SAFETY DATA SHEET

TEKNOS

ALPOLAN DUOSCAN 5483-02 - FARBLOS-INCOLORE-COLOURLESS

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

1.1 Product identifier

Product name : ALPOLAN DUOSCAN 5483-02 - 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

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. 2, H225
Eye Irrit. 2, H319
Carc. 2, H351
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 : Danger

Hazard statements :
H225 - Highly flammable liquid and vapour.
H319 - Causes serious eye irritation.
H336 - May cause drowsiness or dizziness.
H351 - Suspected of causing cancer.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention :
P201 - Obtain special instructions before use.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response : P308 + P313 - IF exposed or concerned: Get medical advice or attention.

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; Ethyl acetate and Methylisobutylketone

Supplemental label elements : Contains Mixture of alpha-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl) propionyl-omega-hydroxypoly(oxyethylene) and alpha-3-(3-(2H-benzotriazol-2-yl) -5-tert-butyl-4-hydroxyphenyl)propionyl-omega-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene). May produce an allergic reaction.

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]
Ethyl acetate	REACH #: 01-2119475103-46 EC: 205-500-4 CAS: 141-78-6 Index: 607-022-00-5	≥10 - ≤25	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	-	[1] [2]
Naphtha (petroleum), hydrotreated light	EC: 265-151-9 CAS: 64742-49-0 Index: 649-328-00-1	≥10 - <25	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	-	[1]
Methylisobutylketone	REACH #: 01-2119473980-30 EC: 203-550-1 CAS: 108-10-1 Index: 606-004-00-4	≥10 - ≤25	Flam. Liq. 2, H225 Acute Tox. 4, H332 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H336 EUH066	ATE [Inhalation (vapours)] = 11 mg/l	[1] [2]
Toluene	REACH #: 01-2119471310-51 EC: 203-625-9 CAS: 108-88-3 Index: 601-021-00-3	<3	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]
Xylene	REACH #: 01-2119488216-32 EC: 215-535-7	≤3	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332	ATE [Dermal] = 1100 mg/kg ATE [Inhalation	[1] [2]

SECTION 3: Composition/information on ingredients

	CAS: 1330-20-7 Index: 601-022-00-9		Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 (oral, inhalation) Asp. Tox. 1, H304 Aquatic Chronic 3, H412	(vapours)] = 11 mg/l	
Mixture of alpha-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl) propionyl-omega-hydroxypoly(oxyethylene) and alpha-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl) propionyl-omega-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl) propionyloxypoly (oxyethylene)	EC: 400-830-7 Index: 607-176-00-3	<1	Skin Sens. 1, H317 Aquatic Chronic 2, H411 **See Section 16 for the full text of the H statements declared above.**	-	[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.

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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. 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.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

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

Skin contact : No specific data.

Ingestion : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

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 : Highly 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
nitrogen oxides
metal oxide/oxides

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). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. 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, 12/2024) [Butylacetat alle Isomeren außer tert-Butylacet]** CEIL: 480 mg/m³. CEIL: 100 ppm. TWA 8 hours: 241 mg/m³. TWA 8 hours: 50 ppm.
Ethyl acetate	**Regulation on Limit Values - MAC (Austria, 12/2024)** TWA 8 hours: 200 ppm. TWA 8 hours: 734 mg/m³. PEAK 15 minutes: 1468 mg/m³ 4 times per shift. PEAK 15 minutes: 400 ppm 4 times per shift.
Naphtha (petroleum), hydrotreated light	**Regulation on Limit Values - MAC (Austria, 12/2024) [Hexan (alle Isomeren außer n-Hexan und Methylcyclopentan)]** PEAK 15 minutes: 800 ppm 4 times per shift. TWA 8 hours: 715 mg/m³. TWA 8 hours: 200 ppm. PEAK 15 minutes: 2860 mg/m³ 4 times per shift.
Methylisobutylketone	**Regulation on Limit Values - MAC (Austria, 12/2024)** Absorbed through skin. TWA 8 hours: 20 ppm. TWA 8 hours: 83 mg/m³. PEAK 15 minutes: 50 ppm 4 times per shift. PEAK 15 minutes: 208 mg/m³ 4 times per shift.
Toluene	**Regulation on Limit Values - MAC (Austria, 12/2024)** 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.
Xylene	**Regulation on Limit Values - MAC (Austria, 12/2024) [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.

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.
Ethyl acetate	**Limit values (Belgium, 12/2023)** TWA 8 hours: 200 ppm. TWA 8 hours: 734 mg/m³. STEL 15 minutes: 1468 mg/m³. STEL 15 minutes: 400 ppm.
Naphtha (petroleum), hydrotreated light	**Limit values (Belgium, 12/2023) [Hexaan (andere isomeren dan n-hexaan)]** TWA 8 hours: 500 ppm. TWA 8 hours: 1786 mg/m³. STEL 15 minutes: 1000 ppm. STEL 15 minutes: 3551 mg/m³.
Methylisobutylketone	**Limit values (Belgium, 12/2023)** TWA 8 hours: 20 ppm. TWA 8 hours: 83 mg/m³. STEL 15 minutes: 50 ppm. STEL 15 minutes: 208 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.
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.
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.
Ethyl acetate	**Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 4/2024)** Limit value 8 hours: 734 mg/m³. Limit value 15 minutes: 400 ppm. Limit value 15 minutes: 1468 mg/m³. Limit value 8 hours: 200 ppm.
Methylisobutylketone	**Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 4/2024)** Limit value 8 hours: 50 mg/m³. Limit value 15 minutes: 200 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.
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.

SECTION 8: Exposure controls/personal protection

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.
Ethyl 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: 400 ppm. ELV 8 hours: 200 ppm. STELV 15 minutes: 1468 mg/m³. ELV 8 hours: 734 mg/m³.
Methylisobutylketone	**Ordinance on the protection of workers from exposure to hazardous chemicals at work, exposure limit values (Annex I) (Croatia, 12/2023)** STELV 15 minutes: 208 mg/m³. STELV 15 minutes: 50 ppm. ELV 8 hours: 83 mg/m³. ELV 8 hours: 20 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.
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.
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.
Ethyl acetate	**Department of labour inspection (Cyprus, 7/2021)** STEL 15 minutes: 400 ppm. STEL 15 minutes: 1468 mg/m³. TWA 8 hours: 200 ppm. TWA 8 hours: 734 mg/m³.
Methylisobutylketone	**Department of labour inspection (Cyprus, 7/2021)** STEL 15 minutes: 50 ppm. STEL 15 minutes: 208 mg/m³. TWA 8 hours: 20 ppm. TWA 8 hours: 83 mg/m³.
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.
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.

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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.
Ethyl acetate	**Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 12/2023)** TWA 8 hours: 700 mg/m³. TWA 8 hours: 191.1 ppm. STEL 15 minutes: 900 mg/m³. STEL 15 minutes: 245.7 ppm.
Naphtha (petroleum), hydrotreated light	**Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 12/2023) [hexan isomery]** TWA 8 hours: 1000 mg/m³. TWA 8 hours: 279 ppm. STEL 15 minutes: 2000 mg/m³. STEL 15 minutes: 558 ppm.
Methylisobutylketone	**Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 12/2023)** Absorbed through skin. TWA 8 hours: 83 mg/m³. TWA 8 hours: 20 ppm. STEL 15 minutes: 208 mg/m³. STEL 15 minutes: 50 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.
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.
n-Butyl acetate	**Working Environment Authority (Denmark, 12/2024) [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.
Ethyl acetate	**Working Environment Authority (Denmark, 12/2024)** TWA 8 hours: 150 ppm. TWA 8 hours: 540 mg/m³. STEL 15 minutes: 1468 mg/m³. STEL 15 minutes: 400 ppm.
Naphtha (petroleum), hydrotreated light	**Working Environment Authority (Denmark, 12/2024) [hexan, andre isomere end n-hexan]** TWA 8 hours: 200 ppm. TWA 8 hours: 700 mg/m³. STEL 15 minutes: 1400 mg/m³. STEL 15 minutes: 400 ppm.
Methylisobutylketone	**Working Environment Authority (Denmark, 12/2024)** Absorbed through skin. TWA 8 hours: 20 ppm. TWA 8 hours: 83 mg/m³. STEL 15 minutes: 208 mg/m³. STEL 15 minutes: 50 ppm.
Toluene	**Working Environment Authority (Denmark, 12/2024)** Absorbed through skin. TWA 8 hours: 25 ppm. TWA 8 hours: 94 mg/m³.

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	STEL 15 minutes: 384 mg/m³. STEL 15 minutes: 100 ppm.
Xylene	**Working Environment Authority (Denmark, 12/2024) [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.
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.
Ethyl acetate	**Occupational exposure limits, Regulation No. 293 (Estonia, 4/2024)** TWA 8 hours: 500 mg/m³. TWA 8 hours: 150 ppm. STEL 15 minutes: 1100 mg/m³. STEL 15 minutes: 300 ppm.
Naphtha (petroleum), hydrotreated light	**Occupational exposure limits, Regulation No. 293 (Estonia, 4/2024) [heksaanid v.a n-heksaan]** TWA 8 hours: 700 mg/m³. TWA 8 hours: 200 ppm. STEL 15 minutes: 1100 mg/m³. STEL 15 minutes: 300 ppm.
Methylisobutylketone	**Occupational exposure limits, Regulation No. 293 (Estonia, 4/2024)** TWA 8 hours: 83 mg/m³. TWA 8 hours: 20 ppm. STEL 15 minutes: 208 mg/m³. STEL 15 minutes: 50 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.
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.
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.
Ethyl acetate	**EU OEL (Europe, 1/2022)** STEL 15 minutes: 400 ppm. STEL 15 minutes: 1468 mg/m³. TWA 8 hours: 200 ppm. TWA 8 hours: 734 mg/m³.
Methylisobutylketone	**EU OEL (Europe, 1/2022)** TWA 8 hours: 20 ppm. TWA 8 hours: 83 mg/m³. STEL 15 minutes: 50 ppm. STEL 15 minutes: 208 mg/m³.
Toluene	**EU OEL (Europe, 1/2022)** Absorbed through skin. TWA 8 hours: 192 mg/m³. TWA 8 hours: 50 ppm.

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	STEL 15 minutes: 384 mg/m³. STEL 15 minutes: 100 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.
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.
Ethyl acetate	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021)** TWA 8 hours: 200 ppm. TWA 8 hours: 730 mg/m³. STEL 15 minutes: 400 ppm. STEL 15 minutes: 1470 mg/m³.
Naphtha (petroleum), hydrotreated light	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021) [Heksaani, paitsi n-heksaani]** TWA 8 hours: 500 ppm. TWA 8 hours: 1800 mg/m³. STEL 15 minutes: 630 ppm. STEL 15 minutes: 2300 mg/m³. **Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021) [Heksaani, isomeerien seos (joka sisältää vähemmän kuin 5% n-heksaania)]** STEL 15 minutes: 630 ppm. TWA 8 hours: 1800 mg/m³. TWA 8 hours: 500 ppm. STEL 15 minutes: 2300 mg/m³.
Methylisobutylketone	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021)** TWA 8 hours: 20 ppm. TWA 8 hours: 80 mg/m³. STEL 15 minutes: 50 ppm. STEL 15 minutes: 210 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.
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.
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)
Ethyl acetate	**Ministry of Labor (France, 6/2024)** TWA 8 hours: 200 ppm. Notes: Binding regulatory limit values

	(article R. 4412-149 of the Labor Code) TWA 8 hours: 734 mg/m³. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) STEL 15 minutes: 1468 mg/m³. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) STEL 15 minutes: 400 ppm. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)
Naphtha (petroleum), hydrotreated light	**Ministry of Labor (France, 6/2024) [Hexane (autres isomères)]** TWA 8 hours: 500 ppm. Notes: Permissible limit values (circulars) TWA 8 hours: 1800 mg/m³. Notes: Permissible limit values (circulars)
Methylisobutylketone	**Ministry of Labor (France, 6/2024)** Carc 2. TWA 8 hours: 20 ppm. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) TWA 8 hours: 83 mg/m³. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) STEL 15 minutes: 208 mg/m³. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) STEL 15 minutes: 50 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)
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)
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, 7/2024)** 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].
Ethyl acetate	**TRGS 900 OEL (Germany, 6/2024)** TWA 8 hours: 730 mg/m³. PEAK 15 minutes: 1460 mg/m³. TWA 8 hours: 200 ppm. PEAK 15 minutes: 400 ppm. **DFG MAC-values list (Germany, 7/2024)** Develop C. TWA 8 hours: 200 ppm. PEAK 15 minutes: 400 ppm 4 times per shift [Interval: 1 hour]. TWA 8 hours: 750 mg/m³. PEAK 15 minutes: 1500 mg/m³ 4 times per shift [Interval: 1 hour].
Naphtha (petroleum), hydrotreated light	**TRGS 900 OEL (Germany, 6/2024) [Hexan Isomere (außer n-Hexan) und Methylcyclopentan]** TWA 8 hours: 1800 mg/m³.

	TWA 8 hours: 500 ppm. PEAK 15 minutes: 3600 mg/m³. PEAK 15 minutes: 1000 ppm. **DFG MAC-values list (Germany, 7/2024) [Hexane]** Develop D. TWA 8 hours: 500 ppm. PEAK 15 minutes: 1000 ppm 4 times per shift [Interval: 1 hour]. TWA 8 hours: 1800 mg/m³. PEAK 15 minutes: 3600 mg/m³ 4 times per shift [Interval: 1 hour].
Methylisobutylketone	**TRGS 900 OEL (Germany, 6/2024)** Absorbed through skin. TWA 8 hours: 83 mg/m³. PEAK 15 minutes: 166 mg/m³. TWA 8 hours: 20 ppm. PEAK 15 minutes: 40 ppm. **DFG MAC-values list (Germany, 7/2024)** Develop C. Absorbed through skin. TWA 8 hours: 20 ppm. PEAK 15 minutes: 40 ppm 4 times per shift [Interval: 1 hour]. TWA 8 hours: 83 mg/m³. PEAK 15 minutes: 166 mg/m³ 4 times per shift [Interval: 1 hour].
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, 7/2024)** 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].
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, 7/2024) [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].
n-Butyl acetate	**Presidential Decree 307/1986: Occupational exposure limit values (Greece, 8/2024)** TWA 8 hours: 50 ppm. TWA 8 hours: 241 mg/m³. STEL 15 minutes: 150 ppm. STEL 15 minutes: 723 mg/m³.
Ethyl acetate	**Presidential Decree 307/1986: Occupational exposure limit values (Greece, 8/2024)** TWA 8 hours: 200 ppm. TWA 8 hours: 734 mg/m³. STEL 15 minutes: 1468 mg/m³. STEL 15 minutes: 400 ppm.
Naphtha (petroleum), hydrotreated light	**Presidential Decree 307/1986: Occupational exposure limit values (Greece, 8/2024) [εξάνιο (όλα τα ισομερή)]** TWA 8 hours: 500 ppm. TWA 8 hours: 1800 mg/m³. STEL 15 minutes: 1000 ppm. STEL 15 minutes: 3600 mg/m³.
Methylisobutylketone	**Presidential Decree 307/1986: Occupational exposure limit values (Greece, 8/2024)** Absorbed through skin. TWA 8 hours: 100 ppm. TWA 8 hours: 410 mg/m³.

	STEL 15 minutes: 100 ppm. STEL 15 minutes: 410 mg/m³.
Toluene	**Presidential Decree 307/1986: Occupational exposure limit values (Greece, 8/2024)** 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.
Xylene	**Presidential Decree 307/1986: Occupational exposure limit values (Greece, 8/2024) [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.
n-Butyl acetate	**5/2020. (II. 6.) ITM Decree (Hungary, 1/2025)** Sensitiser. TWA 8 hours: 241 mg/m³. PEAK 15 minutes: 723 mg/m³. PEAK 15 minutes: 150 ppm. TWA 8 hours: 50 ppm.
Ethyl acetate	**5/2020. (II. 6.) ITM Decree (Hungary, 1/2025)** Sensitiser. TWA 8 hours: 734 mg/m³. PEAK 15 minutes: 1468 mg/m³. PEAK 15 minutes: 400 ppm. TWA 8 hours: 200 ppm.
Methylisobutylketone	**5/2020. (II. 6.) ITM Decree (Hungary, 1/2025)** TWA 8 hours: 83 mg/m³. PEAK 15 minutes: 208 mg/m³. PEAK 15 minutes: 50 ppm. TWA 8 hours: 20 ppm.
Toluene	**5/2020. (II. 6.) ITM Decree (Hungary, 1/2025)** 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.
Xylene	**5/2020. (II. 6.) ITM Decree (Hungary, 1/2025) [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.
n-Butyl acetate	**Ministry of Welfare, List of Exposure Limits (Iceland, 11/2024) [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.
Ethyl acetate	**Ministry of Welfare, List of Exposure Limits (Iceland, 11/2024)** TWA 8 hours: 540 mg/m³. TWA 8 hours: 150 ppm.
Naphtha (petroleum), hydrotreated light	**Ministry of Welfare, List of Exposure Limits (Iceland, 11/2024) [Hexan, aðrir ísómerar en n -hexan]** TWA 8 hours: 700 mg/m³. TWA 8 hours: 200 ppm.
Methylisobutylketone	**Ministry of Welfare, List of Exposure Limits (Iceland, 11/2024)** Absorbed through skin. STEL 15 minutes: 208 mg/m³. STEL 15 minutes: 50 ppm. TWA 8 hours: 83 mg/m³. TWA 8 hours: 20 ppm.
Toluene	**Ministry of Welfare, List of Exposure Limits (Iceland, 11/2024)**

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	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.
Xylene	**Ministry of Welfare, List of Exposure Limits (Iceland, 11/2024) [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.
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.
Ethyl acetate	**NAOSH (Ireland, 4/2024)** Notes: EU derived Occupational Exposure Limit Values OELV 8 hours: 200 ppm. OELV 15 minutes: 400 ppm. OELV 15 minutes: 1468 mg/m³. OELV 8 hours: 734 mg/m³.
Naphtha (petroleum), hydrotreated light	**NAOSH (Ireland, 4/2024) [hexane]** Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV 8 hours: 500 ppm. OELV 8 hours: 1800 mg/m³. OELV 15 minutes: 1000 ppm. OELV 15 minutes: 3600 mg/m³.
Methylisobutylketone	**NAOSH (Ireland, 4/2024)** Absorbed through skin. Notes: EU derived Occupational Exposure Limit Values OELV 8 hours: 20 ppm. OELV 8 hours: 83 mg/m³. OELV 15 minutes: 50 ppm. OELV 15 minutes: 208 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.
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.
n-Butyl acetate	**Legislative Decree No. 81/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 9/2024)** Short Term 15 minutes: 150 ppm. Short Term 15 minutes: 723 mg/m³. Limit value 8 hours: 50 ppm. Limit value 8 hours: 241 mg/m³.
Ethyl acetate	**Legislative Decree No. 81/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 9/2024)** Short Term 15 minutes: 400 ppm. Short Term 15 minutes: 1468 mg/m³. Limit value 8 hours: 200 ppm. Limit value 8 hours: 734 mg/m³.
Methylisobutylketone	**Legislative Decree No. 81/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 9/2024)** Limit value 8 hours: 20 ppm.

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	Limit value 8 hours: 83 mg/m³. Short Term 15 minutes: 50 ppm. Short Term 15 minutes: 208 mg/m³.
Toluene	**Legislative Decree No. 81/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 9/2024)** Absorbed through skin. Limit value 8 hours: 50 ppm. Limit value 8 hours: 192 mg/m³. Short Term 15 minutes: 100 ppm. Short Term 15 minutes: 384 mg/m³.
Xylene	**Legislative Decree No. 81/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 9/2024) [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.
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.
Ethyl acetate	**Ministers Cabinet Regulations Nr.325 - AER (Latvia, 3/2024)** TWA 8 hours: 200 mg/m³. STEL 15 minutes: 400 ppm. STEL 15 minutes: 1468 mg/m³. TWA 8 hours: 54 ppm.
Naphtha (petroleum), hydrotreated light	**Ministers Cabinet Regulations Nr.325 - AER (Latvia, 3/2024) [Ogļūdeņraži, piesātinātie alifātiskie, C1-10]** TWA 8 hours: 100 mg/m³ (as C). STEL 15 minutes: 300 mg/m³ (as C).
Methylisobutylketone	**Ministers Cabinet Regulations Nr.325 - AER (Latvia, 3/2024)** TWA 8 hours: 83 mg/m³. TWA 8 hours: 20 ppm. STEL 15 minutes: 50 ppm. STEL 15 minutes: 208 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.
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.
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.
Ethyl acetate	**Lithuanian Hygiene Standard HN 23 (Lithuania, 1/2024)** TWA 8 hours: 500 mg/m³. TWA 8 hours: 150 ppm. CEIL: 1100 mg/m³. CEIL: 300 ppm.
Naphtha (petroleum), hydrotreated light	**Lithuanian Hygiene Standard HN 23 (Lithuania, 1/2024) [heksanai, išskyrus n-heksaną]** TWA 8 hours: 700 mg/m³. TWA 8 hours: 200 ppm. STEL 15 minutes: 1100 mg/m³.

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	STEL 15 minutes: 300 ppm.
Methylisobutylketone	**Lithuanian Hygiene Standard HN 23 (Lithuania, 1/2024)** TWA 8 hours: 83 mg/m³. TWA 8 hours: 20 ppm. STEL 15 minutes: 208 mg/m³. STEL 15 minutes: 50 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.
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.
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.
Ethyl acetate	**Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021)** STEL 15 minutes: 400 ppm. STEL 15 minutes: 1468 mg/m³. TWA 8 hours: 200 ppm. TWA 8 hours: 734 mg/m³.
Methylisobutylketone	**Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021)** TWA 8 hours: 20 ppm. TWA 8 hours: 83 mg/m³. STEL 15 minutes: 50 ppm. STEL 15 minutes: 208 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.
Xylene	**Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021) [xylène Isomères mixtes, purs]** 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.
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.
Ethyl acetate	**EU OEL (Europe, 1/2022)** STEL 15 minutes: 400 ppm. STEL 15 minutes: 1468 mg/m³. TWA 8 hours: 200 ppm. TWA 8 hours: 734 mg/m³.
Methylisobutylketone	**EU OEL (Europe, 1/2022)** TWA 8 hours: 20 ppm.

	TWA 8 hours: 83 mg/m³. STEL 15 minutes: 50 ppm. STEL 15 minutes: 208 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.
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.
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.
Ethyl acetate	**Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 5/2024)** STEL 15 minutes: 1468 mg/m³. TWA 8 hours: 734 mg/m³. STEL 15 minutes: 400 ppm. TWA 8 hours: 200 ppm.
Methylisobutylketone	**Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 5/2024)** TWA 8 hours: 104 mg/m³. STEL 15 minutes: 208 mg/m³. TWA 8 hours: 25 ppm. STEL 15 minutes: 50 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.
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.
n-Butyl acetate	**FOR-2011-12-06-1358 (Norway, 5/2024)** STEL 15 minutes: 723 mg/m³. STEL 15 minutes: 150 ppm. TWA 8 hours: 241 mg/m³. TWA 8 hours: 50 ppm.
Ethyl acetate	**FOR-2011-12-06-1358 (Norway, 5/2024)** TWA 8 hours: 200 ppm. TWA 8 hours: 734 mg/m³. STEL 15 minutes: 1468 mg/m³. STEL 15 minutes: 400 ppm.
Naphtha (petroleum), hydrotreated light	**FOR-2011-12-06-1358 (Norway, 5/2024) [heksan (unntatt n-heksan)]** TWA 8 hours: 250 ppm. TWA 8 hours: 1050 mg/m³.
Methylisobutylketone	**FOR-2011-12-06-1358 (Norway, 5/2024)** Absorbed through skin. TWA 8 hours: 20 ppm. TWA 8 hours: 83 mg/m³.

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	STEL 15 minutes: 50 ppm. STEL 15 minutes: 208 mg/m³.
Toluene	**FOR-2011-12-06-1358 (Norway, 5/2024)** Absorbed through skin. TWA 8 hours: 25 ppm. TWA 8 hours: 94 mg/m³.
Xylene	**FOR-2011-12-06-1358 (Norway, 5/2024) [xylen]** Absorbed through skin. TWA 8 hours: 25 ppm. TWA 8 hours: 108 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, 7/2024)** TWA 8 hours: 240 mg/m³. STEL 15 minutes: 720 mg/m³.
Ethyl 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, 7/2024)** TWA 8 hours: 734 mg/m³. STEL 15 minutes: 1468 mg/m³. STEL 15 minutes: 400 ppm. TWA 8 hours: 200 ppm.
Naphtha (petroleum), hydrotreated light	**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, 7/2024) [benzin extraction]** TWA 8 hours: 500 mg/m³. STEL 15 minutes: 1500 mg/m³. **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, 7/2024) [hexane – other acyclic isomers except hexane]** TWA 8 hours: 400 mg/m³. STEL 15 minutes: 1200 mg/m³.
Methylisobutylketone	**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, 7/2024)** TWA 8 hours: 83 mg/m³. STEL 15 minutes: 200 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, 7/2024)** Absorbed through skin. TWA 8 hours: 100 mg/m³. STEL 15 minutes: 200 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, 7/2024) [xylene – mixed isomers (1,2-, 1,3-, 1,4-)]** Absorbed through skin. TWA 8 hours: 100 mg/m³. STEL 15 minutes: 200 mg/m³.

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n-Butyl acetate	**Portuguese Institute of Quality (Portugal, 11/2014)** TWA 8 hours: 150 ppm. STEL 15 minutes: 200 ppm. **Decree-Law 24/2012 - Occupational exposure limits for chemical agents (Portugal, 6/2021)** STEL 15 minutes: 150 ppm. STEL 15 minutes: 723 mg/m³. TWA 8 hours: 50 ppm. TWA 8 hours: 241 mg/m³.
Ethyl acetate	**Portuguese Institute of Quality (Portugal, 11/2014)** TWA 8 hours: 400 ppm. **Decree-Law 24/2012 - Occupational exposure limits for chemical agents (Portugal, 6/2021)** STEL 15 minutes: 400 ppm. STEL 15 minutes: 1468 mg/m³. TWA 8 hours: 200 ppm. TWA 8 hours: 734 mg/m³.
Naphtha (petroleum), hydrotreated light	**Portuguese Institute of Quality (Portugal, 11/2014) [hexano, outros isómeros]** TWA 8 hours: 500 ppm. STEL 15 minutes: 1000 ppm.
Methylisobutylketone	**Portuguese Institute of Quality (Portugal, 11/2014)** A3. TWA 8 hours: 20 ppm. STEL 15 minutes: 75 ppm. **Decree-Law 24/2012 - Occupational exposure limits for chemical agents (Portugal, 6/2021)** STEL 15 minutes: 50 ppm. STEL 15 minutes: 208 mg/m³. TWA 8 hours: 20 ppm. TWA 8 hours: 83 mg/m³.
Toluene	**Portuguese Institute of Quality (Portugal, 11/2014)** A4. TWA 8 hours: 20 ppm. **Decree-Law 24/2012 - Occupational exposure limits for chemical agents (Portugal, 6/2021)** 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.
Xylene	**Portuguese Institute of Quality (Portugal, 11/2014) [xileno (isómeros o, m & p)]** A4. TWA 8 hours: 100 ppm. STEL 15 minutes: 150 ppm. **Decree-Law 24/2012 - Occupational exposure limits for chemical agents (Portugal, 6/2021) [xilenos]** 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.
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.
Ethyl acetate	**HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2024)** VLA 8 hours: 734 mg/m³. VLA 8 hours: 200 ppm. Short term 15 minutes: 1468 mg/m³. Short term 15 minutes: 400 ppm.
Methylisobutylketone	**HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2024)**

	VLA 8 hours: 83 mg/m³. VLA 8 hours: 20 ppm. Short term 15 minutes: 208 mg/m³. Short term 15 minutes: 50 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.
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.
n-Butyl acetate	**Government regulation SR c. 355/2006 (Slovakia, 6/2024) [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).
Ethyl acetate	**Government regulation SR c. 355/2006 (Slovakia, 6/2024)** Inhalation sensitiser. TWA 8 hours: 734 mg/m³. TWA 8 hours: 200 ppm. STEL 15 minutes: 1468 mg/m³. STEL 15 minutes: 400 ppm.
Naphtha (petroleum), hydrotreated light	**Government regulation SR c. 355/2006 (Slovakia, 6/2024) [hexán, všetky izoméry okrem n-hexánu]** Inhalation sensitiser. TWA 8 hours: 500 ppm (Hexane (isomers)). TWA 8 hours: 1800 mg/m³ (Hexane (isomers)). STEL 15 minutes: 3600 mg/m³ (Hexane (isomers)). STEL 15 minutes: 1000 ppm (Hexane (isomers)).
Methylisobutylketone	**Government regulation SR c. 355/2006 (Slovakia, 6/2024)** Absorbed through skin , Inhalation sensitiser. TWA 8 hours: 83 mg/m³. TWA 8 hours: 20 ppm. STEL 15 minutes: 166 mg/m³. STEL 15 minutes: 40 ppm.
Toluene	**Government regulation SR c. 355/2006 (Slovakia, 6/2024)** 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.
Xylene	**Government regulation SR c. 355/2006 (Slovakia, 6/2024) [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).
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].
Ethyl acetate	**Regulation on protection of workers from the risks related to**

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	exposure to chemical substances at work (Slovenia, 4/2024) TWA 8 hours: 734 mg/m³. TWA 8 hours: 200 ppm. KTV 15 minutes: 1468 mg/m³ 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes]. KTV 15 minutes: 400 ppm 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes].
Naphtha (petroleum), hydrotreated light	**Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2024) [heksan izomere]** KTV 15 minutes: 1000 ppm 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes]. TWA 8 hours: 500 ppm. KTV 15 minutes: 3600 mg/m³ 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes]. TWA 8 hours: 1800 mg/m³.
Methylisobutylketone	**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: 83 mg/m³. TWA 8 hours: 20 ppm. KTV 15 minutes: 208 mg/m³ 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes]. KTV 15 minutes: 50 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].
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].
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.
Ethyl acetate	**National institute of occupational safety and health (Spain, 1/2024)** TWA 8 hours: 200 ppm. TWA 8 hours: 734 mg/m³. STEL 15 minutes: 1468 mg/m³. STEL 15 minutes: 400 ppm.
Naphtha (petroleum), hydrotreated light	**National institute of occupational safety and health (Spain, 1/2024) [hexano (todos los isómeros excepto n-hexano)]** TWA 8 hours: 500 ppm. TWA 8 hours: 1790 mg/m³. STEL 15 minutes: 1000 ppm. STEL 15 minutes: 3580 mg/m³.
Methylisobutylketone	**National institute of occupational safety and health (Spain, 1/2024)**

	TWA 8 hours: 20 ppm. TWA 8 hours: 83 mg/m³. STEL 15 minutes: 50 ppm. STEL 15 minutes: 208 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.
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.
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.
Ethyl acetate	**Work environment authority Regulation 2018:1 (Sweden, 11/2022)** TWA 8 hours: 150 ppm. TWA 8 hours: 550 mg/m³. STEL 15 minutes: 300 ppm. STEL 15 minutes: 1100 mg/m³.
Naphtha (petroleum), hydrotreated light	**Work environment authority Regulation 2018:1 (Sweden, 11/2022) [hexanes]** TWA 8 hours: 200 ppm. TWA 8 hours: 700 mg/m³. STEL 15 minutes: 300 ppm. STEL 15 minutes: 1100 mg/m³.
Methylisobutylketone	**Work environment authority Regulation 2018:1 (Sweden, 11/2022)** TWA 8 hours: 20 ppm. TWA 8 hours: 83 mg/m³. STEL 15 minutes: 50 ppm. STEL 15 minutes: 200 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.
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.
n-Butyl acetate	**SUVA (Switzerland, 1/2025)** TWA 8 hours: 50 ppm. TWA 8 hours: 240 mg/m³. STEL 15 minutes: 150 ppm. STEL 15 minutes: 720 mg/m³.
Ethyl acetate	**SUVA (Switzerland, 1/2025)** STEL 15 minutes: 400 ppm. STEL 15 minutes: 1460 mg/m³. TWA 8 hours: 200 ppm. TWA 8 hours: 730 mg/m³.

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Naphtha (petroleum), hydrotreated light	**SUVA (Switzerland, 1/2025)** TWA 8 hours: 500 ppm. TWA 8 hours: 2000 mg/m³.
Methylisobutylketone	**SUVA (Switzerland, 1/2025)** Absorbed through skin. TWA 8 hours: 20 ppm. TWA 8 hours: 82 mg/m³. STEL 15 minutes: 40 ppm. STEL 15 minutes: 164 mg/m³.
Toluene	**SUVA (Switzerland, 1/2025)** 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.
Xylene	**SUVA (Switzerland, 1/2025) [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.
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.
Ethyl acetate	**EH40/2005 WELs (United Kingdom (UK), 1/2020)** STEL 15 minutes: 400 ppm. TWA 8 hours: 200 ppm. STEL 15 minutes: 1468 mg/m³. TWA 8 hours: 734 mg/m³.
Methylisobutylketone	**EH40/2005 WELs (United Kingdom (UK), 1/2020)** Absorbed through skin. STEL 15 minutes: 416 mg/m³. STEL 15 minutes: 100 ppm. TWA 8 hours: 208 mg/m³. TWA 8 hours: 50 ppm.
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.
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.

Biological exposure indices

Product/ingredient name	Exposure indices
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.
Xylene	**VGU BEI (Austria, 9/2020) [Xylole]** 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.
No exposure indices known.	
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.
Methylisobutylketone	**Ordinance on the protection of workers from exposure to hazardous chemicals at work, biological limit values (Annex IV) (Croatia, 12/2023)** BEI: 3.5 mg/l, 4-methylpentan-2-one [in urine]. Sampling time: not critical. BEI: 35 nmol/l, 4-methylpentan-2-one [in urine]. Sampling time: not critical.
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.
Xylene	**Ordinance on the protection of workers from exposure to hazardous chemicals at work, biological limit values (Annex IV) (Croatia, 12/2023) [ksilen]** 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.
No exposure indices known.	

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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.
Xylene	**Government regulation of Czech Republic Limit Values of Biological Exposure Tests (Czech Republic, 9/2015) [Xyleny]** 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.
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
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.
Xylene	**Institute of Occupational Health, Ministry of Social Affairs (Finland, 9/2020) [Ksyleeni]** BEI: 5 mmol/l, methylhippuricacid [in urine]. Sampling time: at the end of the work shift.
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.
Methylisobutylketone	**DFG BEI-values list (Germany, 7/2024)** Notes: danger from percutaneous absorption (see p. 211 and p. 228). BEI: 0.7 mg/l, hexone [in urine]. Sampling time: end of exposure or end of shift. **TRGS 903 - BEI Values (Germany, 10/2024)** BEI: 0.7 mg/l, 4-methylpentan-2-one [in urine]. Sampling time: end of exposure or end of shift.
Toluene	**DFG BEI-values list (Germany, 7/2024)** 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, 10/2024)** 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: at the end of the shift, for long-term exposure after several previous shifts. BEI: 75 µg/l, toluene [in urine]. Sampling time: end of exposure or end of shift.

Xylene	**DFG BEI-values list (Germany, 7/2024) [Xylene (all isomers)]** Notes: danger from percutaneous absorption (see p. 211 and p. 228). BEI: 1800 mg/g creatinine, Methylhippuric acids (=toluric acids) (all isomers) [in urine]. Sampling time: end of exposure or end of shift. **TRGS 903 - BEI Values (Germany, 10/2024) [Xylol alle Isomeren]** BEI: 2000 mg/l, methylhippuric acid [in urine]. Sampling time: end of exposure or end of shift.
No exposure indices known.	
Methylisobutylketone	**5/2020. (II. 6.) ITM Decree (Hungary, 12/2023)** BEI: 35 µmol/l, methyl-iso-butyl-ketone [in urine]. Sampling time: at the end of the shift. BEI: 3.5 mg/l, methyl-iso-butyl-ketone [in urine]. Sampling time: 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.
Xylene	**5/2020. (II. 6.) ITM Decree (Hungary, 12/2023) [xilol]** 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.
No exposure indices known.	
Methylisobutylketone	**NAOSH BGVs (Ireland, 1/2011)** BMGV: 1 mg/l, MIBK [in urine]. Sampling time: end of shift - As soon as possible after exposure ceases.
Toluene	**NAOSH BGVs (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.
Xylene	**NAOSH BGVs (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.
No exposure indices known.	
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.
Xylene	**Minister Cabinet Regulations No.325 - BEI (Latvia, 3/2024) [ksiloli (visi izomēri)]** 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.
No exposure indices known.	
No exposure indices known.	

No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
Methylisobutylketone	**Portuguese Institute of Quality (Portugal, 11/2014)** BEI: 1 mg/l, methylisobutylketone (MIBK) [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	**Portuguese Institute of Quality (Portugal, 11/2014) [Xilenos (graus técnico e comercial)]** BEI: 1.5 g/g creatinine, (o, m, p) -methyl-boronic acids [in urine]. Sampling time: end of shift.
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	**HG 1218/2006, Annex 2, with subsequent modifications and additions (Romania, 3/2024) [xilen]** OBLV: 3 g/l, methylhippuric acid [in urine]. Sampling time: end of shift.
Methylisobutylketone	**Government regulation SR c. 355/2006 (Slovakia, 6/2024)** BLV: 2.67 µmol/mmol creatinine, as hexon [in urine]. Sampling time: at the end of exposure or work shift. BLV: 2.36 mg/g creatinine, as hexon [in urine]. Sampling time: at the end of exposure or work shift. BLV: 35.4 µmol/l, as hexon [in urine]. Sampling time: at the end of exposure or work shift. BLV: 3.5 mg/l, as hexon [in urine]. Sampling time: at the end of exposure or work shift.
Toluene	**Government regulation SR c. 355/2006 (Slovakia, 6/2024)** 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	**Government regulation SR c. 355/2006 (Slovakia, 6/2024) [xylén (všetky izoméry)]** 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.
Methylisobutylketone	**Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2024)** BAT: 0.7 mg/l, 4-methylpentan-2-one [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	**Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2024) [ksilen (vse izomere)]** BAT: 2 g/l, methylhippuric acid (all isomers) [in urine]. Sampling time: at the end of the work shift.
Methylisobutylketone	**National institute of occupational safety and health (Spain, 1/2024)** VLB: 1 mg/l, methyl isobutyl ketone [in urine]. Sampling time: end of shift.
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.
Xylene	**National institute of occupational safety and health (Spain, 1/2024) [Xilenos]** VLB: 1 g/g creatinine, methylhippuric acids [in urine]. Sampling time: end of shift.
No exposure indices known.	
Methylisobutylketone	**SUVA (Switzerland, 1/2025)** BEI: 0.7 mg/l, 4-methylpentan-2-one [in urine]. Sampling time: immediately after exposure or after working hours.
Toluene	**SUVA (Switzerland, 1/2025)** 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	**SUVA (Switzerland, 1/2025) [Xylol (alle Isomere)]** BEI: 2 g/l, methyl hippuric acid [in urine]. Sampling time: immediately after exposure or after working hours.
Methylisobutylketone	**EH40/2005 BMGVs (United Kingdom (UK), 1/2020)** BGV: 20 µmol/l, 4-methylpentan-2-one [in urine]. Sampling time: post shift.
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

Ethyl acetate

DNEL - General population - Long term - Oral
4.5 mg/kg bw/day
Effects: Systemic

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

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

DNEL - General population - Long term - Inhalation
367 mg/m³
Effects: Local

DNEL - General population - Long term - Inhalation
367 mg/m³
Effects: Systemic

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

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

DNEL - Workers - Long term - Inhalation
734 mg/m³
Effects: Local

DNEL - Workers - Long term - Inhalation
734 mg/m³

	Effects: Systemic **DNEL - Workers - Short term - Inhalation** 1468 mg/m³ Effects: Local **DNEL - Workers - Short term - Inhalation** 1468 mg/m³ Effects: Systemic
Naphtha (petroleum), hydrotreated light	**DNEL - General population - Long term - Oral** 149 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Dermal** 149 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Dermal** 300 mg/kg bw/day Effects: Systemic **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
Methylisobutylketone	**DNEL - General population - Long term - Dermal** 4.2 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Dermal** 11.8 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Inhalation** 14.7 mg/m³ Effects: Local

DNEL - General population - Long term - Inhalation
14.7 mg/m³
Effects: Systemic

DNEL - Workers - Long term - Inhalation
83 mg/m³
Effects: Local

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

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

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

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

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

DNEL - General population - Long term - Oral
4.2 mg/kg bw/day
Effects: Systemic

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
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

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.

SECTION 8: Exposure controls/personal protection

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. 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: chemical splash goggles.

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.

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 :

SECTION 9: Physical and chemical properties

Ingredient name	°C	°F	Method
Ethyl acetate	77.1	170.8	
Toluene	110.6	231.1	

Flammability : Not available.

Lower and upper explosion limit : Lower: 0.8% (xylene)
Upper: 11.5% (ethyl acetate)

Flash point : Closed cup: -1°C (30.2°F)

Auto-ignition temperature :

Ingredient name	°C	°F	Method
Naphtha (petroleum), hydrotreated light	280 to 470	536 to 878	DIN EN 14522
n-Butyl acetate	415	779	EU A.15

Decomposition temperature : Not available.

pH : Not applicable.

Viscosity : Not available.

Solubility(ies) :

Not available.

Solubility in water : Not available.

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

Vapour pressure :

	Vapour Pressure at 20˚C			Vapour pressure at 50˚C		
Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
Ethyl acetate	81.59163	10.9				
Naphtha (petroleum), hydrotreated light	42.15358	5.6	OECD 104	357.48039	47.7	OECD 104

Relative density : Not available.

Density : 0.9 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.

SECTION 10: Stability and reactivity

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]
Ethyl acetate	**Rat - Oral - LD50** 5620 mg/kg
Methylisobutylketone	**Rat - Oral - LD50** 2080 mg/kg
Toluene	**Rat - Oral - LD50** 636 mg/kg **Rat - Inhalation - LC50 Vapour** 49 g/m³ [4 hours]
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]

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)
ALPOLAN DUOSCAN 5483-02	N/A	88888.9	N/A	97.9	N/A
n-Butyl acetate	10760	14112	N/A	N/A	N/A
Ethyl acetate	5620	N/A	N/A	N/A	N/A
Methylisobutylketone	2080	N/A	N/A	11	N/A
Toluene	N/A	N/A	N/A	49	N/A
Xylene	4300	1100	N/A	11	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
Methylisobutylketone	**Rabbit - Skin - Mild irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 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
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 %

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
Methylisobutylketone	**Rabbit - Eyes - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 100 uL **Rabbit - Eyes - Severe irritant** Amount/concentration applied: 40 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
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

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)
Ethyl acetate	STOT SE 3, H336 (Narcotic effects)
Methylisobutylketone	STOT SE 3, H336 (Narcotic effects)
Toluene	STOT SE 3, H336 (Narcotic effects)
Xylene	STOT SE 3, H335 (Respiratory tract irritation)

Specific target organ toxicity (repeated exposure)

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

Aspiration hazard

Product/ingredient name	Result
Naphtha (petroleum), hydrotreated light	ASPIRATION HAZARD - Category 1
Toluene	ASPIRATION HAZARD - Category 1
Xylene	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure

SECTION 11: Toxicological information

Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

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

Skin contact : No known significant effects or critical hazards.

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

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

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

Skin contact : No specific data.

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 : No known significant effects or critical hazards.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

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**

SECTION 12: Ecological information

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
Ethyl acetate	**Acute - LC50 - Fresh water** Daphnia - Water flea - *Daphnia cucullata* Age: 11 days 154000 µg/l [48 hours] Effect: Mortality **Acute - LC50 - Fresh water** Fish - Indian catfish - *Heteropneustes fossilis* Size: 14.16 cm; Weight: 25.54 g 212500 µg/l [96 hours] Effect: Mortality **Acute - EC50 - Fresh water** Algae - Green algae - *Selenastrum sp.* 2500000 µg/l [96 hours] **Chronic - NOEC - Fresh water** Daphnia - Water flea - *Daphnia magna* 12 mg/l [21 days] Effect: Behavior **Chronic - NOEC - Fresh water** Fish - Fathead minnow - *Pimephales promelas* - Embryo Age: <24 hours 75.6 mg/l [32 days] Effect: Mortality
Methylisobutylketone	**Acute - LC50 - Fresh water** Fish - Fathead minnow - *Pimephales promelas* Age: 29 days; Size: 21 mm; Weight: 0.141 g 505000 µg/l [96 hours] Effect: Mortality **Chronic - NOEC - Fresh water** Daphnia - Water flea - *Daphnia magna* 78 mg/l [21 days] Effect: Behavior **Chronic - NOEC - Fresh water** Fish - Fathead minnow - *Pimephales promelas* - Embryo Age: <24 hours 168 mg/l [33 days] Effect: Mortality
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
Ethyl acetate	0.68	30	Low
Naphtha (petroleum), hydrotreated light	2.2 to 5.2	10 to 2500	High
Methylisobutylketone	1.9	-	Low
Toluene	2.73	90	Low
Xylene	3.12	8.1 to 25.9	Low

12.4 Mobility in soil

Soil/water partition coefficient

Product/ingredient name	logKoc	Koc
n-Butyl acetate	1.5	33.2139
Ethyl acetate	1.3	18.1744
Methylisobutylketone	1.6	40.9047
Toluene	2.1	117.115

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
Ethyl acetate	No	No	No	No	No	No	No
Naphtha (petroleum), hydrotreated light	No	No	No	No	No	No	No
Methylisobutylketone	No	No	No	No	No	No	No
Toluene	No	No	No	No	No	No	No
Xylene	No	No	No	No	No	No	No
Mixture of alpha-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl) propionyl-omega-hydroxypoly(oxyethylene) and alpha-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl) propionyl-omega-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl) propionyloxypoly (oxyethylene)	No	No	No	No	No	No	No

Mobility : Not available.

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	N/A	N/A	No	N/A	N/A	N/A
Ethyl acetate	No	N/A	No	No	No	N/A	No
Naphtha (petroleum), hydrotreated light	No	N/A	No	No	No	N/A	No
Methylisobutylketone	No	N/A	N/A	No	N/A	N/A	N/A
Toluene	No	N/A	No	Yes	No	N/A	No
Xylene	No	N/A	No	Yes	No	N/A	No
Mixture of alpha-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl) propionyl-omega-hydroxypoly(oxyethylene) and alpha-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl) propionyl-omega-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl) propionyloxypoly (oxyethylene)	No	N/A	N/A	No	N/A	N/A	N/A

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
Ethyl acetate	No	No	No	No	No	No	No
Naphtha (petroleum), hydrotreated light	No	No	No	No	No	No	No
Methylisobutylketone	No	No	No	No	No	No	No
Toluene	No	No	No	No	No	No	No
Xylene	No	No	No	No	No	No	No
Mixture of alpha-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl) propionyl-omega-hydroxypoly(oxyethylene) and alpha-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl) propionyl-omega-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl) propionyloxypoly (oxyethylene)	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.

SECTION 12: Ecological information

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.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

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	II	II	II	II
14.5 Environmental hazards	No.	Yes.	No.	No.

Additional information

ADR/RID : **Special provisions** 640 (C)
Tunnel code (D/E)

ADN : The product is only regulated as an environmentally hazardous substance when transported in tank vessels.
Special provisions 640 (C)

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.

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.

SECTION 14: Transport information

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

Product/ingredient name	%	Designation [Usage]
ALPOLAN DUOSCAN 5483-02	≥90	3
Toluene	<3	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 2

Limitation of the use of organic solvents : Permitted.

Belgium

Czech Republic

Storage code : I

Denmark

Fire class : I-1

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Executive Order No. 1795/2015

Ingredient name	Annex I Section A	Annex I Section B
Propan-2-ol	Listed	-
Ethylbenzene	Listed	-
Methylisobutylketone	-	Carc. 2, H351

MAL-code : 3-1

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, respiratory protection with air supply and arm protectors/apron/coveralls/protective clothing must be worn as appropriate or as instructed.

MAL-code: 3-1

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

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

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

- Air-supplied full mask and arm protectors must be worn.

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 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, coveralls 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.

Low-boiling liquids : This product contains low-boiling point liquids. Any respiratory protective equipment should be air-fed.

SECTION 15: Regulatory information

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 : Listed

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

Finland

France

Social Security Code, Articles L 461-1 to L 461-7 :

n-Butyl acetate	RG 84
Ethyl acetate	RG 84
Naphtha (petroleum), hydrotreated light	RG 84
Methylisobutylketone	RG 84
Toluene	RG 4bis, RG 84
Xylene	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 : 3

Technical instruction on air quality control (TA Luft)

Number [Class]	Description	%
5.2.1	Total dust	12.6
5.2.5	Organic substances	87.4
5.2.5 [I]	Organic substances	81.5

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
Naphtha (petroleum), hydrotreated light	Listed	Listed	-	-	-
tolueen	-	-	-	Development 2	-
xyleen	-	-	-	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) : 1

Switzerland

VOC content : VOC (w/w): 81.5%

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

SECTION 15: Regulatory information

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

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. 2, H225	On basis of test data
Eye Irrit. 2, H319	Calculation method
Carc. 2, H351	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.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Full text of classifications [CLP/GHS]

SECTION 16: Other information

Acute Tox. 4	ACUTE TOXICITY - Category 4
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
Carc. 2	CARCINOGENICITY - Category 2
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
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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ALPOLAN DUOSCAN 5483-02_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.