue of waste (J. o L. 2014, item 1923).
 Act of 25 February 2011 on chemical substances and their mixtures (J. o L. No. 63, item 322 as amended; consolidated text J. o L. 2019, item 1225).
 Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the highest permissible concentration and intensity of noxious agents for health at work environment (J. o L. item 1286 as amended).
 Regulation of the Minister of Health of 2 February 2011 on tests and measurements of the noxious agents for health at work environment (J. o L. No. 33, item 166 as amended).
 The announcement of Minister of Health dated 9 September 2016 concerning the consolidated text announcement of the decree of the Minister of Health of 30 December 2004 on health and safety at work related to exposure to chemical agents at work (J. o L. of 16 September 2016, item 1488)
 Regulation of the Minister of Health of 10 August 2012 on the criteria and classification method of chemical substances and their mixtures (consolidated text: J. o L. 2015, item 208).
 Regulation of the Minister of Health of 20 April 2012 on labelling of hazardous substances and hazardous mixtures and certain mixtures (consolidated text: J. o L. 2015, item 450)
 Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
 Act of 14 December 2012 on waste (J. o L. 2013, item 322 as amended; consolidated text J. o L. 2020, item 797).
 according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Switzerland

Chemicals Ordinance (ChemO, SR 813.11) : Group 2

15.2. Chemical safety assessment

A chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes

Section	Changed item	Comments
3.1	Composition/information on ingredients	Removed n-hexane
8.1		

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor

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Indication of changes		
Section	Changed item	Comments
BLV	Biological limit value	
BOD	Biochemical oxygen demand (BOD)	
COD	Chemical oxygen demand (COD)	
DMEL	Derived Minimal Effect level	
DNEL	Derived-No Effect Level	
EC-No.	European Community number	
EC50	Median effective concentration	
EN	European Standard	
IARC	International Agency for Research on Cancer	
IATA	International Air Transport Association	
IMDG	International Maritime Dangerous Goods	
LC50	Median lethal concentration	
LD50	Median lethal dose	
LOAEL	Lowest Observed Adverse Effect Level	
NOAEC	No-Observed Adverse Effect Concentration	
NOAEL	No-Observed Adverse Effect Level	
NOEC	No-Observed Effect Concentration	
OECD	Organisation for Economic Co-operation and Development	
OEL	Occupational Exposure Limit	
PBT	Persistent Bioaccumulative Toxic	
PNEC	Predicted No-Effect Concentration	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail	
SDS	Safety Data Sheet	
STP	Sewage treatment plant	
ThOD	Theoretical oxygen demand (ThOD)	
TLM	Median Tolerance Limit	
VOC	Volatile Organic Compounds	
CAS-No.	Chemical Abstract Service number	
N.O.S.	Not Otherwise Specified	
vPvB	Very Persistent and Very Bioaccumulative	
ED	Endocrine disruptor	

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Training advice : As from 24 August 2023 adequate training is required before industrial or professional use. Personal monitoring.

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Full text of H- and EUH-statements:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 1A	Carcinogenicity, Category 1A
Carc. 1B	Carcinogenicity, Category 1B
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Muta. 1B	Germ cell mutagenicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 1	Specific target organ toxicity – Repeated exposure, Category 1
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis
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.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects.
H350	May cause cancer.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs (central nervous system) through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

The classification complies with : ATP 12

Safety Data Sheet (SDS), EU