SAFETY DATA SHEET

TEKNOS

ALPOCRYL KLARLACK 1495-95 - FARBLOS-INCOLORE-COLOURLESS

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

1.1 Product identifier

Product name : ALPOCRYL KLARLACK 1495-95 - FARBLOS-INCOLORE-COLOURLESS

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

Product use : Paint.

1.3 Details of the supplier of the safety data sheet

Teknos Group Oy, Takkatie 3, FI-00370 HELSINKI, FINLAND. Tel. +358 9 506 091.

e-mail address of person responsible for this SDS : Prod-safe@teknos.com

National contact

Teknos Group Oy, Takkatie 3, FI-00370 HELSINKI, FINLAND. Tel. +358 9 506 091.

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : In an emergency, call 112

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Flam. Liq. 3, H226
Skin Sens. 1, H317
STOT SE 3, H336
Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : H226 - Flammable liquid and vapour.
H317 - May cause an allergic skin reaction.
H336 - May cause drowsiness or dizziness.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : P280 - Wear protective gloves.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 - Avoid release to the environment.

Response : P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.

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

SECTION 2: Hazards identification

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients : Contains: n-Butyl acetate; EO bis(benztriazolyl)phenylpropionat; bis (1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

Supplemental label elements :

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles :

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
n-Butyl acetate	REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4 Index: 607-025-00-1	≥25 - ≤50	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	-	[1] [2]
Solvent naphtha (petroleum), light aromatic	REACH #: 01-2119455851-35 EC: 265-199-0 CAS: 64742-95-6 Index: 649-356-00-4	≤10	Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	-	[1]
Xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≤8	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 (oral, inhalation) Asp. Tox. 1, H304	ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 11 mg/l	[1] [2]
EO bis(benztriazolyl) phenylpropionat	REACH #: 01-0000015075-76 EC: 400-830-7 CAS: 104810-48-2 Index: 607-176-00-3	≤1.8	Skin Sens. 1A, H317 Aquatic Chronic 2, H411	-	[1]
Ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≤3	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) (oral, inhalation)	ATE [Inhalation (vapours)] = 11 mg/l	[1] [2]

SECTION 3: Composition/information on ingredients

			Asp. Tox. 1, H304		
Toluene	REACH #: 01-2119471310-51 EC: 203-625-9 CAS: 108-88-3 Index: 601-021-00-3	<1	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304	-	[1] [2]
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	REACH #: 01-2119491304-40 EC: 255-437-1 CAS: 41556-26-7	≤0.93	Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	REACH #: 01-2119491304-40 EC: 280-060-4 CAS: 82919-37-7	≤0.24	Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 **See Section 16 for the full text of the H statements declared above.**	M [Acute] = 1 M [Chronic] = 1	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

SECTION 4: First aid measures

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

6.4 Reference to other sections

: See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

SECTION 7: Handling and storage

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P5c	5000 tonnes	50000 tonnes

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
n-Butyl acetate	**Regulation on Limit Values - MAC (Austria, 4/2021) [Butylacetat alle Isomeren außer tert-Butylacet]** CEIL: 480 mg/m³. CEIL: 100 ppm. TWA 8 hours: 241 mg/m³. TWA 8 hours: 50 ppm.
Xylene	**Regulation on Limit Values - MAC (Austria, 4/2021) [Xylol (alle Isomeren, rein)]** PEAK 15 minutes: 442 mg/m³ 4 times per shift. TWA 8 hours: 50 ppm. PEAK 15 minutes: 100 ppm 4 times per shift. TWA 8 hours: 221 mg/m³.
Ethylbenzene	**Regulation on Limit Values - MAC (Austria, 4/2021)** Absorbed through skin. TWA 8 hours: 100 ppm. TWA 8 hours: 440 mg/m³. CEIL 5 minutes: 200 ppm 8 times per shift. CEIL 5 minutes: 880 mg/m³ 8 times per shift.
Toluene	**Regulation on Limit Values - MAC (Austria, 4/2021)** d. Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 190 mg/m³. PEAK 15 minutes: 100 ppm 4 times per shift. PEAK 15 minutes: 380 mg/m³ 4 times per shift.
n-Butyl acetate	**Limit values (Belgium, 12/2023) [butylacetaat]** STEL 15 minutes: 712 mg/m³. STEL 15 minutes: 150 ppm. TWA 8 hours: 238 mg/m³. TWA 8 hours: 50 ppm.
Xylene	**Limit values (Belgium, 12/2023) [Xyleen]** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 221 mg/m³. STEL 15 minutes: 100 ppm. STEL 15 minutes: 442 mg/m³.

Ethylbenzene	**Limit values (Belgium, 12/2023)** Absorbed through skin. TWA 8 hours: 20 ppm. TWA 8 hours: 87 mg/m³. STEL 15 minutes: 125 ppm. STEL 15 minutes: 551 mg/m³.
Toluene	**Limit values (Belgium, 12/2023)** Absorbed through skin. TWA 8 hours: 20 ppm. TWA 8 hours: 77 mg/m³. STEL 15 minutes: 100 ppm. STEL 15 minutes: 384 mg/m³.
n-Butyl acetate	**Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 4/2024)** Limit value 8 hours: 241 mg/m³. Limit value 15 minutes: 723 mg/m³. Limit value 15 minutes: 150 ppm. Limit value 8 hours: 50 ppm.
Xylene	**Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 4/2024) [Xylene]** Absorbed through skin. Limit value 8 hours: 221 mg/m³. Limit value 15 minutes: 442 mg/m³. Limit value 15 minutes: 100 ppm. Limit value 8 hours: 50 ppm.
Ethylbenzene	**Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 4/2024)** Absorbed through skin. Limit value 8 hours: 435 mg/m³. Limit value 15 minutes: 545 mg/m³.
Toluene	**Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 4/2024)** Absorbed through skin. Limit value 15 minutes: 384 mg/m³. Limit value 8 hours: 192 mg/m³. Limit value 15 minutes: 100 ppm. Limit value 8 hours: 50 ppm.
n-Butyl acetate	**Ordinance on the protection of workers from exposure to hazardous chemicals at work, exposure limit values (Annex I) (Croatia, 12/2023)** STELV 15 minutes: 723 mg/m³. STELV 15 minutes: 150 ppm. ELV 8 hours: 241 mg/m³. ELV 8 hours: 50 ppm.
Solvent naphtha (petroleum), light aromatic	**Ordinance on the protection of workers from exposure to hazardous chemicals at work, exposure limit values (Annex I) (Croatia)** ELV: 100 ppm. ELV: 400 mg/m³.
Xylene	**Ordinance on the protection of workers from exposure to hazardous chemicals at work, exposure limit values (Annex I) (Croatia, 12/2023) [ksilen]** Absorbed through skin. STELV 15 minutes: 442 mg/m³. STELV 15 minutes: 100 ppm. ELV 8 hours: 221 mg/m³. ELV 8 hours: 50 ppm.
Ethylbenzene	**Ordinance on the protection of workers from exposure to hazardous chemicals at work, exposure limit values (Annex I) (Croatia, 12/2023)** Absorbed through skin. STELV 15 minutes: 884 mg/m³. STELV 15 minutes: 200 ppm. ELV 8 hours: 442 mg/m³. ELV 8 hours: 100 ppm.
Toluene	**Ordinance on the protection of workers from exposure to**

	hazardous chemicals at work, exposure limit values (Annex I) (Croatia, 12/2023) Absorbed through skin. STELV 15 minutes: 384 mg/m³. STELV 15 minutes: 100 ppm. ELV 8 hours: 192 mg/m³. ELV 8 hours: 50 ppm.
n-Butyl acetate	**Department of labour inspection (Cyprus, 7/2021)** STEL 15 minutes: 150 ppm. STEL 15 minutes: 723 mg/m³. TWA 8 hours: 50 ppm. TWA 8 hours: 241 mg/m³.
Xylene	**Department of labour inspection (Cyprus, 7/2021) [Ξυλένιο, μικτά ισομερή, καθαρά]** Absorbed through skin. STEL 15 minutes: 100 ppm. STEL 15 minutes: 442 mg/m³. TWA 8 hours: 50 ppm. TWA 8 hours: 221 mg/m³.
Ethylbenzene	**Department of labour inspection (Cyprus, 7/2021)** Absorbed through skin. STEL 15 minutes: 884 mg/m³. TWA 8 hours: 100 ppm. TWA 8 hours: 442 mg/m³. STEL 15 minutes: 200 ppm.
Toluene	**Department of labour inspection (Cyprus, 7/2021)** Absorbed through skin. STEL 15 minutes: 100 ppm. STEL 15 minutes: 384 mg/m³. TWA 8 hours: 50 ppm. TWA 8 hours: 192 mg/m³.
n-Butyl acetate	**Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 12/2023)** TWA 8 hours: 241 mg/m³. STEL 15 minutes: 723 mg/m³. STEL 15 minutes: 150 ppm. TWA 8 hours: 50 ppm.
Solvent naphtha (petroleum), light aromatic	**Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 12/2023) [nafta solventní]** TWA 8 hours: 200 mg/m³. STEL 15 minutes: 1000 mg/m³.
Xylene	**Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 12/2023) [xylen]** Absorbed through skin. TWA 8 hours: 200 mg/m³. TWA 8 hours: 45.33 ppm. STEL 15 minutes: 400 mg/m³. STEL 15 minutes: 90.66 ppm.
Ethylbenzene	**Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 12/2023)** Absorbed through skin. TWA 8 hours: 200 mg/m³. TWA 8 hours: 45.33 ppm. STEL 15 minutes: 500 mg/m³. STEL 15 minutes: 113.32 ppm.
Toluene	**Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 12/2023)** Absorbed through skin. TWA 8 hours: 192 mg/m³. TWA 8 hours: 50 ppm. STEL 15 minutes: 384 mg/m³. STEL 15 minutes: 100 ppm.

n-Butyl acetate	**Working Environment Authority (Denmark, 3/2024) [butylacetat, alle isomerer]** TWA 8 hours: 50 ppm. TWA 8 hours: 241 mg/m³. STEL 15 minutes: 723 mg/m³. STEL 15 minutes: 150 ppm.
Xylene	**Working Environment Authority (Denmark, 3/2024) [xylen, alle isomere]** Absorbed through skin. TWA 8 hours: 25 ppm. TWA 8 hours: 109 mg/m³. STEL 15 minutes: 442 mg/m³. STEL 15 minutes: 100 ppm.
Ethylbenzene	**Working Environment Authority (Denmark, 3/2024)** K. Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 217 mg/m³. STEL 15 minutes: 434 mg/m³. STEL 15 minutes: 100 ppm.
Toluene	**Working Environment Authority (Denmark, 3/2024)** Absorbed through skin. TWA 8 hours: 25 ppm. TWA 8 hours: 94 mg/m³. STEL 15 minutes: 384 mg/m³. STEL 15 minutes: 100 ppm.
n-Butyl acetate	**Occupational exposure limits, Regulation No. 293 (Estonia, 4/2024)** STEL 15 minutes: 150 ppm. STEL 15 minutes: 723 mg/m³. TWA 8 hours: 50 ppm. TWA 8 hours: 241 mg/m³.
Xylene	**Occupational exposure limits, Regulation No. 293 (Estonia, 4/2024) [ksüleen]** Absorbed through skin. TWA 8 hours: 50 ppm. STEL 15 minutes: 100 ppm. STEL 15 minutes: 450 mg/m³. TWA 8 hours: 200 mg/m³.
Ethylbenzene	**Occupational exposure limits, Regulation No. 293 (Estonia, 4/2024)** Absorbed through skin , Sensitiser. TWA 8 hours: 442 mg/m³. TWA 8 hours: 100 ppm. STEL 15 minutes: 884 mg/m³. STEL 15 minutes: 200 ppm.
Toluene	**Occupational exposure limits, Regulation No. 293 (Estonia, 4/2024)** Absorbed through skin. TWA 8 hours: 192 mg/m³. TWA 8 hours: 50 ppm. STEL 15 minutes: 384 mg/m³. STEL 15 minutes: 100 ppm.
n-Butyl acetate	**EU OEL (Europe, 1/2022)** STEL 15 minutes: 150 ppm. STEL 15 minutes: 723 mg/m³. TWA 8 hours: 241 mg/m³. TWA 8 hours: 50 ppm.
Xylene	**EU OEL (Europe, 1/2022) [xylene, mixed isomers]** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 221 mg/m³. STEL 15 minutes: 100 ppm. STEL 15 minutes: 442 mg/m³.
Ethylbenzene	**EU OEL (Europe, 1/2022)** Absorbed through skin. TWA 8 hours: 100 ppm. TWA 8 hours: 442 mg/m³. STEL 15 minutes: 200 ppm.

	STEL 15 minutes: 884 mg/m³.
Toluene	**EU OEL (Europe, 1/2022)** Absorbed through skin. TWA 8 hours: 192 mg/m³. TWA 8 hours: 50 ppm. STEL 15 minutes: 384 mg/m³. STEL 15 minutes: 100 ppm.
n-Butyl acetate	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021)** TWA 8 hours: 150 ppm. TWA 8 hours: 720 mg/m³. STEL 15 minutes: 200 ppm. STEL 15 minutes: 960 mg/m³.
Solvent naphtha (petroleum), light aromatic	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2020)** TWA 8 hours: 100 mg/m³.
Xylene	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021) [Ksyleeni]** Absorbed through skin. STEL 15 minutes: 440 mg/m³. TWA 8 hours: 220 mg/m³. TWA 8 hours: 50 ppm. STEL 15 minutes: 100 ppm.
Ethylbenzene	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021)** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 220 mg/m³. STEL 15 minutes: 200 ppm. STEL 15 minutes: 880 mg/m³.
Toluene	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021)** Absorbed through skin , Ototoxicant. TWA 8 hours: 25 ppm. TWA 8 hours: 81 mg/m³. STEL 15 minutes: 100 ppm. STEL 15 minutes: 380 mg/m³.
n-Butyl acetate	**Ministry of Labor (France, 6/2024)** TWA 8 hours: 50 ppm. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) TWA 8 hours: 241 mg/m³. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) STEL 15 minutes: 150 ppm. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) STEL 15 minutes: 723 mg/m³. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)
Solvent naphtha (petroleum), light aromatic	**Ministry of Labor (France, 6/2024) [hydrocarbures en C6-C12]** TWA 8 hours: 1000 mg/m³. Form: Vapour. Notes: Permissible limit values (circulars) STEL 15 minutes: 1500 mg/m³. Form: Vapour. Notes: Permissible limit values (circulars)
Xylene	**Ministry of Labor (France, 6/2024) [xylènes, isomères mixtes, purs]** Absorbed through skin. STEL 15 minutes: 442 mg/m³. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) STEL 15 minutes: 100 ppm. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) TWA 8 hours: 221 mg/m³. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) TWA 8 hours: 50 ppm. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)
Ethylbenzene	**Ministry of Labor (France, 6/2024)** Absorbed through skin. TWA 8 hours: 20 ppm. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) TWA 8 hours: 88.4 mg/m³. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)

	STEL 15 minutes: 442 mg/m³. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) STEL 15 minutes: 100 ppm. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)
Toluene	**Ministry of Labor (France, 6/2024)** Repr 2. Absorbed through skin , Ototoxicant. TWA 8 hours: 20 ppm. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) TWA 8 hours: 76.8 mg/m³. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) STEL 15 minutes: 100 ppm. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) STEL 15 minutes: 384 mg/m³. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)
n-Butyl acetate	**TRGS 900 OEL (Germany, 6/2024)** TWA 8 hours: 300 mg/m³. TWA 8 hours: 62 ppm. PEAK 15 minutes: 600 mg/m³. PEAK 15 minutes: 124 ppm. **DFG MAC-values list (Germany, 7/2023)** Develop C. TWA 8 hours: 100 ppm. PEAK 15 minutes: 200 ppm 4 times per shift [Interval: 1 hour]. TWA 8 hours: 480 mg/m³. PEAK 15 minutes: 960 mg/m³ 4 times per shift [Interval: 1 hour].
Xylene	**TRGS 900 OEL (Germany, 6/2024) [Xylol]** Absorbed through skin. TWA 8 hours: 220 mg/m³. PEAK 15 minutes: 440 mg/m³. TWA 8 hours: 50 ppm. PEAK 15 minutes: 100 ppm. **DFG MAC-values list (Germany, 7/2023) [Xylene]** Develop D. Absorbed through skin. TWA 8 hours: 50 ppm. PEAK 15 minutes: 100 ppm 4 times per shift [Interval: 1 hour]. TWA 8 hours: 220 mg/m³. PEAK 15 minutes: 440 mg/m³ 4 times per shift [Interval: 1 hour].
Ethylbenzene	**TRGS 900 OEL (Germany, 6/2024)** Absorbed through skin. TWA 8 hours: 88 mg/m³. PEAK 15 minutes: 176 mg/m³. TWA 8 hours: 20 ppm. PEAK 15 minutes: 40 ppm. **DFG MAC-values list (Germany, 7/2023)** Carc 4, Develop C. Absorbed through skin. PEAK 15 minutes: 40 ppm 4 times per shift [Interval: 1 hour]. PEAK 15 minutes: 176 mg/m³ 4 times per shift [Interval: 1 hour]. TWA 8 hours: 88 mg/m³. TWA 8 hours: 20 ppm.
Toluene	**TRGS 900 OEL (Germany, 6/2024)** Absorbed through skin. TWA 8 hours: 190 mg/m³. PEAK 15 minutes: 380 mg/m³. TWA 8 hours: 50 ppm. PEAK 15 minutes: 100 ppm. **DFG MAC-values list (Germany, 7/2023)** Develop C. Absorbed through skin. TWA 8 hours: 50 ppm. PEAK 15 minutes: 100 ppm 4 times per shift [Interval: 1 hour]. TWA 8 hours: 190 mg/m³. PEAK 15 minutes: 380 mg/m³ 4 times per shift [Interval: 1 hour].

n-Butyl acetate	**Presidential Decree 307/1986: Occupational exposure limit values (Greece, 9/2021)** TWA 8 hours: 50 ppm. TWA 8 hours: 241 mg/m³. STEL 15 minutes: 150 ppm. STEL 15 minutes: 723 mg/m³.
Xylene	**Presidential Decree 307/1986: Occupational exposure limit values (Greece, 9/2021) [ξυλόλια (όλα τα ισομερή)]** Absorbed through skin. TWA 8 hours: 100 ppm. TWA 8 hours: 435 mg/m³. STEL 15 minutes: 150 ppm. STEL 15 minutes: 650 mg/m³.
Ethylbenzene	**Presidential Decree 307/1986: Occupational exposure limit values (Greece, 9/2021)** TWA 8 hours: 100 ppm. TWA 8 hours: 435 mg/m³. STEL 15 minutes: 125 ppm. STEL 15 minutes: 545 mg/m³.
Toluene	**Presidential Decree 307/1986: Occupational exposure limit values (Greece, 9/2021)** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 192 mg/m³. STEL 15 minutes: 100 ppm. STEL 15 minutes: 384 mg/m³.
n-Butyl acetate	**5/2020. (II. 6.) ITM Decree (Hungary, 12/2023)** Sensitiser. TWA 8 hours: 241 mg/m³. PEAK 15 minutes: 723 mg/m³. PEAK 15 minutes: 150 ppm. TWA 8 hours: 50 ppm.
Xylene	**5/2020. (II. 6.) ITM Decree (Hungary, 12/2023) [xilol izomerek keveréke]** Absorbed through skin. TWA 8 hours: 221 mg/m³. PEAK 15 minutes: 442 mg/m³. PEAK 15 minutes: 100 ppm. TWA 8 hours: 50 ppm.
Ethylbenzene	**5/2020. (II. 6.) ITM Decree (Hungary, 12/2023)** Absorbed through skin. TWA 8 hours: 442 mg/m³. PEAK 15 minutes: 884 mg/m³. PEAK 15 minutes: 200 ppm. TWA 8 hours: 100 ppm.
Toluene	**5/2020. (II. 6.) ITM Decree (Hungary, 12/2023)** Absorbed through skin. TWA 8 hours: 192 mg/m³. PEAK 15 minutes: 384 mg/m³. PEAK 15 minutes: 100 ppm. TWA 8 hours: 50 ppm.
n-Butyl acetate	**Ministry of Welfare, List of Exposure Limits (Iceland, 11/2023) [bútýlasetat, allir ísómerar]** TWA 8 hours: 241 mg/m³. TWA 8 hours: 50 ppm. STEL 15 minutes: 723 mg/m³. STEL 15 minutes: 150 ppm.
Xylene	**Ministry of Welfare, List of Exposure Limits (Iceland, 11/2023) [Xýlen, allir ísómerar]** Absorbed through skin. STEL 15 minutes: 442 mg/m³. STEL 15 minutes: 100 ppm. TWA 8 hours: 109 mg/m³. TWA 8 hours: 25 ppm.
Ethylbenzene	**Ministry of Welfare, List of Exposure Limits (Iceland, 11/2023)** Absorbed through skin.

	STEL 15 minutes: 884 mg/m³. STEL 15 minutes: 200 ppm. TWA 8 hours: 200 mg/m³. TWA 8 hours: 50 ppm.
Toluene	**Ministry of Welfare, List of Exposure Limits (Iceland, 11/2023)** Absorbed through skin. STEL 15 minutes: 188 mg/m³. STEL 15 minutes: 50 ppm. TWA 8 hours: 94 mg/m³. TWA 8 hours: 25 ppm.
n-Butyl acetate	**NAOSH (Ireland, 4/2024)** Notes: EU derived Occupational Exposure Limit Values OELV 8 hours: 50 ppm. OELV 8 hours: 241 mg/m³. OELV 15 minutes: 150 ppm. OELV 15 minutes: 723 mg/m³.
Xylene	**NAOSH (Ireland, 4/2024) [xylene]** Absorbed through skin. Notes: EU derived Occupational Exposure Limit Values OELV 8 hours: 50 ppm. OELV 8 hours: 221 mg/m³. OELV 15 minutes: 100 ppm. OELV 15 minutes: 442 mg/m³.
Ethylbenzene	**NAOSH (Ireland, 4/2024)** Absorbed through skin. Notes: EU derived Occupational Exposure Limit Values OELV 8 hours: 100 ppm. OELV 8 hours: 442 mg/m³. OELV 15 minutes: 200 ppm. OELV 15 minutes: 884 mg/m³.
Toluene	**NAOSH (Ireland, 4/2024)** Absorbed through skin. Notes: EU derived Occupational Exposure Limit Values OELV 8 hours: 50 ppm. OELV 8 hours: 192 mg/m³. OELV 15 minutes: 100 ppm. OELV 15 minutes: 384 mg/m³.
n-Butyl acetate	**EU OEL (Europe, 1/2022)** STEL 15 minutes: 150 ppm. STEL 15 minutes: 723 mg/m³. TWA 8 hours: 241 mg/m³. TWA 8 hours: 50 ppm.
Xylene	**Legislative Decree No. 81/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 6/2020) [Xilene, isomeri misti, puro]** Absorbed through skin. Limit value 8 hours: 50 ppm. Limit value 8 hours: 221 mg/m³. Short Term 15 minutes: 100 ppm. Short Term 15 minutes: 442 mg/m³.
Ethylbenzene	**Legislative Decree No. 81/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 6/2020)** Absorbed through skin. Limit value 8 hours: 100 ppm. Limit value 8 hours: 442 mg/m³. Short Term 15 minutes: 200 ppm. Short Term 15 minutes: 884 mg/m³.
Toluene	**Legislative Decree No. 81/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 6/2020)** Absorbed through skin. Limit value 8 hours: 50 ppm. Limit value 8 hours: 192 mg/m³.

n-Butyl acetate	**Ministers Cabinet Regulations Nr.325 - AER (Latvia, 3/2024)** TWA 8 hours: 241 mg/m³. STEL 15 minutes: 150 ppm. STEL 15 minutes: 723 mg/m³. TWA 8 hours: 50 ppm.
Xylene	**Ministers Cabinet Regulations Nr.325 - AER (Latvia, 3/2024)** **[Ksilols]** Absorbed through skin. TWA 8 hours: 221 mg/m³. TWA 8 hours: 50 ppm. STEL 15 minutes: 100 ppm. STEL 15 minutes: 442 mg/m³.
Ethylbenzene	**Ministers Cabinet Regulations Nr.325 - AER (Latvia, 3/2024)** Absorbed through skin. TWA 8 hours: 442 mg/m³. TWA 8 hours: 100 ppm. STEL 15 minutes: 200 ppm. STEL 15 minutes: 884 mg/m³.
Toluene	**Ministers Cabinet Regulations Nr.325 - AER (Latvia, 3/2024)** Absorbed through skin. TWA 8 hours: 50 mg/m³. STEL 15 minutes: 150 mg/m³. TWA 8 hours: 14 ppm. STEL 15 minutes: 40 ppm.
n-Butyl acetate	**Lithuanian Hygiene Standard HN 23 (Lithuania, 1/2024)** TWA 8 hours: 241 mg/m³. TWA 8 hours: 50 ppm. STEL 15 minutes: 723 mg/m³. STEL 15 minutes: 150 ppm.
Xylene	**Lithuanian Hygiene Standard HN 23 (Lithuania, 1/2024)** **[ksilenas, mišrūs izomerai, grynas]** Absorbed through skin. STEL 15 minutes: 442 mg/m³. TWA 8 hours: 50 ppm. STEL 15 minutes: 100 ppm. TWA 8 hours: 221 mg/m³.
Ethylbenzene	**Lithuanian Hygiene Standard HN 23 (Lithuania, 1/2024)** Absorbed through skin. TWA 8 hours: 442 mg/m³. TWA 8 hours: 100 ppm. STEL 15 minutes: 884 mg/m³. STEL 15 minutes: 200 ppm.
Toluene	**Lithuanian Hygiene Standard HN 23 (Lithuania, 1/2024)** Repr. Absorbed through skin. TWA 8 hours: 192 mg/m³. TWA 8 hours: 50 ppm. STEL 15 minutes: 384 mg/m³. STEL 15 minutes: 100 ppm.
n-Butyl acetate	**Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021)** STEL 15 minutes: 150 ppm. STEL 15 minutes: 723 mg/m³. TWA 8 hours: 50 ppm. TWA 8 hours: 241 mg/m³.
Xylene	**Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021) [xylène Isomères mixtes, pures]** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 221 mg/m³. STEL 15 minutes: 100 ppm. STEL 15 minutes: 442 mg/m³.
Ethylbenzene	**Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021)** Absorbed through skin. TWA 8 hours: 100 ppm.

	TWA 8 hours: 442 mg/m³. STEL 15 minutes: 200 ppm. STEL 15 minutes: 884 mg/m³.
Toluene	**Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021)** Absorbed through skin. STEL 15 minutes: 100 ppm. STEL 15 minutes: 384 mg/m³. TWA 8 hours: 50 ppm. TWA 8 hours: 192 mg/m³.
n-Butyl acetate	**EU OEL (Europe, 1/2022)** STEL 15 minutes: 150 ppm. STEL 15 minutes: 723 mg/m³. TWA 8 hours: 241 mg/m³. TWA 8 hours: 50 ppm.
Xylene	**EU OEL (Europe, 1/2022) [xylene, mixed isomers]** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 221 mg/m³. STEL 15 minutes: 100 ppm. STEL 15 minutes: 442 mg/m³.
Ethylbenzene	**EU OEL (Europe, 1/2022)** Absorbed through skin. TWA 8 hours: 100 ppm. TWA 8 hours: 442 mg/m³. STEL 15 minutes: 200 ppm. STEL 15 minutes: 884 mg/m³.
Toluene	**EU OEL (Europe, 1/2022)** Absorbed through skin. TWA 8 hours: 192 mg/m³. TWA 8 hours: 50 ppm. STEL 15 minutes: 384 mg/m³. STEL 15 minutes: 100 ppm.
n-Butyl acetate	**Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 5/2024)** TWA 8 hours: 241 mg/m³. STEL 15 minutes: 723 mg/m³. STEL 15 minutes: 150 ppm. TWA 8 hours: 50 ppm.
Xylene	**Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 5/2024) [xyleen, o-, m-, p-isomeren]** Absorbed through skin. TWA 8 hours: 210 mg/m³. STEL 15 minutes: 442 mg/m³. STEL 15 minutes: 100 ppm. TWA 8 hours: 47.5 ppm.
Ethylbenzene	**Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 5/2024)** Absorbed through skin. TWA 8 hours: 215 mg/m³. STEL 15 minutes: 430 mg/m³. STEL 15 minutes: 97.3 ppm. TWA 8 hours: 48.6 ppm.
Toluene	**Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 5/2024)** TWA 8 hours: 150 mg/m³. STEL 15 minutes: 384 mg/m³. STEL 15 minutes: 100 ppm. TWA 8 hours: 39 ppm.
n-Butyl acetate	**FOR-2011-12-06-1358 (Norway, 12/2022)** STEL 15 minutes: 723 mg/m³. STEL 15 minutes: 150 ppm. TWA 8 hours: 241 mg/m³. TWA 8 hours: 50 ppm.
Xylene	**FOR-2011-12-06-1358 (Norway, 12/2022) [xylen]** Absorbed through skin.

SECTION 8: Exposure controls/personal protection

	TWA 8 hours: 25 ppm. TWA 8 hours: 108 mg/m³.
Ethylbenzene	**FOR-2011-12-06-1358 (Norway, 12/2022)** Carc. Absorbed through skin. TWA 8 hours: 5 ppm. TWA 8 hours: 20 mg/m³.
Toluene	**FOR-2011-12-06-1358 (Norway, 12/2022)** Absorbed through skin. TWA 8 hours: 25 ppm. TWA 8 hours: 94 mg/m³.
n-Butyl acetate	**Regulation of the Minister of Family, Labor and Social Policy of June 12, 2018 on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286) (Poland, 8/2023)** TWA 8 hours: 240 mg/m³. STEL 15 minutes: 720 mg/m³.
Xylene	**Regulation of the Minister of Family, Labor and Social Policy of June 12, 2018 on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286) (Poland, 8/2023) [xylene – mixed isomers (1,2-, 1,3-, 1,4-)]** Absorbed through skin. TWA 8 hours: 100 mg/m³. STEL 15 minutes: 200 mg/m³.
Ethylbenzene	**Regulation of the Minister of Family, Labor and Social Policy of June 12, 2018 on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286) (Poland, 8/2023)** Absorbed through skin. TWA 8 hours: 200 mg/m³. STEL 15 minutes: 400 mg/m³.
Toluene	**Regulation of the Minister of Family, Labor and Social Policy of June 12, 2018 on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286) (Poland, 8/2023)** Absorbed through skin. TWA 8 hours: 100 mg/m³. STEL 15 minutes: 200 mg/m³.
n-Butyl acetate	**Portuguese Institute of Quality (Portugal, 11/2014)** TWA 8 hours: 150 ppm. STEL 15 minutes: 200 ppm.
Xylene	**Portuguese Institute of Quality (Portugal, 11/2014) [xileno (isómeros o, m & p)]** A4. TWA 8 hours: 100 ppm. STEL 15 minutes: 150 ppm.
Ethylbenzene	**Portuguese Institute of Quality (Portugal, 11/2014)** A3. TWA 8 hours: 20 ppm.
Toluene	**Portuguese Institute of Quality (Portugal, 11/2014)** A4. TWA 8 hours: 20 ppm.
n-Butyl acetate	**HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2024)** VLA 8 hours: 241 mg/m³. VLA 8 hours: 50 ppm. Short term 15 minutes: 723 mg/m³. Short term 15 minutes: 150 ppm.
Solvent naphtha (petroleum), light aromatic	**HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2024) [Solvent nafta]** Absorbed through skin. VLA 8 hours: 100 mg/m³. Short term 15 minutes: 200 mg/m³.
Xylene	**HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2024) [xilen]** Absorbed through skin.

	VLA 8 hours: 221 mg/m³. VLA 8 hours: 50 ppm. Short term 15 minutes: 442 mg/m³. Short term 15 minutes: 100 ppm.
Ethylbenzene	**HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2024)** Absorbed through skin. VLA 8 hours: 442 mg/m³. VLA 8 hours: 100 ppm. Short term 15 minutes: 884 mg/m³. Short term 15 minutes: 200 ppm.
Toluene	**HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2024)** R2. Absorbed through skin. VLA 8 hours: 192 mg/m³. VLA 8 hours: 50 ppm. Short term 15 minutes: 384 mg/m³. Short term 15 minutes: 100 ppm.
n-Butyl acetate	**Government regulation SR c. 355/2006 (Slovakia, 7/2024) [butylacetáty]** Inhalation sensitiser. TWA 8 hours: 241 mg/m³ (Butyl acetates). TWA 8 hours: 50 ppm (Butyl acetates). STEL 15 minutes: 723 mg/m³ (Butyl acetates). STEL 15 minutes: 150 ppm (Butyl acetates).
Xylene	**Government regulation SR c. 355/2006 (Slovakia, 7/2024) [xylén, zmiešané izoméry]** Absorbed through skin , Inhalation sensitiser. TWA 8 hours: 221 mg/m³ (xylene, mixed isomers). TWA 8 hours: 50 ppm (xylene, mixed isomers). STEL 15 minutes: 442 mg/m³ (xylene, mixed isomers). STEL 15 minutes: 100 ppm (xylene, mixed isomers).
Ethylbenzene	**Government regulation SR c. 355/2006 (Slovakia, 7/2024)** Absorbed through skin , Inhalation sensitiser. TWA 8 hours: 442 mg/m³. TWA 8 hours: 100 ppm. STEL 15 minutes: 884 mg/m³. STEL 15 minutes: 200 ppm.
Toluene	**Government regulation SR c. 355/2006 (Slovakia, 7/2024)** Absorbed through skin , Inhalation sensitiser. TWA 8 hours: 192 mg/m³. TWA 8 hours: 50 ppm. STEL 15 minutes: 384 mg/m³. STEL 15 minutes: 100 ppm.
n-Butyl acetate	**Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2024)** TWA 8 hours: 241 mg/m³. TWA 8 hours: 50 ppm. KTV 15 minutes: 723 mg/m³ 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes]. KTV 15 minutes: 150 ppm 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes].
Xylene	**Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2024) [ksilen]** Absorbed through skin. TWA 8 hours: 221 mg/m³. TWA 8 hours: 50 ppm. KTV 15 minutes: 442 mg/m³ 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes]. KTV 15 minutes: 100 ppm 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes].
Ethylbenzene	**Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2024)** Absorbed through skin. TWA 8 hours: 442 mg/m³. TWA 8 hours: 100 ppm.

	KTV 15 minutes: 884 mg/m³ 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes]. KTV 15 minutes: 200 ppm 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes].
Toluene	**Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2024)** Repr Dev 2. Absorbed through skin. TWA 8 hours: 192 mg/m³. TWA 8 hours: 50 ppm. KTV 15 minutes: 384 mg/m³ 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes]. KTV 15 minutes: 100 ppm 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes].
n-Butyl acetate	**National institute of occupational safety and health (Spain, 1/2024)** TWA 8 hours: 50 ppm. TWA 8 hours: 241 mg/m³. STEL 15 minutes: 150 ppm. STEL 15 minutes: 723 mg/m³.
Xylene	**National institute of occupational safety and health (Spain, 1/2024) [xileno, mezcla isómeros]** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 221 mg/m³. STEL 15 minutes: 100 ppm. STEL 15 minutes: 442 mg/m³.
Ethylbenzene	**National institute of occupational safety and health (Spain, 1/2024)** Absorbed through skin. TWA 8 hours: 100 ppm. TWA 8 hours: 441 mg/m³. STEL 15 minutes: 200 ppm. STEL 15 minutes: 884 mg/m³.
Toluene	**National institute of occupational safety and health (Spain, 1/2024)** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 192 mg/m³. STEL 15 minutes: 100 ppm. STEL 15 minutes: 384 mg/m³.
n-Butyl acetate	**Work environment authority Regulation 2018:1 (Sweden, 11/2022) [butyl acetate]** TWA 8 hours: 50 ppm. TWA 8 hours: 241 mg/m³. STEL 15 minutes: 150 ppm. STEL 15 minutes: 723 mg/m³.
Xylene	**Work environment authority Regulation 2018:1 (Sweden, 11/2022) [xylene]** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 221 mg/m³. STEL 15 minutes: 100 ppm. STEL 15 minutes: 442 mg/m³.
Ethylbenzene	**Work environment authority Regulation 2018:1 (Sweden, 11/2022)** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 220 mg/m³. STEL 15 minutes: 200 ppm. STEL 15 minutes: 884 mg/m³.
Toluene	**Work environment authority Regulation 2018:1 (Sweden, 11/2022)** Absorbed through skin , Ototoxicant. TWA 8 hours: 50 ppm. TWA 8 hours: 192 mg/m³. STEL 15 minutes: 100 ppm. STEL 15 minutes: 384 mg/m³.

n-Butyl acetate	**SUVA (Switzerland, 1/2024)** TWA 8 hours: 50 ppm. TWA 8 hours: 240 mg/m³. STEL 15 minutes: 150 ppm. STEL 15 minutes: 720 mg/m³.
Xylene	**SUVA (Switzerland, 1/2024) [Xylol]** Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 220 mg/m³. STEL 15 minutes: 100 ppm. STEL 15 minutes: 440 mg/m³.
Ethylbenzene	**SUVA (Switzerland, 1/2024)** Absorbed through skin , Ototoxicant. TWA 8 hours: 50 ppm. TWA 8 hours: 220 mg/m³. STEL 15 minutes: 50 ppm. STEL 15 minutes: 220 mg/m³.
Toluene	**SUVA (Switzerland, 1/2024)** Develop 2. Absorbed through skin , Ototoxicant. TWA 8 hours: 50 ppm. TWA 8 hours: 190 mg/m³. STEL 15 minutes: 200 ppm. STEL 15 minutes: 760 mg/m³.
n-Butyl acetate	**EH40/2005 WELs (United Kingdom (UK), 1/2020)** STEL 15 minutes: 966 mg/m³. STEL 15 minutes: 200 ppm. TWA 8 hours: 724 mg/m³. TWA 8 hours: 150 ppm.
Xylene	**EH40/2005 WELs (United Kingdom (UK), 1/2020) [xylene, o-,m-, p- or mixed isomers]** Absorbed through skin. STEL 15 minutes: 441 mg/m³. TWA 8 hours: 50 ppm. TWA 8 hours: 220 mg/m³. STEL 15 minutes: 100 ppm.
Ethylbenzene	**EH40/2005 WELs (United Kingdom (UK), 1/2020)** Absorbed through skin. STEL 15 minutes: 552 mg/m³. STEL 15 minutes: 125 ppm. TWA 8 hours: 100 ppm. TWA 8 hours: 441 mg/m³.
Toluene	**EH40/2005 WELs (United Kingdom (UK), 1/2020)** Absorbed through skin. STEL 15 minutes: 384 mg/m³. TWA 8 hours: 191 mg/m³. TWA 8 hours: 50 ppm. STEL 15 minutes: 100 ppm.

Biological exposure indices

Product/ingredient name	Exposure indices
Xylene	**VGU BEI (Austria, 9/2020) [xylenes]** BEI Fitness: 1000 µg/l, xylene [in blood]. Sampling time: one year. BEI Fitness: 1.5 g/l, methylhippuricacid [in urine]. Sampling time: one year.
Toluene	**VGU BEI (Austria, 9/2020)** BEI Fitness: 250 µg/l, toluene [in blood]. Sampling time: one year. BEI Fitness: 0.8 mg/l, o-cresol [in urine]. Sampling time: one year. BEI Fitness: 130000 /µl, platelets (non-pathological differential blood count) [in blood]. Sampling time: one year. BEI Fitness: 150000 /µl, platelets [in blood]. Sampling time: one year. BEI Fitness: 3700 to 13000 /µl, leukocytes (non-pathological differential blood count) [in blood]. Sampling time: one year. BEI Fitness: 4000 to 13000 /µl, leukocytes [in blood]. Sampling time: one year.

	BEI Fitness - men: 3.8 million/µl, erythrocytes [in blood]. Sampling time: one year. BEI Fitness - women: 3.2 million/µl, erythrocytes [in blood]. Sampling time: one year. BEI Fitness - men: 12 g/dl, hemoglobin [in blood]. Sampling time: one year. BEI Fitness - women: 10 g/dl, hemoglobin [in blood]. Sampling time: one year.
No exposure indices known.	
Ethylbenzene	**Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 4/2024)** Notes: significant skin resorption possible BLV: 2000 mg/g creatinine, mandelic acid and phenylglyoxylic acid – in total [in urine]. Sampling time: at the end of the exposure or at the end of the work shift.
Toluene	**Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 4/2024)** BLV: 1.6 mmol/mmol creatinine, hippuric acid [in urine]. Sampling time: at the end of the exposure or at the end of the work shift.
Xylene	**Ordinance on the protection of workers from exposure to hazardous chemicals at work, biological limit values (Annex IV) (Croatia, 12/2023) [xylene]** BEI: 1.5 mg/l, xylene [in blood]. Sampling time: at the end of the work shift. BEI: 14.13 µmol/l, xylene [in blood]. Sampling time: at the end of the work shift. BEI: 0.88 mol/mol creatinine, methylhippuric acid [in urine]. Sampling time: at the end of the work shift. BEI: 1.5 g/g creatinine, methylhippuric acid [in urine]. Sampling time: at the end of the work shift.
Ethylbenzene	**Ordinance on the protection of workers from exposure to hazardous chemicals at work, biological limit values (Annex IV) (Croatia, 12/2023)** BEI: 1.5 mg/l, ethylbenzene [in blood]. Sampling time: during exposure. BEI: 14.1 µmol/l, ethylbenzene [in blood]. Sampling time: during exposure. BEI: 1.12 mol/mol creatinine, almond acid [in urine]. Sampling time: at the end of the work shift and at the end of the working week. BEI: 1.5 g/g creatinine, almond acid [in urine]. Sampling time: at the end of the work shift and at the end of the working week.
Toluene	**Ordinance on the protection of workers from exposure to hazardous chemicals at work, biological limit values (Annex IV) (Croatia, 12/2023)** BEI: 20 ppm, toluene [in end exhaled air]. Sampling time: during exposure. BEI: 0.83 µmol/l, toluene [in end exhaled air]. Sampling time: during exposure. BEI: 1 mg/l, toluene [in blood]. Sampling time: at the end of the work shift. BEI: 10.85 µmol/l, toluene [in blood]. Sampling time: at the end of the work shift. BEI: 1.05 mmol/mol creatinine, o-cresol [in urine]. Sampling time: at the end of the work shift. BEI: 1 mg/g creatinine, o-cresol [in urine]. Sampling time: at the end of the work shift. BEI: 1.58 mol/mol creatinine, hippuric acid [in urine]. Sampling time: at the end of the work shift.

	BEI: 2.5 g/g creatinine, hippuric acid [in urine]. Sampling time: at the end of the work shift.
No exposure indices known.	
Xylene	**Government regulation of Czech Republic Limit Values of Biological Exposure Tests (Czech Republic, 9/2015) [Xylene]** Biological limit values: 820 µmol/mmol creatinine, methylhippuric acid [in urine]. Sampling time: end of the shift. Biological limit values: 1400 mg/g creatinine, methylhippuric acid [in urine]. Sampling time: end of the shift.
Ethylbenzene	**Government regulation of Czech Republic Limit Values of Biological Exposure Tests (Czech Republic, 9/2015)** Biological limit values: 1100 µmol/mmol creatinine, almond acid [in urine]. Sampling time: end of the shift. Biological limit values: 1500 mg/g creatinine, almond acid [in urine]. Sampling time: end of the shift.
Toluene	**Government regulation of Czech Republic Limit Values of Biological Exposure Tests (Czech Republic, 9/2015)** Biological limit values: 1000 µmol/mmol creatinine, hippuric acid [in urine]. Sampling time: end of the shift. Biological limit values: 1600 mg/g, hippuric acid [in urine]. Sampling time: end of the shift. Biological limit values: 1.6 µmol/mmol creatinine, o-kresol (after hydrolysis) [in urine]. Sampling time: end of the shift. Biological limit values: 1.5 mg/g creatinine, o-kresol (after hydrolysis) [in urine]. Sampling time: end of the shift.
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
Xylene	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 9/2020) [Xylene]** BEI: 5 mmol/l, methylhippuricacid [in urine]. Sampling time: at the end of the work shift.
Ethylbenzene	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 9/2020)** BEI: 5.2 mmol/l, mandelic acid [in urine]. Sampling time: after work shift at the end of the working week or exposure period.
Toluene	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 9/2020)** BEI: 500 nmol/l, toluene [in blood]. Sampling time: the morning after the working day.
Toluene	**Biological limit values (BLV) - Labour Code / ANSES (France, 4/2023)** BLV: 30 µg/l, toluene [in urine]. Sampling time: at the end of the shift. BLV: 20 µg/l, toluene [in blood]. Sampling time: at the beginning of the shift and at the end of the week. BLV: 300 µg/g Cr, ortho-cresol [in urine]. Sampling time: end of shift and weekend.
Xylene	**DFG BEI-values list (Germany, 7/2023) [Xylene (all isomers)]** Notes: danger from percutaneous absorption (see p. 211 and p. 228). BEI: 2000 mg/l, methylhippuric acid (toluric acid) (all isomers) [in urine]. Sampling time: end of exposure or end of shift. **TRGS 903 - BEI Values (Germany, 2/2024) [Xylene (all isomers)]** BEI: 2000 mg/l, methylhippuric acid [in urine]. Sampling time: end of exposure or end of shift.

Ethylbenzene	**DFG BEI-values list (Germany, 7/2023)** Notes: danger from percutaneous absorption (see p. 211 and p. 228). BEI: 250 mg/g creatinine, mandelic acid plus phenyl glyoxylic acid [in urine]. Sampling time: end of exposure or end of shift. **TRGS 903 - BEI Values (Germany, 2/2024)** BEI: 250 mg/g creatinine, mandelic acid plus phenylglyoxylic acid [in urine]. Sampling time: end of exposure or end of shift.
Toluene	**DFG BEI-values list (Germany, 7/2023)** Notes: danger from percutaneous absorption (see p. 211 and p. 228). BEI: 600 µg/l, toluene [in blood]. Sampling time: immediately after exposure. BEI: 1.5 mg/l, o-cresol (after hydrolysis) [in urine]. Sampling time: end of exposure or end of shift / for long-term exposures: at the end of the shift after several shifts. BEI: 75 µg/l, toluene [in urine]. Sampling time: end of exposure or end of shift. **TRGS 903 - BEI Values (Germany, 2/2024)** BEI: 600 µg/l, toluene [in whole blood]. Sampling time: immediately after exposure. BEI: 1.5 mg/l, o-cresol (after hydrolysis) [in urine]. Sampling time: end of exposure or end of shift; for long-term exposures: at the end of shift after several shifts. BEI: 75 µg/l, toluene [in urine]. Sampling time: end of exposure or end of shift.
No exposure indices known.	
Xylene	**5/2020. (II. 6.) ITM Decree (Hungary, 12/2023) [xylene]** BEI: 1500 mg/g creatinine, methylhippuric acid [in urine]. Sampling time: at the end of the shift. BEI: 860 µmol/mmol creatinine, methylhippuric acid [in urine]. Sampling time: at the end of the shift.
Ethylbenzene	**5/2020. (II. 6.) ITM Decree (Hungary, 12/2023)** BEI: 1500 mg/g creatinine, mandelic acid [in urine]. Sampling time: at the end of the working week; at the end of the shift. BEI: 1110 µmol/mmol creatinine, mandelic acid [in urine]. Sampling time: at the end of the working week; at the end of the shift.
Toluene	**5/2020. (II. 6.) ITM Decree (Hungary, 12/2023)** BEI: 1 mg/g creatinine, o-cresol [in urine]. Sampling time: at the end of the shift. BEI: 1 µmol/mmol creatinine, o-cresol [in urine]. Sampling time: at the end of the shift.
No exposure indices known.	
Xylene	**NAOSH (Ireland, 1/2011) [Xylene]** BMGV: 1.5 g/g creatinine, methylhippuric acids [in urine]. Sampling time: end of shift - As soon as possible after exposure ceases.
Ethylbenzene	**NAOSH (Ireland, 1/2011)** BMGV: Semi-quantitative, the biological analyte is an indicator of exposure to the substance but the quantitative interpretation of the measurement is ambiguous. These analytes should be used as a screening test if a quantitative test is not practical; or as a confirmatory test if the quantitative test is not specific and the origin of the determinant is in question., ethylbenzene [in endexhaled air]. Sampling time: not critical. BMGV: 0.7 g/g creatinine [Semi-quantitative, the biological analyte is an indicator of exposure to the substance but the quantitative interpretation of the measurement is ambiguous. These analytes should be used as a screening test if a quantitative

	test is not practical; or as a confirmatory test if the quantitative test is not specific and the origin of the determinant is in question.], mandelic acid and phenylglyoxylic acid [in urine]. Sampling time: end of shift at end of workweek.
Toluene	**NAOSH (Ireland, 1/2011)** BMGV: 0.3 mg/g creatinine, o-cresol [in urine]. Sampling time: end of shift - As soon as possible after exposure ceases. BMGV: 0.03 mg/l, toluene [in urine]. Sampling time: end of shift - As soon as possible after exposure ceases. BMGV: 0.02 mg/l, toluene [in blood]. Sampling time: prior to last shift of workweek.
No exposure indices known.	
Xylene	**Minister Cabinet Regulations No.325 - BEI (Latvia, 3/2024) [xylenes (all isomers)]** BEI: 2000 mg/l, methylhippuric (toluric) acid (all isomers) [in urine]. Sampling time: at the end of the exposure or at the end of the shift.
Toluene	**Minister Cabinet Regulations No.325 - BEI (Latvia, 3/2024)** BEI: 600 µg/l, toluene [in blood]. Sampling time: at the end of the exposure. BEI: 75 µg/l, toluene [in urine]. Sampling time: end of the shift. BEI: 1.5 mg/l, o-cresol (after hydrolysis) [in urine]. Sampling time: at the end of the exposure or at the end of the shift.
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
Xylene	**Portuguese Institute of Quality (Portugal, 11/2014) [Xylenes]** BEI: 1.5 g/g creatinine, (o, m, p) -methyl-boronic acids [in urine]. Sampling time: end of shift.
Ethylbenzene	**Portuguese Institute of Quality (Portugal, 11/2014)** BEI: 0.7 g/g creatinine, sum of mandelic acid and phenylglyoxylic acid [in urine]. Sampling time: end of shift.
Toluene	**Portuguese Institute of Quality (Portugal, 11/2014)** BEI: 0.3 mg/g creatinine, o-cresol [in urine]. Sampling time: end of shift. BEI: 0.03 mg/l, toluene [in urine]. Sampling time: end of shift. BEI: 0.02 mg/l, toluene [in blood]. Sampling time: end of shift at the end of the workweek.
Xylene	**HG 1218/2006, Annex 2, with subsequent modifications and additions (Romania, 3/2024) [Xylene]** OBLV: 3 g/l, methylhippuric acid [in urine]. Sampling time: end of shift.
Ethylbenzene	**HG 1218/2006, Annex 2, with subsequent modifications and additions (Romania, 3/2024)** OBLV: 1.5 g/g creatinine, mandelic acid [in urine]. Sampling time: end of the week.
Toluene	**HG 1218/2006, Annex 2, with subsequent modifications and additions (Romania, 3/2024)** OBLV: 3 mg/l, o-cresol [in urine]. Sampling time: end of shift. OBLV: 2 g/l, hippuric acid [in urine]. Sampling time: end of shift.

Xylene	**Government regulation SR c. 355/2006 (Slovakia, 5/2024) [xylene, all isomers]** BLV: 781 µmol/mmol creatinine, as sum of 2,3,4-methylhippuroic acids [in urine]. Sampling time: at the end of exposure or work shift. BLV: 1334 mg/g creatinine, as sum of 2,3,4-methylhippuroic acids [in urine]. Sampling time: at the end of exposure or work shift. BLV: 10355 µmol/l, as sum of 2,3,4-methylhippuroic acids [in urine]. Sampling time: at the end of exposure or work shift. BLV: 14.6 µmol/l, as xylene [in blood]. Sampling time: at the end of exposure or work shift. BLV: 2000 mg/l, as sum of 2,3,4-methylhippuroic acids [in urine]. Sampling time: at the end of exposure or work shift. BLV: 1.5 mg/l, as xylene [in blood]. Sampling time: at the end of exposure or work shift.
Ethylbenzene	**Government regulation SR c. 355/2006 (Slovakia, 5/2024)** BLV: 799 µmol/mmol creatinine, as mandelic acid and phenylglyoxylic acid [in urine]. Sampling time: at the end of exposure or work shift; long-term exposure: after several work shifts. BLV: 7.44 µmol/mmol creatinine, as 2 or 4-etylfenol [in urine]. Sampling time: at the end of exposure or work shift; long-term exposure: after several work shifts. BLV: 1067 mg/g creatinine, as mandelic acid and phenylglyoxylic acid [in urine]. Sampling time: at the end of exposure or work shift; long-term exposure: after several work shifts. BLV: 8.03 mg/g creatinine, as 2 or 4-etylfenol [in urine]. Sampling time: at the end of exposure or work shift; long-term exposure: after several work shifts. BLV: 10590 µmol/l, as mandelic acid and phenylglyoxylic acid [in urine]. Sampling time: at the end of exposure or work shift; long-term exposure: after several work shifts. BLV: 98.6 µmol/l, as 2 or 4-etylfenol [in urine]. Sampling time: at the end of exposure or work shift; long-term exposure: after several work shifts. BLV: 1600 mg/l, as mandelic acid and phenylglyoxylic acid [in urine]. Sampling time: at the end of exposure or work shift; long-term exposure: after several work shifts. BLV: 12 mg/l, as 2 or 4-etylfenol [in urine]. Sampling time: at the end of exposure or work shift; long-term exposure: after several work shifts.
Toluene	**Government regulation SR c. 355/2006 (Slovakia, 5/2024)** BLV: 1010 µmol/mmol creatinine, as hippuric acid [in urine]. Sampling time: at the end of exposure or work shift. BLV: 1.08 µmol/mmol creatinine, as o-cresol [in urine]. Sampling time: at the end of exposure or work shift; long-term exposure: after several work shifts. BLV: 1600 mg/g creatinine, as hippuric acid [in urine]. Sampling time: at the end of exposure or work shift. BLV: 1.03 mg/g creatinine, as o-cresol [in urine]. Sampling time: at the end of exposure or work shift; long-term exposure: after several work shifts. BLV: 13399 µmol/l, as hippuric acid [in urine]. Sampling time: at the end of exposure or work shift. BLV: 14.3 µmol/l, as o-cresol [in urine]. Sampling time: at the end of exposure or work shift; long-term exposure: after several work shifts. BLV: 6517 nmol/l, as toluene [in blood]. Sampling time: at the end of exposure or work shift. BLV: 2401 mg/l, as hippuric acid [in urine]. Sampling time: at the end of exposure or work shift. BLV: 1.5 mg/l, as o-cresol [in urine]. Sampling time: at the end of exposure or work shift; long-term exposure: after several work

	shifts. BLV: 600 µg/l, as toluene [in blood]. Sampling time: at the end of exposure or work shift.
Xylene	**Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2024) [xylene (all isomers)]** BAT: 2 g/l, methylhippuric acid (all isomers) [in urine]. Sampling time: at the end of the work shift.
Ethylbenzene	**Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2024)** BAT: 250 mg/g creatinine, mandelic acid and phenylglyoxylic acid [in urine]. Sampling time: at the end of the work shift.
Toluene	**Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2024)** BAT: 1.5 mg/l, o-cresol (after hydrolysis) [in urine]. Sampling time: at the end of the work shift, at long-term exposure: at the end of the work shift after several consecutive workdays. BAT: 600 µg/l, toluene [in blood]. Sampling time: immediately after exposure. BAT: 75 µg/l, toluene [in urine]. Sampling time: at the end of the work shift.
Xylene	**National institute of occupational safety and health (Spain, 1/2024) [Xylenes]** VLB: 1 g/g creatinine, methylhippuric acids [in urine]. Sampling time: end of shift.
Ethylbenzene	**National institute of occupational safety and health (Spain, 1/2024)** VLB: 700 mg/g creatinine, sum of mandelic acid and acid and phenylglyoxylic acid [in urine]. Sampling time: end of workweek.
Toluene	**National institute of occupational safety and health (Spain, 1/2024)** VLB: 0.05 mg/l, toluene [in blood]. Sampling time: prior to last shift of workweek. VLB: 0.6 mg/g creatinine, o-cresol [in urine]. Sampling time: end of shift. VLB: 0.08 mg/l, toluene [in urine]. Sampling time: end of shift.
No exposure indices known.	
Xylene	**SUVA (Switzerland, 1/2024) [Xylene, all isomers]** BEI: 2 g/l, methyl hippuric acid [in urine]. Sampling time: immediately after exposure or after working hours.
Ethylbenzene	**SUVA (Switzerland, 1/2024)** BEI: 600 mg/g creatinine, mandelic acid + phenylglyoxylic acid [in urine]. Sampling time: immediately after exposure or after working hours.
Toluene	**SUVA (Switzerland, 1/2024)** BEI: 2 g/g creatinine, hippuric acid [in urine]. Sampling time: immediately after exposure or after working hours. In case of long-term exposure: after more than one shift. BEI: 1.26 mmol/mmol creatinine, hippuric acid [in urine]. Sampling time: immediately after exposure or after working hours. In case of long-term exposure: after more than one shift. BEI: 0.5 mg/l, o-cresol [in urine]. Sampling time: immediately after exposure or after working hours. In case of long-term exposure: after more than one shift. BEI: 4.62 µmol/l, o-cresol [in urine]. Sampling time: immediately after exposure or after working hours. In case of long-term

	exposure: after more than one shift. BEI: 600 µg/l, toluene [in blood]. Sampling time: immediately after exposure or after working hours. BEI: 6.48 µmol/l, toluene [in blood]. Sampling time: immediately after exposure or after working hours. BEI: 75 µg/l, toluene [in urine]. Sampling time: immediately after exposure or after working hours.
Xylene	**EH40/2005 BMGVs (United Kingdom (UK), 1/2020) [Xylene, o-, m-, p- or mixed isomers]** BGV: 650 mmol/mol creatinine, methyl hippuric acid [in urine]. Sampling time: post shift.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Result
n-Butyl acetate	**DNEL - General population - Long term - Oral** 2 mg/kg bw/day Effects: Systemic **DNEL - General population - Short term - Oral** 2 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Dermal** 3.4 mg/kg bw/day Effects: Systemic **DNEL - General population - Short term - Dermal** 6 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Dermal** 7 mg/kg bw/day Effects: Systemic **DNEL - Workers - Short term - Dermal** 11 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Inhalation** 12 mg/m³ Effects: Systemic **DNEL - General population - Long term - Inhalation** 35.7 mg/m³ Effects: Local **DNEL - Workers - Long term - Inhalation** 48 mg/m³ Effects: Systemic **DNEL - General population - Short term - Inhalation** 300 mg/m³ Effects: Local **DNEL - General population - Short term - Inhalation**

	300 mg/m³ Effects: Systemic **DNEL - Workers - Long term - Inhalation** 300 mg/m³ Effects: Local **DNEL - Workers - Short term - Inhalation** 600 mg/m³ Effects: Local **DNEL - Workers - Short term - Inhalation** 600 mg/m³ Effects: Systemic
Solvent naphtha (petroleum), light aromatic	**DNEL - General population - Long term - Inhalation** 0.41 mg/m³ Effects: Systemic **DNEL - Workers - Long term - Inhalation** 1.9 mg/m³ Effects: Systemic **DNEL - General population - Long term - Inhalation** 178.57 mg/m³ Effects: Local **DNEL - General population - Short term - Inhalation** 640 mg/m³ Effects: Local **DNEL - Workers - Long term - Inhalation** 837.5 mg/m³ Effects: Local **DNEL - Workers - Short term - Inhalation** 1066.67 mg/m³ Effects: Local **DNEL - General population - Short term - Inhalation** 1152 mg/m³ Effects: Systemic **DNEL - Workers - Short term - Inhalation** 1286.4 mg/m³ Effects: Systemic
Xylene	**DNEL - General population - Long term - Oral** 5 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Inhalation** 65.3 mg/m³ Effects: Local **DNEL - General population - Long term - Inhalation** 65.3 mg/m³ Effects: Systemic **DNEL - General population - Long term - Dermal** 125 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Dermal** 212 mg/kg bw/day Effects: Systemic

	DNEL - Workers - Long term - Inhalation 221 mg/m³ Effects: Local **DNEL - Workers - Long term - Inhalation** 221 mg/m³ Effects: Systemic **DNEL - General population - Short term - Inhalation** 260 mg/m³ Effects: Local **DNEL - General population - Short term - Inhalation** 260 mg/m³ Effects: Systemic **DNEL - Workers - Short term - Inhalation** 442 mg/m³ Effects: Local **DNEL - Workers - Short term - Inhalation** 442 mg/m³ Effects: Systemic
Ethylbenzene	**DMEL - Workers - Long term - Inhalation** 442 mg/m³ Effects: Local **DMEL - Workers - Short term - Inhalation** 884 mg/m³ Effects: Systemic **DNEL - General population - Long term - Oral** 1.6 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Inhalation** 15 mg/m³ Effects: Systemic **DNEL - Workers - Long term - Inhalation** 77 mg/m³ Effects: Systemic **DNEL - Workers - Long term - Dermal** 180 mg/kg bw/day Effects: Systemic **DNEL - Workers - Short term - Inhalation** 293 mg/m³ Effects: Local
Toluene	**DNEL - General population - Long term - Oral** 8.13 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Inhalation** 56.5 mg/m³ Effects: Local **DNEL - General population - Long term - Inhalation** 56.5 mg/m³ Effects: Systemic **DNEL - Workers - Long term - Inhalation**

192 mg/m³
Effects: Local

DNEL - Workers - Long term - Inhalation
192 mg/m³
Effects: Systemic

DNEL - General population - Long term - Dermal
226 mg/kg bw/day
Effects: Systemic

DNEL - General population - Short term - Inhalation
226 mg/m³
Effects: Local

DNEL - General population - Short term - Inhalation
226 mg/m³
Effects: Systemic

DNEL - Workers - Long term - Dermal
384 mg/kg bw/day
Effects: Systemic

DNEL - Workers - Short term - Inhalation
384 mg/m³
Effects: Local

DNEL - Workers - Short term - Inhalation
384 mg/m³
Effects: Systemic

PNECs

Not available.

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

SECTION 8: Exposure controls/personal protection

Recommendations : Wear suitable gloves tested to EN374.

< 1 hour (breakthrough time): Nitrile gloves. thickness > 0.3 mm

1 - 4 hours (breakthrough time): 4H / Silver Shield® gloves.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Filter type: A

Filter type (spray application): A P

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.

Colour : Colourless.

Odour : Slight

Odour threshold : Not available.

Melting point/freezing point : Not available.

Initial boiling point and boiling range :

Ingredient name	°C	°F	Method
n-Butyl acetate	126	258.8	OECD 103
Solvent naphtha (petroleum), light aromatic	135 to 210	275 to 410	

Flammability : Not available.

Lower and upper explosion limit : Lower: 0.8% (xylene)
Upper: 7.6% (n-butyl acetate)

Flash point : Closed cup: 27°C (80.6°F)

Auto-ignition temperature :

Ingredient name	°C	°F	Method
Solvent naphtha (petroleum), light aromatic	280 to 470	536 to 878	
EO bis(benztriazolyl)phenylpropionat	405	761	

Decomposition temperature : Not available.

pH : Not applicable.

Viscosity : Not available.

Solubility(ies) :

Not available.

Solubility in water : Not available.

SECTION 9: Physical and chemical properties

Partition coefficient: n-octanol/ water : Not applicable.

Vapour pressure :

Ingredient name	Vapour Pressure at 20˚C			Vapour pressure at 50˚C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
n-Butyl acetate	11.25096	1.5	DIN EN 13016-2			
Ethylbenzene	9.30076	1.2				

Relative density : Not available.

Density : 1 g/cm³

Vapour density : Not available.

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Explosive properties : Not available.

Oxidising properties : Not available.

9.2.2 Other safety characteristics

Not applicable.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 Incompatible materials : Reactive or incompatible with the following materials: oxidising materials

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity

Product/ingredient name	Result
n-Butyl acetate	**Rat - Oral - LD50** 10760 mg/kg EU **Rabbit - Dermal - LD50** 14112 mg/kg **Rat - Inhalation - LC50 Vapour** 0.74 mg/l [4 hours]
Solvent naphtha (petroleum), light aromatic	**Rat - Oral - LD50** 8400 mg/kg Toxic effects: Behavioral - Somnolence (general depressed

activity) Behavioral - Tremor Lung, Thorax, or Respiration - Other changes

Xylene

Rat - Oral - LD50
4300 mg/kg
Toxic effects: Liver - Other changes Kidney, Ureter, and Bladder - Other changes

Rat - Inhalation - LC50 Vapour
21.7 mg/l [4 hours]

Ethylbenzene

Rat - Oral - LD50
3500 mg/kg

Rabbit - Dermal - LD50
15400 mg/kg

Rat - Inhalation - LC50 Dusts and mists
29000 mg/l [4 hours]

Toluene

Rat - Oral - LD50
636 mg/kg

Rat - Inhalation - LC50 Vapour
49 g/m³ [4 hours]

Conclusion/Summary [Product] : Not available.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
ALPOCRYL KLARLACK 1495-95	N/A	17040.9	N/A	139.7	N/A
n-Butyl acetate	10760	14112	N/A	N/A	N/A
Solvent naphtha (petroleum), light aromatic	8400	N/A	N/A	N/A	N/A
Xylene	4300	1100	N/A	11	N/A
Ethylbenzene	3500	15400	N/A	11	29000
Toluene	N/A	N/A	N/A	49	N/A

Skin corrosion/irritation

Product/ingredient name	Result
n-Butyl acetate	**Rabbit - Skin - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg
Xylene	**Rat - Skin - Mild irritant** Duration of treatment/exposure: 8 hours Amount/concentration applied: 60 uL **Rabbit - Skin - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg **Rabbit - Skin - Moderate irritant** Amount/concentration applied: 100 %
Ethylbenzene	**Rabbit - Skin - Mild irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 15 mg
Toluene	**Pig - Skin - Mild irritant**

Duration of treatment/exposure: 24 hours
Amount/concentration applied: 250 uL

Rabbit - Skin - Mild irritant
Amount/concentration applied: 435 mg

Rabbit - Skin - Moderate irritant
Duration of treatment/exposure: 24 hours
Amount/concentration applied: 20 mg

Rabbit - Skin - Moderate irritant
Amount/concentration applied: 500 mg

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name	Result
n-Butyl acetate	**Rabbit - Eyes - Moderate irritant** Amount/concentration applied: 100 mg
Solvent naphtha (petroleum), light aromatic	**Rabbit - Eyes - Mild irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 100 uL
Xylene	**Rabbit - Eyes - Mild irritant** Amount/concentration applied: 87 mg **Rabbit - Eyes - Severe irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 5 mg
Ethylbenzene	**Rabbit - Eyes - Severe irritant** Amount/concentration applied: 500 mg
Toluene	**Rabbit - Eyes - Mild irritant** Duration of treatment/exposure: 0.5 minutes Amount/concentration applied: 100 mg **Rabbit - Eyes - Mild irritant** Amount/concentration applied: 870 ug **Rabbit - Eyes - Severe irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 2 mg **Rabbit - Eyes - Severe irritant** Amount/concentration applied: 0.1 Ml

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
n-Butyl acetate	STOT SE 3, H336 (Narcotic effects)
Solvent naphtha (petroleum), light aromatic	STOT SE 3, H335 (Respiratory tract irritation) STOT SE 3, H336 (Narcotic effects)
Xylene	STOT SE 3, H335 (Respiratory tract irritation)
Toluene	STOT SE 3, H336 (Narcotic effects)

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
Xylene	STOT RE 2, H373 (oral, inhalation)
Ethylbenzene	STOT RE 2, H373 (hearing organs) (oral, inhalation)
Toluene	STOT RE 2, H373

Aspiration hazard

Product/ingredient name	Result
Solvent naphtha (petroleum), light aromatic	ASPIRATION HAZARD - Category 1
Xylene	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1
Toluene	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure

Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact : May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

SECTION 11: Toxicological information

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary [Product] : Not available.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result
n-Butyl acetate	**Acute - LC50 - Fresh water** Fish - Fathead minnow - *Pimephales promelas* Age: 31 to 32 days; Size: 21.6 mm; Weight: 0.175 g 18000 µg/l [96 hours] Effect: Mortality **Acute - LC50 - Marine water** Crustaceans - Brine shrimp - *Artemia salina* 32 mg/l [48 hours] Effect: Mortality
Solvent naphtha (petroleum), light aromatic	**Acute - LC50** Fish 9.2 mg/l [96 hours] **Acute - EC50** Daphnia 3.2 mg/l [48 hours]
Toluene	**Acute - LC50 - Fresh water** Fish - Coho salmon,silver salmon - *Oncorhynchus kisutch* - Fry Weight: 1 g 5500 µg/l [96 hours] Effect: Mortality

Acute - EC50 - Fresh water
Algae - Green algae - *Pseudokirchneriella subcapitata*
12500 µg/l [72 hours]
Effect: Growth

Chronic - NOEC - Fresh water
Daphnia - Water flea - *Daphnia magna*
Age: ≤24 hours
1000 µg/l [21 days]
Effect: Reproduction

Acute - EC50 - Fresh water
Daphnia - Water flea - *Daphnia magna* - Neonate
Age: ≤24 hours
5.56 mg/l [48 hours]
Effect: Intoxication

Conclusion/Summary [Product] : Not available.

12.2 Persistence and degradability

Not available.

Conclusion/Summary [Product] : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
n-Butyl acetate	2.3	-	Low
Solvent naphtha (petroleum), light aromatic	-	10 to 2500	High
Xylene	3.12	8.1 to 25.9	Low
Ethylbenzene	3.6	-	Low
Toluene	2.73	90	Low

12.4 Mobility in soil

Soil/water partition coefficient

Product/ingredient name	logKoc	Koc
n-Butyl acetate	1.52	33.2139
Ethylbenzene	2.23	170.406
Toluene	2.07	117.115
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	5	101050
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	4.04	11012

Results of PMT and vPvM assessment

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
n-Butyl acetate	No	No	No	No	No	No	No
Solvent naphtha (petroleum), light aromatic	No	No	No	No	No	No	No
Xylene	No	No	No	No	No	No	No
EO bis(benztriazolyl) phenylpropionat	No	No	No	No	No	No	No
Ethylbenzene	No	No	No	No	No	No	No
Toluene	No	No	No	No	No	No	No
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	No	No	No	No	No	No	No
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	No	No	No	No	No	No	No

Mobility : Not available.

SECTION 12: Ecological information

Conclusion/Summary : The product does not meet the criteria to be considered as a PMT or vPvM.

12.5 Results of PBT and vPvB assessment

Regulation (EC) No. 1907/2006 [REACH]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
n-Butyl acetate	No	No	No	No	No	No	No
Solvent naphtha (petroleum), light aromatic	No	No	No	No	No	No	No
Xylene	No	No	No	No	No	No	No
EO bis(benztriazolyl) phenylpropionat	No	No	No	No	No	No	No
Ethylbenzene	No	No	No	No	No	No	No
Toluene	No	No	No	No	No	No	No
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	No	No	No	No	No	No	No
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	No	No	No	No	No	No	No

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

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
n-Butyl acetate	No	No	No	No	No	No	No
Solvent naphtha (petroleum), light aromatic	No	No	No	No	No	No	No
Xylene	No	No	No	No	No	No	No
EO bis(benztriazolyl) phenylpropionat	No	No	No	No	No	No	No
Ethylbenzene	No	No	No	No	No	No	No
Toluene	No	No	No	No	No	No	No
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	No	No	No	No	No	No	No
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	No	No	No	No	No	No	No

Conclusion/Summary Regulation (EC) No. 1272/2008 [CLP] : The product does not meet the criteria to be considered as a PBT or vPvB.

12.6 Endocrine disrupting properties

Not available.

Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

SECTION 13: Disposal considerations

European waste catalogue (EWC) : 08.01.11

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	UN1263	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT	PAINT	PAINT	PAINT
14.3 Transport hazard class(es)	3 	3 	3 	3 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	No.	Yes.	No.	No.

Additional information

ADR/RID : **Tunnel code** (D/E)

ADN : The product is only regulated as an environmentally hazardous substance when transported in tank vessels.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not relevant/applicable due to nature of the product.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

SECTION 15: Regulatory information

Product/ingredient name	%	Designation [Usage]
ALPOCRYL KLARLACK 1495-95	≥90	3
Toluene	<1	48

Labelling :

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

Explosive precursors : Not applicable.

Ozone depleting substances (EU 2024/590)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
P5c

National regulations

Austria

VbF class : Category 3

Limitation of the use of organic solvents : Permitted.

Belgium

Book VI carcinogenic agents annex VI.2-1 - VI.2-3

Ingredient name	Status
Styrène	Listed

Czech Republic

Storage code : II

Denmark

Fire class : II-1

Executive Order No. 1795/2015

Ingredient name	Annex I Section A	Annex I Section B
Ethylbenzene	Listed	-

MAL-code : 3-5

Protection based on MAL : **According to the regulations on work involving coded products, the following stipulations apply to the use of personal protective equipment:**

General: Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. A face shield must be worn in work involving spattering if a full mask is not required. In this case, other recommended use of eye protection is not required.

In all spraying operations in which there is return spray, the following must be worn: respiratory protection and arm protectors/apron/coveralls/protective clothing as appropriate or as instructed.

MAL-code: 3-5
Application: When using scraper or knife, brush, roller etc. for pre- and post-treatments in a spray booth where the operator is outside the spray zone and when working in similar new* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone. When spraying in new* booths and cabins with non-atomizing guns.

- Protective clothing must be worn.

During downtimes, cleaning and repair in closed facilities, spray booths or cabins, if there is a risk of contact with wet paint or organic solvents. When using scraper or knife, brush, roller, etc, for pre- and post-treatments in cabins or booths of the existing* facility type, if the operator is inside the spray zone. When using scraper or knife, brush, roller, etc. for pre- and post-treatments outside a closed facility, spray booth or spray cabin.

- Air-supplied half mask, protective clothing and eye protection must be worn.

When spraying in new* booths if the operator is outside the spray zone.

- Air-supplied half mask and eye protection must be worn.

When spraying in existing* spray booths, if the operator is outside the spray zone. During non-atomising spraying in existing* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone.

- Air-supplied full mask and protective clothing must be worn.

During all spraying where atomisation occurs in cabins or spray booths where the operator is inside the spray zone and during spraying outside a closed facility, cabin or booth.

- Air-supplied full mask, protective clothing and hood must be worn.

Drying: Items for drying/drying ovens that are temporarily placed on such things as rack trolleys, etc, must be equipped with a mechanical exhaust system to prevent fumes from wet items from passing through workers' inhalation zone.

Polishing: When polishing treated surfaces, a mask with dust filter must be worn. When machine grinding, eye protection must be worn. Work gloves must always be worn.

Caution The regulations contain other stipulations in addition to the above.

*See Regulations.

Restrictions on use : Not to be used by professional users below 18 years of age. See the National Working Environment Authorities Executive Order regarding Young People At Work.

List of undesirable substances : Not listed

Carcinogenic waste : Waste containers must be labeled: Contains a substance or substances regulated by Danish working environment legislation on cancer risks.

Finland

France

SECTION 15: Regulatory information

Social Security Code, Articles L 461-1 to L 461-7 : n-Butyl acetate — RG 84
Solvent naphtha (petroleum), light aromatic — RG 84
Xylene — RG 4bis, RG 84
Ethylbenzene — RG 84
Toluene — RG 4bis, RG 84

Reinforced medical surveillance : Act of July 11, 1977 determining the list of activities which require reinforced medical surveillance: not applicable

Germany

Storage class (TRGS 510) : 3

Hazardous incident ordinance

This product is controlled under the Germany Hazardous Incident Ordinance.

Danger criteria

Category	Reference number
P5c	1.2.5.3

Hazard class for water : 2

Technical instruction on air quality control (TA Luft)

Number [Class]	Description	%
5.2.1	Total dust	23.4
5.2.2 [III]	Dusty inorganic substances	0.013
5.2.5	Organic substances	76.6
5.2.5 [I]	Organic substances	41.3

Italy

D.Lgs. 152/06 : Not determined.

Netherlands

Ministry of Social Affairs and Employment (SZW) - Carcinogenic substances and processes, mutagenic or reprotoxic substances

Ingredient name	Carcinogen	Mutagen	Reproductive toxicity - Fertility	Reproductive toxicity - Development	Harmful via breastfeeding
Solvent naphtha (petroleum), light arom.	Listed	Listed	-	-	-
xylene	-	-	-	Development 2	-
tolueen	-	-	-	Development 2	-

Water Discharge Policy (ABM) : Z(1) Non biodegradable substances with hazardous properties for humans and the environment (carcinogenicity/ mutagenicity/ reprotoxicity/ bioacumulative potential/ toxicity or persistence). Decontamination effort: Z

Norway

Sweden

Flammable liquid class (SRVFS 2005:10) : 2a

Switzerland

VOC content : VOC (w/w): 50.8%

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

SECTION 15: Regulatory information

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
SGG = Segregation Group
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Skin Sens. 1, H317	Calculation method
STOT SE 3, H336	Calculation method
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements

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.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Full text of classifications [CLP/GHS]

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1A	SKIN SENSITISATION - Category 1A

SECTION 16: Other information

STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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ALPOCRYL KLARLACK 1495-95_FARBLOS-INCOLORE-COLOURLESS FARBLOS-INCOLORE-COLOURLESS

Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.