

# SAFETY DATA SHEET



TEKNOPOX FILLER 2112

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

### 1.1 Product identifier

Product name : TEKNOPOX FILLER 2112

### 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]

Skin Irrit. 2, H315

Eye Irrit. 2, H319

Skin Sens. 1, H317

Repr. 1B, H360F

Aquatic Chronic 2, H411

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 :  
H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.  
H360F - May damage fertility.  
H411 - Toxic 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.  
P273 - Avoid release to the environment.

Response :  
P391 - Collect spillage.  
P308 + P313 - IF exposed or concerned: Get medical advice or attention.

Storage : Not applicable.


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Label No : 41755

## SECTION 2: Hazards identification


<b>Disposal</b>	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazardous ingredients</b>	: Contains: Bis[4-(2,3-epoxypropoxy)phenyl]propane; Oxirane, mono[ (C12-14-alkyloxy)methyl]derivs.; Reaction mass of 2,2'-[methylenebis (2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis (4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl] phenoxy}methyl)oxirane; Benzyl alcohol and Phenol, methylstyrenated
<b>Supplemental label elements</b>	:  Contains epoxy constituents. May produce an allergic reaction.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: Restricted to professional users.

### 2.3 Other hazards

<b>Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII</b>	: This mixture contains substances that are assessed to be a PBT or a vPvB, refer to Section 3.2.
<b>Other hazards which do not result in classification</b>	: 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
 Bis[4-(2,3-epoxypropoxy)phenyl]propane	REACH #: 01-2119456619-26 EC: 216-823-5 CAS: 1675-54-3 Index: 603-073-00-2	≥25 - ≤50	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	Skin Irrit. 2, H315: C ≥ 5% Eye Irrit. 2, H319: C ≥ 5%	[1]
Oxirane, mono[ (C12-14-alkyloxy)methyl] derivs.	REACH #: 01-2119485289-22 EC: 271-846-8 CAS: 68609-97-2 Index: 603-103-00-4	≤10	Skin Irrit. 2, H315 Skin Sens. 1, H317 Repr. 1B, H360F	-	[1]
Reaction mass of 2,2'-[methylenebis (2,1-phenyleneoxymethylene)] bis(oxirane) and 2,2'-[methylenebis (4,1-phenyleneoxymethylene)] bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl] phenoxy}methyl)oxirane	REACH #: 01-2119454392-40 EC: 500-006-8 CAS: 9003-36-5	≤10	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411	-	[1]
Benzyl alcohol	REACH #: 01-2119492630-38 EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5	≤3	Acute Tox. 4, H302 Eye Irrit. 2, H319 Skin Sens. 1B, H317	ATE [Oral] = 1200 mg/kg	[1]
Phenol, methylstyrenated	REACH #: 01-2119555274-38 EC: 700-960-7 CAS: 68512-30-1	≤3	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 3, H412	-	[1] [3]

## SECTION 3: Composition/information on ingredients

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]
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	REACH #: 01-2119979085-27 EC: 309-629-8 CAS: 100545-48-0	<1	Skin Sens. 1B, H317  <b>See Section 16 for the full text of the H statements declared above.</b>	-	[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

[3] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

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 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 unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. 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.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

#### Over-exposure signs/symptoms

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

## SECTION 4: First aid measures

- Inhalation** : Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations

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

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

### 5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic 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  
halogenated compounds  
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.
- 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. 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".

## SECTION 6: Accidental release measures

- 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. Collect spillage.
- 6.3 Methods and material for containment and cleaning up**
- Small spill** :  Stop leak if without risk. Move containers from spill area. 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. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
- 6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.


## SECTION 7: Handling and storage

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

### 7.1 Precautions for safe handling


- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. 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. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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

 Store in accordance with local regulations. 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. 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
 2	200 tonnes	500 tonnes

### 7.3 Specific end use(s)

- Recommendations** : Not available.

## SECTION 7: Handling and storage

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
Bis[4-(2,3-epoxypropoxy)phenyl]propane	<b>Regulation on Limit Values - MAC (Austria, 12/2024)</b> <b>[1,2-Epoxy-3-(tolylxy)propan (alle Isomeren)]</b> Carc B. TWA 8 hours: 10 ppm. TWA 8 hours: 70 mg/m <sup>3</sup> . PEAK 15 minutes: 20 ppm 4 times per shift. PEAK 15 minutes: 140 mg/m <sup>3</sup> 4 times per shift.
Oxirane, mono[(C12-14-alkyloxy)methyl]derivs.	<b>Regulation on Limit Values - MAC (Austria, 12/2024)</b> <b>[1,2-Epoxy-3-(tolylxy)propan (alle Isomeren)]</b> Carc B. TWA 8 hours: 10 ppm. TWA 8 hours: 70 mg/m <sup>3</sup> . PEAK 15 minutes: 20 ppm 4 times per shift. PEAK 15 minutes: 140 mg/m <sup>3</sup> 4 times per shift.
Toluene	<b>Regulation on Limit Values - MAC (Austria, 12/2024) d.</b> Absorbed through skin. TWA 8 hours: 50 ppm. TWA 8 hours: 190 mg/m <sup>3</sup> . PEAK 15 minutes: 100 ppm 4 times per shift. PEAK 15 minutes: 380 mg/m <sup>3</sup> 4 times per shift.
Toluene	<b>Limit values (Belgium, 12/2023)</b> Absorbed through skin. TWA 8 hours: 20 ppm. TWA 8 hours: 77 mg/m <sup>3</sup> . STEL 15 minutes: 100 ppm. STEL 15 minutes: 384 mg/m <sup>3</sup> .
Benzyl alcohol	<b>Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 4/2024)</b> Limit value 8 hours: 5 mg/m <sup>3</sup> .
Toluene	<b>Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 4/2024)</b> Absorbed through skin. Limit value 15 minutes: 384 mg/m <sup>3</sup> . Limit value 8 hours: 192 mg/m <sup>3</sup> . Limit value 15 minutes: 100 ppm. Limit value 8 hours: 50 ppm.
Toluene	<b>Ordinance on the protection of workers from exposure to hazardous chemicals at work, exposure limit values (Annex I) (Croatia, 12/2023)</b> Absorbed through skin. STELV 15 minutes: 384 mg/m <sup>3</sup> . STELV 15 minutes: 100 ppm. ELV 8 hours: 192 mg/m <sup>3</sup> . ELV 8 hours: 50 ppm.
Toluene	<b>Department of labour inspection (Cyprus, 7/2021)</b> Absorbed through skin. STEL 15 minutes: 100 ppm. STEL 15 minutes: 384 mg/m <sup>3</sup> . TWA 8 hours: 50 ppm. TWA 8 hours: 192 mg/m <sup>3</sup> .



## SECTION 8: Exposure controls/personal protection

Benzyl alcohol	<p><b>Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 12/2023)</b>  TWA 8 hours: 40 mg/m<sup>3</sup>.  TWA 8 hours: 9 ppm.  STEL 15 minutes: 80 mg/m<sup>3</sup>.  STEL 15 minutes: 18 ppm.</p>
Toluene	<p><b>Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 12/2023)</b> Absorbed through skin.  TWA 8 hours: 192 mg/m<sup>3</sup>.  TWA 8 hours: 50 ppm.  STEL 15 minutes: 384 mg/m<sup>3</sup>.  STEL 15 minutes: 100 ppm.</p>
Toluene	<p><b>Working Environment Authority (Denmark, 12/2024)</b> Absorbed through skin.  TWA 8 hours: 25 ppm.  TWA 8 hours: 94 mg/m<sup>3</sup>.  STEL 15 minutes: 384 mg/m<sup>3</sup>.  STEL 15 minutes: 100 ppm.</p>
Toluene	<p><b>Occupational exposure limits, Regulation No. 293 (Estonia, 4/2024)</b> Absorbed through skin.  TWA 8 hours: 192 mg/m<sup>3</sup>.  TWA 8 hours: 50 ppm.  STEL 15 minutes: 384 mg/m<sup>3</sup>.  STEL 15 minutes: 100 ppm.</p>
Toluene	<p><b>EU OEL (Europe, 1/2022)</b> Absorbed through skin.  TWA 8 hours: 192 mg/m<sup>3</sup>.  TWA 8 hours: 50 ppm.  STEL 15 minutes: 384 mg/m<sup>3</sup>.  STEL 15 minutes: 100 ppm.</p>
Benzyl alcohol	<p><b>Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021)</b>  TWA 8 hours: 45 mg/m<sup>3</sup>.  TWA 8 hours: 10 ppm.</p>
Toluene	<p><b>Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021)</b> Absorbed through skin , Ototoxicant.  TWA 8 hours: 25 ppm.  TWA 8 hours: 81 mg/m<sup>3</sup>.  STEL 15 minutes: 100 ppm.  STEL 15 minutes: 380 mg/m<sup>3</sup>.</p>
Toluene	<p><b>Ministry of Labor (France, 6/2024)</b> 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/m<sup>3</sup>. 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/m<sup>3</sup>. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)</p>
Bis[4-(2,3-epoxypropoxy)phenyl]propane	<p><b>DFG MAC-values list (Germany, 7/2024)</b> Skin sensitiser.</p>
Benzyl alcohol	<p><b>TRGS 900 OEL (Germany, 6/2024)</b> Absorbed through skin.  PEAK 15 minutes: 10 ppm.  PEAK 15 minutes: 44 mg/m<sup>3</sup>.  TWA 8 hours: 22 mg/m<sup>3</sup>.  TWA 8 hours: 5 ppm.</p>
	<p><b>DFG MAC-values list (Germany, 7/2024)</b> Develop C. Absorbed through skin.  PEAK 15 minutes: 44 mg/m<sup>3</sup> 4 times per shift [Interval: 1 hour].  PEAK 15 minutes: 10 ppm 4 times per shift [Interval: 1 hour].  TWA 8 hours: 22 mg/m<sup>3</sup>.  TWA 8 hours: 5 ppm.</p>

## SECTION 8: Exposure controls/personal protection

Toluene	<p><b>TRGS 900 OEL (Germany, 6/2024)</b> Absorbed through skin.  TWA 8 hours: 190 mg/m<sup>3</sup>.  PEAK 15 minutes: 380 mg/m<sup>3</sup>.  TWA 8 hours: 50 ppm.  PEAK 15 minutes: 100 ppm.</p> <p><b>DFG MAC-values list (Germany, 7/2024)</b> 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/m<sup>3</sup>.  PEAK 15 minutes: 380 mg/m<sup>3</sup> 4 times per shift [Interval: 1 hour].</p>
Toluene	<p><b>Presidential Decree 307/1986: Occupational exposure limit values (Greece, 8/2024)</b> Absorbed through skin.  TWA 8 hours: 50 ppm.  TWA 8 hours: 192 mg/m<sup>3</sup>.  STEL 15 minutes: 100 ppm.  STEL 15 minutes: 384 mg/m<sup>3</sup>.</p>
Toluene	<p><b>5/2020. (II. 6.) ITM Decree (Hungary, 1/2025)</b> Absorbed through skin.  TWA 8 hours: 192 mg/m<sup>3</sup>.  PEAK 15 minutes: 384 mg/m<sup>3</sup>.  PEAK 15 minutes: 100 ppm.  TWA 8 hours: 50 ppm.</p>
Toluene	<p><b>Ministry of Welfare, List of Exposure Limits (Iceland, 11/2024)</b> Absorbed through skin.  STEL 15 minutes: 188 mg/m<sup>3</sup>.  STEL 15 minutes: 50 ppm.  TWA 8 hours: 94 mg/m<sup>3</sup>.  TWA 8 hours: 25 ppm.</p>
glass, oxide, chemicals	<p><b>NAOSH (Ireland, 4/2024) [refractory ceramic fibres]</b> Carc 1B.  Notes: EU derived Occupational Exposure Limit Values  OELV 8 hours: 0.3 f/cm<sup>3</sup>. Form: fibres.</p> <p><b>NAOSH (Ireland, 4/2024) [mineral wool]</b> Notes: Advisory Occupational Exposure Limit Values (OELVs)  OELV 8 hours: 2 f/cm<sup>3</sup>. Form: fibres.  OELV 8 hours: 5 mg/m<sup>3</sup>. Form: fibres.</p>
Toluene	<p><b>NAOSH (Ireland, 4/2024)</b> Absorbed through skin. Notes: EU derived Occupational Exposure Limit Values  OELV 8 hours: 50 ppm.  OELV 8 hours: 192 mg/m<sup>3</sup>.  OELV 15 minutes: 100 ppm.  OELV 15 minutes: 384 mg/m<sup>3</sup>.</p>
Toluene	<p><b>Legislative Decree No. 81/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 9/2024)</b> Absorbed through skin.  Limit value 8 hours: 50 ppm.  Limit value 8 hours: 192 mg/m<sup>3</sup>.  Short Term 15 minutes: 100 ppm.  Short Term 15 minutes: 384 mg/m<sup>3</sup>.</p>
Benzyl alcohol	<p><b>Ministers Cabinet Regulations Nr.325 - AER (Latvia, 3/2024)</b>  TWA 8 hours: 5 mg/m<sup>3</sup>.</p>
Toluene	<p><b>Ministers Cabinet Regulations Nr.325 - AER (Latvia, 3/2024)</b> Absorbed through skin.  TWA 8 hours: 50 mg/m<sup>3</sup>.  STEL 15 minutes: 150 mg/m<sup>3</sup>.  TWA 8 hours: 14 ppm.  STEL 15 minutes: 40 ppm.</p>



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Benzyl alcohol	Lithuanian Hygiene Standard HN 23 (Lithuania, 1/2024) Absorbed through skin. TWA 8 hours: 5 mg/m <sup>3</sup> .
Toluene	Lithuanian Hygiene Standard HN 23 (Lithuania, 1/2024) Repr. Absorbed through skin. TWA 8 hours: 192 mg/m <sup>3</sup> . TWA 8 hours: 50 ppm. STEL 15 minutes: 384 mg/m <sup>3</sup> . STEL 15 minutes: 100 ppm.
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/m <sup>3</sup> . TWA 8 hours: 50 ppm. TWA 8 hours: 192 mg/m <sup>3</sup> .
Toluene	EU OEL (Europe, 1/2022) Absorbed through skin. TWA 8 hours: 192 mg/m <sup>3</sup> . TWA 8 hours: 50 ppm. STEL 15 minutes: 384 mg/m <sup>3</sup> . STEL 15 minutes: 100 ppm.
Toluene	Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 5/2024) TWA 8 hours: 150 mg/m <sup>3</sup> . STEL 15 minutes: 384 mg/m <sup>3</sup> . STEL 15 minutes: 100 ppm. TWA 8 hours: 39 ppm.
Toluene	FOR-2011-12-06-1358 (Norway, 5/2024) Absorbed through skin. TWA 8 hours: 25 ppm. TWA 8 hours: 94 mg/m <sup>3</sup> .
Benzyl alcohol	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/m <sup>3</sup> .
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/m <sup>3</sup> . STEL 15 minutes: 200 mg/m <sup>3</sup> .
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/m <sup>3</sup> . TWA 8 hours: 50 ppm. TWA 8 hours: 192 mg/m <sup>3</sup> .
Toluene	HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2024) R2. Absorbed through skin. VLA 8 hours: 192 mg/m <sup>3</sup> . VLA 8 hours: 50 ppm. Short term 15 minutes: 384 mg/m <sup>3</sup> . Short term 15 minutes: 100 ppm.

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Toluene	<p><b>Government regulation SR c. 355/2006 (Slovakia, 6/2024)</b>  Absorbed through skin , Inhalation sensitiser.  TWA 8 hours: 192 mg/m<sup>3</sup>.  TWA 8 hours: 50 ppm.  STEL 15 minutes: 384 mg/m<sup>3</sup>.  STEL 15 minutes: 100 ppm.</p>
Benzyl alcohol	<p><b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2024)</b>  Absorbed through skin.  KTV 15 minutes: 10 ppm 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes].  KTV 15 minutes: 44 mg/m<sup>3</sup> 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes].  TWA 8 hours: 5 ppm.  TWA 8 hours: 22 mg/m<sup>3</sup>.</p>
Toluene	<p><b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2024)</b>  Repr Dev 2. Absorbed through skin.  TWA 8 hours: 192 mg/m<sup>3</sup>.  TWA 8 hours: 50 ppm.  KTV 15 minutes: 384 mg/m<sup>3</sup> 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].</p>
Toluene	<p><b>National institute of occupational safety and health (Spain, 1/2024)</b> Absorbed through skin.  TWA 8 hours: 50 ppm.  TWA 8 hours: 192 mg/m<sup>3</sup>.  STEL 15 minutes: 100 ppm.  STEL 15 minutes: 384 mg/m<sup>3</sup>.</p>
Toluene	<p><b>Work environment authority Regulation 2018:1 (Sweden, 11/2022)</b> Absorbed through skin , Ototoxicant.  TWA 8 hours: 50 ppm.  TWA 8 hours: 192 mg/m<sup>3</sup>.  STEL 15 minutes: 100 ppm.  STEL 15 minutes: 384 mg/m<sup>3</sup>.</p>
Benzyl alcohol	<p><b>SUVA (Switzerland, 1/2025)</b> Absorbed through skin.  TWA 8 hours: 5 ppm. Form: vapour and aerosols.  TWA 8 hours: 22 mg/m<sup>3</sup>. Form: vapour and aerosols.</p>
Toluene	<p><b>SUVA (Switzerland, 1/2025)</b> Develop 2. Absorbed through skin , Ototoxicant.  TWA 8 hours: 50 ppm.  TWA 8 hours: 190 mg/m<sup>3</sup>.  STEL 15 minutes: 200 ppm.  STEL 15 minutes: 760 mg/m<sup>3</sup>.</p>
Toluene	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020)</b> Absorbed through skin.  STEL 15 minutes: 384 mg/m<sup>3</sup>.  TWA 8 hours: 191 mg/m<sup>3</sup>.  TWA 8 hours: 50 ppm.  STEL 15 minutes: 100 ppm.</p>

### Biological exposure indices

## SECTION 8: Exposure controls/personal protection

Product/ingredient name	Exposure indices
Toluene	<p><b>VGU BEI (Austria, 9/2020)</b></p> <p>BEI Fitness: 250 µg/l, toluene [in blood]. Sampling time: one year.</p> <p>BEI Fitness: 0.8 mg/l, o-cresol [in urine]. Sampling time: one year.</p> <p>BEI Fitness: 130000 /µl, platelets (non-pathological differential blood count) [in blood]. Sampling time: one year.</p> <p>BEI Fitness: 150000 /µl, platelets [in blood]. Sampling time: one year.</p> <p>BEI Fitness: 3700 to 13000 /µl, leukocytes (non-pathological differential blood count) [in blood]. Sampling time: one year.</p> <p>BEI Fitness: 4000 to 13000 /µl, leukocytes [in blood]. Sampling time: one year.</p> <p>BEI Fitness - men: 3.8 million/µl, erythrocytes [in blood]. Sampling time: one year.</p> <p>BEI Fitness - women: 3.2 million/µl, erythrocytes [in blood]. Sampling time: one year.</p> <p>BEI Fitness - men: 12 g/dl, hemoglobin [in blood]. Sampling time: one year.</p> <p>BEI Fitness - women: 10 g/dl, hemoglobin [in blood]. Sampling time: one year.</p>
No exposure indices known.	
Toluene	<p><b>Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 4/2024)</b></p> <p>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.</p>
Toluene	<p><b>Ordinance on the protection of workers from exposure to hazardous chemicals at work, biological limit values (Annex IV) (Croatia, 12/2023)</b></p> <p>BEI: 20 ppm, toluene [in end exhaled air]. Sampling time: during exposure.</p> <p>BEI: 0.83 µmol/l, toluene [in end exhaled air]. Sampling time: during exposure.</p> <p>BEI: 1 mg/l, toluene [in blood]. Sampling time: at the end of the work shift.</p> <p>BEI: 10.85 µmol/l, toluene [in blood]. Sampling time: at the end of the work shift.</p> <p>BEI: 1.05 mmol/mol creatinine, o-cresol [in urine]. Sampling time: at the end of the work shift.</p> <p>BEI: 1 mg/g creatinine, o-cresol [in urine]. Sampling time: at the end of the work shift.</p> <p>BEI: 1.58 mol/mol creatinine, hippuric acid [in urine]. Sampling time: at the end of the work shift.</p> <p>BEI: 2.5 g/g creatinine, hippuric acid [in urine]. Sampling time: at the end of the work shift.</p>
No exposure indices known.	
Toluene	<p><b>Government regulation of Czech Republic Limit Values of Biological Exposure Tests (Czech Republic, 9/2015)</b></p> <p>Biological limit values: 1000 µmol/mmol creatinine, hippuric acid [in urine]. Sampling time: end of the shift.</p> <p>Biological limit values: 1600 mg/g, hippuric acid [in urine]. Sampling time: end of the shift.</p> <p>Biological limit values: 1.6 µmol/mmol creatinine, o-kresol (after hydrolysis) [in urine]. Sampling time: end of the shift.</p> <p>Biological limit values: 1.5 mg/g creatinine, o-kresol (after hydrolysis) [in urine]. Sampling time: end of the shift.</p>
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	

## SECTION 8: Exposure controls/personal protection

Toluene	<b>Institute of Occupational Health, Ministry of Social Affairs (Finland, 9/2020)</b> BEI: 500 nmol/l, toluene [in blood]. Sampling time: the morning after the working day.
Toluene	<b>Biological limit values (BLV) - Labour Code / ANSES (France, 4/2023)</b> 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.
Toluene	<b>DFG BEI-values list (Germany, 7/2024)</b> 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. <b>TRGS 903 - BEI Values (Germany, 10/2024)</b> 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.
No exposure indices known.	
Toluene	<b>5/2020. (II. 6.) ITM Decree (Hungary, 12/2023)</b> BEI: 1 mg/g creatinine, o-cresol [in urine]. Sampling time: at the end of the shift. BEI: 1 µmol/mmol creatinine, o-cresol [in urine]. Sampling time: at the end of the shift.
No exposure indices known.	
Toluene	<b>NAOSH BGVs (Ireland, 1/2011)</b> BMGV: 0.3 mg/g creatinine, o-cresol [in urine]. Sampling time: end of shift - As soon as possible after exposure ceases. BMGV: 0.03 mg/l, toluene [in urine]. Sampling time: end of shift - As soon as possible after exposure ceases. BMGV: 0.02 mg/l, toluene [in blood]. Sampling time: prior to last shift of workweek.
No exposure indices known.	
Toluene	<b>Minister Cabinet Regulations No.325 - BEI (Latvia, 3/2024)</b> BEI: 600 µg/l, toluene [in blood]. Sampling time: at the end of the exposure. BEI: 75 µg/l, toluene [in urine]. Sampling time: end of the shift. BEI: 1.5 mg/l, o-cresol (after hydrolysis) [in urine]. Sampling time: at the end of the exposure or at the end of the shift.
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	

## SECTION 8: Exposure controls/personal protection

Toluene	<p><b>Portuguese Institute of Quality (Portugal, 11/2014)</b>            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.</p>
Toluene	<p><b>HG 1218/2006, Annex 2, with subsequent modifications and additions (Romania, 3/2024)</b>            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.</p>
Toluene	<p><b>Government regulation SR c. 355/2006 (Slovakia, 6/2024)</b>            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.</p>
Toluene	<p><b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2024)</b>            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.</p>
Toluene	<p><b>National institute of occupational safety and health (Spain, 1/2024)</b>            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.</p>
No exposure indices known.	
Toluene	<p><b>SUVA (Switzerland, 1/2025)</b>            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:</p>

## SECTION 8: Exposure controls/personal protection

No exposure indices known.

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.

**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

Bis[4-(2,3-epoxypropoxy)phenyl]propane

#### Result

**DNEL - General population - Long term - Dermal**

89.3 µg/kg bw/day

Effects: Systemic

**DNEL - General population - Long term - Oral**

0.5 mg/kg bw/day

Effects: Systemic

**DNEL - Workers - Long term - Dermal**

0.75 mg/kg bw/day

Effects: Systemic

**DNEL - General population - Long term - Inhalation**

0.87 mg/m<sup>3</sup>

Effects: Systemic

**DNEL - Workers - Long term - Inhalation**

4.93 mg/m<sup>3</sup>

Effects: Systemic

Oxirane, mono[(C12-14-alkyloxy)methyl]  
derivs.

**DNEL - General population - Long term - Oral**

0.5 mg/kg bw/day

Effects: Systemic

**DNEL - General population - Long term - Dermal**

0.5 mg/kg bw/day

Effects: Systemic

**DNEL - General population - Long term - Inhalation**

0.87 mg/m<sup>3</sup>

Effects: Systemic

**DNEL - Workers - Long term - Dermal**

1 mg/kg bw/day

Effects: Systemic

**DNEL - Workers - Long term - Inhalation**

3.6 mg/m<sup>3</sup>

Effects: Systemic



## SECTION 8: Exposure controls/personal protection

Reaction mass of 2,2'-[methylenebis  
(2,1-phenyleneoxymethylene)]bis(oxirane)  
and 2,2'-[methylenebis  
(4,1-phenyleneoxymethylene)]bis(oxirane)  
and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]  
phenoxy}methyl)oxirane

### DNEL - Workers - Short term - Dermal

8.3 µg/cm<sup>2</sup>

Effects: Local

### DNEL - General population - Long term - Oral

6.25 mg/kg bw/day

Effects: Systemic

### DNEL - General population - Long term - Inhalation

8.7 mg/m<sup>3</sup>

Effects: Systemic

### DNEL - Workers - Long term - Inhalation

29.39 mg/m<sup>3</sup>

Effects: Systemic

### DNEL - General population - Long term - Dermal

62.5 mg/kg bw/day

Effects: Systemic

### DNEL - Workers - Long term - Dermal

104.15 mg/kg bw/day

Effects: Systemic

Benzyl alcohol

### DNEL - General population - Long term - Oral

4 mg/kg bw/day

Effects: Systemic

### DNEL - General population - Long term - Dermal

4 mg/kg bw/day

Effects: Systemic

### DNEL - General population - Long term - Inhalation

5.4 mg/m<sup>3</sup>

Effects: Systemic

### DNEL - Workers - Long term - Dermal

8 mg/kg bw/day

Effects: Systemic

### DNEL - General population - Short term - Oral

20 mg/kg bw/day

Effects: Systemic

### DNEL - General population - Short term - Dermal

20 mg/kg bw/day

Effects: Systemic

### DNEL - Workers - Long term - Inhalation

22 mg/m<sup>3</sup>

Effects: Systemic

### DNEL - General population - Short term - Inhalation

27 mg/m<sup>3</sup>

Effects: Systemic

### DNEL - Workers - Short term - Dermal

40 mg/kg bw/day

Effects: Systemic

### DNEL - Workers - Short term - Inhalation

110 mg/m<sup>3</sup>

Effects: Systemic

## SECTION 8: Exposure controls/personal protection

Toluene

**DNEL - General population - Long term - Oral**

8.13 mg/kg bw/day

Effects: Systemic

**DNEL - General population - Long term - Inhalation**

56.5 mg/m<sup>3</sup>

Effects: Local

**DNEL - General population - Long term - Inhalation**

56.5 mg/m<sup>3</sup>

Effects: Systemic

**DNEL - Workers - Long term - Inhalation**

192 mg/m<sup>3</sup>

Effects: Local

**DNEL - Workers - Long term - Inhalation**

192 mg/m<sup>3</sup>

Effects: Systemic

**DNEL - General population - Long term - Dermal**

226 mg/kg bw/day

Effects: Systemic

**DNEL - General population - Short term - Inhalation**

226 mg/m<sup>3</sup>

Effects: Local

**DNEL - General population - Short term - Inhalation**

226 mg/m<sup>3</sup>

Effects: Systemic

**DNEL - Workers - Long term - Dermal**

384 mg/kg bw/day

Effects: Systemic

**DNEL - Workers - Short term - Inhalation**

384 mg/m<sup>3</sup>

Effects: Local

**DNEL - Workers - Short term - Inhalation**

384 mg/m<sup>3</sup>

Effects: Systemic

Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine

**DNEL - General population - Long term - Inhalation**

0.055 mg/m<sup>3</sup>

Effects: Local

**DNEL - Workers - Long term - Inhalation**

0.308 mg/m<sup>3</sup>

Effects: Local

### PNECs

#### **Product/ingredient name**

Reaction mass of 2,2'-[methylenebis (2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis (4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl] phenoxy}methyl)oxirane

#### **Result**

**Fresh water**

0.003 mg/l

**Fresh water sediment**

## SECTION 8: Exposure controls/personal protection

0.294 mg/kg

### Marine water sediment

0.029 mg/kg

### Sewage Treatment Plant

10 mg/l

### Soil

0.237 mg/kg

## 8.2 Exposure controls

**Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### Individual protection measures

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

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

> 8 hours (breakthrough time): 4H / Silver Shield® gloves.

Wash hands before breaks and immediately after handling the product.

**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.

**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	: Various
Odour	: Slight
Odour threshold	: Not available.
Melting point/freezing point	: Not available.
Initial boiling point and boiling range	:

Ingredient name	°C	°F	Method
Toluene	110.6	231.1	
Benzyl alcohol	205.3	401.5	

Flammability	: Not available.
Lower and upper explosion limit	: Lower: 1.1% (toluene) Upper: 13% (benzyl alcohol)
Flash point	: Closed cup: >100°C (>212°F)
Auto-ignition temperature	:

Ingredient name	°C	°F	Method
Phenol, methylstyrenated	>385	>725	DIN 51794
Benzyl alcohol	436	816.8	

Decomposition temperature	: Not available.
pH	: Not available.
Viscosity	: Not available.
Solubility(ies)	:
	Not available.

Solubility in water	: Not available.
Partition coefficient: n-octanol/ water	: Not applicable.
Vapour pressure	:

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Toluene	23.17	3.1				
Reaction mass of 2,2'-(methylenebis(2,1-phenyleneoxymethylene))bis(oxirane) and 2,2'-(methylenebis(4,1-phenyleneoxymethylene))bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane	0.62	0.083	EU A.4			

Relative density	: Not available.
Density	: 1.2 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.
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## SECTION 9: Physical and chemical properties

**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** : No specific data.

**10.5 Incompatible materials** : No specific data.

**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**

 Bis[4-(2,3-epoxypropoxy)phenyl]propane

##### **Result**

###### **Rabbit - Dermal - LD50**

20 g/kg

Toxic effects: Behavioral - Somnolence (general depressed activity) Gastrointestinal - Hypermotility, diarrhea Gross Metabolite Changes - Weight loss or decreased weight gain

Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.

###### **Rat - Oral - LD50**

17100 mg/kg

Reaction mass of 2,2'-[methylenebis (2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis (4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl] phenoxy}methyl)oxirane

###### **Rat - Oral - LD50**

>5000 mg/kg

###### **Rat - Dermal - LD50**

>2000 mg/kg

Benzyl alcohol

###### **Rat - Oral - LD50**

1230 mg/kg

Toxic effects: Behavioral - Somnolence (general depressed activity) Behavioral - Excitement Behavioral - Coma

###### **Rabbit - Dermal - LD50**

2000 mg/kg

###### **Rat - Male, Female - Inhalation - LC50 Dusts and mists**

4200 mg/m<sup>3</sup> [4 hours]

OECD 403

Toluene

###### **Rat - Oral - LD50**

636 mg/kg

###### **Rat - Inhalation - LC50 Vapour**

49 g/m<sup>3</sup> [4 hours]

## SECTION 11: Toxicological information

**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)
TEKNOPOX FILLER 2112	44119.1	N/A	N/A	N/A	N/A
Bis[4-(2,3-epoxypropoxy)phenyl]propane	N/A	20000	N/A	N/A	N/A
Oxirane, mono[(C12-14-alkyloxy)methyl]derivs.	17100	N/A	N/A	N/A	N/A
Benzyl alcohol	1200	N/A	N/A	N/A	N/A
Toluene	N/A	N/A	N/A	49	N/A

### Skin corrosion/irritation

#### Product/ingredient name

Bis[4-(2,3-epoxypropoxy)phenyl]propane

Oxirane, mono[(C12-14-alkyloxy)methyl]derivs.

Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane

Benzyl alcohol

Toluene

#### Result

##### Rabbit - Skin - Mild irritant

Amount/concentration applied: 500 mg

##### Rabbit - Skin - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 500 uL

##### Rabbit - Skin - Mild irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 500 uL

##### Man - Skin - Mild irritant

Duration of treatment/exposure: 48 hours

Amount/concentration applied: 16 mg

##### Pig - Skin - Moderate irritant

Amount/concentration applied: 100 %

##### Rabbit - Skin - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 100 mg

##### Pig - Skin - Mild irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 250 uL

##### Rabbit - Skin - Mild irritant

Amount/concentration applied: 435 mg

##### Rabbit - Skin - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 20 mg

##### Rabbit - Skin - Moderate irritant

Amount/concentration applied: 500 mg

**Conclusion/Summary [Product]** : Not available.


### Serious eye damage/eye irritation

#### Product/ingredient name

#### Result



## SECTION 11: Toxicological information

 Bis[4-(2,3-epoxypropoxy)phenyl]propane

**Rabbit - Eyes - Severe irritant**

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 2 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 MI

**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**

 Toluene

**Result**

STOT SE 3, H336 (Narcotic effects)

### Specific target organ toxicity (repeated exposure)

**Product/ingredient name**

**Result**

## SECTION 11: Toxicological information

Toluene

STOT RE 2, H373

### Aspiration hazard

#### Product/ingredient name

Toluene

#### Result

ASPIRATION HAZARD - Category 1

### Information on likely routes of exposure

Not available.

### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

### 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:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations

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

#### Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

**Conclusion/Summary [Product]** : Not available.

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : May damage fertility.

## 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.

## SECTION 11: Toxicological information

### 11.2.2 Other information

Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product/ingredient name

Reaction mass of 2,2'-[methylenebis  
(2,1-phenyleneoxymethylene)]bis(oxirane)  
and 2,2'-[methylenebis  
(4,1-phenyleneoxymethylene)]bis(oxirane)  
and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]  
phenoxy}methyl)oxirane

#### Result

##### Chronic - LC50

Fish  
2.54 mg/l [96 hours]

##### EC50

Daphnia - Daphnia - *Daphnia magna*  
2.55 mg/l [48 hours]

##### EC50

Algae - Algae  
1.8 mg/l [72 hours]

Benzyl alcohol

##### Acute - LC50 - Fresh water

Fish - Bluegill - *Lepomis macrochirus*  
Size: 33 to 75 mm  
10000 µg/l [96 hours]  
Effect: Mortality

Phenol, methylstyrenated

##### Acute - LC50

Fish  
25.8 mg/l [96 hours]

##### Acute - EC50

Daphnia  
14 mg/l [48 hours]

##### Acute - EC50

Algae  
15 mg/l [72 hours]

Toluene

##### Acute - LC50 - Fresh water

Fish - Coho salmon, silver salmon - *Oncorhynchus kisutch* - Fry  
Weight: 1 g  
5500 µg/l [96 hours]  
Effect: Mortality

##### Acute - EC50 - Fresh water

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

##### Chronic - NOEC - Fresh water

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

##### Acute - EC50 - Fresh water

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

**Conclusion/Summary [Product]** : Not available.

## SECTION 12: Ecological information

### 12.2 Persistence and degradability

Not available.

**Conclusion/Summary [Product]** : Not available.

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Oxirane, mono[ (C12-14-alkyloxy)methyl] derivs.	3.77	160 to 263	Low
Reaction mass of 2,2'- [methylenebis (2,1-phenyleneoxymethylene)] bis(oxirane) and 2,2'- [methylenebis (4,1-phenyleneoxymethylene)] bis(oxirane) and 2-({2-[4- (oxiran-2-ylmethoxy)benzyl] phenoxy}methyl)oxirane	2.7	-	Low
Benzyl alcohol	0.87	-	Low
Phenol, methylstyrenated	3.627	-	Low
Toluene	2.73	90	Low

### 12.4 Mobility in soil

#### Soil/water partition coefficient

Product/ingredient name	logKoc	Koc
Bis[4-(2,3-epoxypropoxy)phenyl]propane	4	10465.7
Benzyl alcohol	1.1	12.6442
Toluene	2.1	117.115

#### Results of PMT and vPvM assessment

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
Bis[4-(2,3-epoxypropoxy)phenyl]propane	No	No	No	No	No	No	No
Oxirane, mono[ (C12-14-alkyloxy)methyl] derivs.	No	No	No	No	No	No	No
Reaction mass of 2,2'- [methylenebis (2,1-phenyleneoxymethylene)] bis(oxirane) and 2,2'- [methylenebis (4,1-phenyleneoxymethylene)] bis(oxirane) and 2-({2-[4- (oxiran-2-ylmethoxy)benzyl] phenoxy}methyl)oxirane	No	No	No	No	No	No	No
Benzyl alcohol	No	No	No	No	No	No	No
Phenol, methylstyrenated	No	No	No	No	No	No	No
Toluene	No	No	No	No	No	No	No
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	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]

## SECTION 12: Ecological information

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Bis[4-(2,3-epoxypropoxy)phenyl]propane	No	N/A	N/A	No	N/A	N/A	N/A
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	No	N/A	No	Yes	No	N/A	No
Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)] bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)] bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane	No	N/A	N/A	No	N/A	N/A	N/A
Benzyl alcohol	No	N/A	N/A	No	N/A	N/A	N/A
Phenol, methylstyrenated	No	Yes	Yes	No	Yes	Yes	Yes
Toluene	No	N/A	No	Yes	No	N/A	No
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	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
Bis[4-(2,3-epoxypropoxy)phenyl]propane	No	No	No	No	No	No	No
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	No	No	No	No	No	No	No
Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)] bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)] bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane	No	No	No	No	No	No	No
Benzyl alcohol	No	No	No	No	No	No	No
Phenol, methylstyrenated	No	No	No	No	No	No	No
Toluene	No	No	No	No	No	No	No
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	No	No	No	No	No	No	No

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

### 12.6 Endocrine disrupting properties

Not available.

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

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

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

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

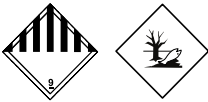
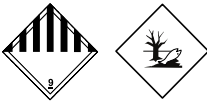
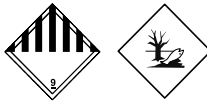

**European waste catalogue (EWC)** : 080111\*, 200127\*

#### 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. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number or ID number</b>	UN3082	UN3082	UN3082	UN3082
<b>14.2 UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy Resin)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy Resin)
<b>14.3 Transport hazard class(es)</b>	9 	9 	9 	9 
<b>14.4 Packing group</b>	III	III	III	III
<b>14.5 Environmental hazards</b>	Yes.	Yes.	Yes.	Yes.

#### Additional information

**ADR/RID** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

**Tunnel code** (-)

**ADN** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

**IMDG** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

**IATA** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.



## SECTION 14: Transport information

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

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

## SECTION 15: Regulatory information

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


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

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

Intrinsic property	Ingredient name	Status	Reference number	Date of revision
 PvB	Phenol, methylstyrenated	Candidate	D(2023) 8585-DC	-

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

Product/ingredient name	%	Designation [Usage]
TEKNOPOX FILLER 2112	≥90	3
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	≤10	30
Toluene	<3	48

**Labelling** : Restricted to professional users.

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
 2

National regulations

Austria

## SECTION 15: Regulatory information

Limitation of the use of organic solvents : Permitted.

[Belgium](#)


[Czech Republic](#)

Storage code : IV

[Denmark](#)

Fire class : -1

[Executive Order No. 1795/2015](#)

Ingredient name	Annex I Section A	Annex I Section B
 lass, oxide, chemicals	Listed	-
titanium dioxide	Listed	-

MAL-code : -6

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

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

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

MAL-code: 5-6

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

- Protective clothing must be worn.

During 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. When spraying in existing\* spray 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 full mask and protective clothing must be worn.

When spraying in new\* booths if the operator is outside 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, protective clothing and hood must be worn.

## SECTION 15: Regulatory information

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

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


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

\*See Regulations.

- Restrictions on use** : Not to be used by professional users below 18 years of age. See the National Working Environment Authorities Executive Order regarding Young People At Work.
- List of undesirable substances** : Listed
- Carcinogenic waste** : Waste containers must be labeled: Contains a substance or substances regulated by Danish working environment legislation on cancer risks.
- Epoxy/Isocyanate** : The product is covered by the rules for epoxy resins and isocyanates in Executive Order no. 1793 of 18/12/2015 on working with substances and materials (chemical agents). Pay attention to the rules, for example: the user of the product must have undergone special training and waste must be labelled. This requirement is in addition to the training requirement described in the REACH regulation, Annex XVII, entry 74 (COMMISSION REGULATION (EU) 2020/1149).

### Finland

### France

- Social Security Code, Articles L 461-1 to L 461-7** :  Bis[4-(2,3-epoxypropoxy)phenyl]propane RG 84  
Oxirane, mono[(C12-14-alkyloxy)methyl]derivs. RG 84  
Toluene RG 4bis, RG 84

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

### Germany

**Storage class (TRGS 510)** : 6.1C

### Hazardous incident ordinance


This product is controlled under the Germany Hazardous Incident Ordinance.

### Danger criteria

Category	Reference number
E2	1.3.2

**Hazard class for water** : 2

### Technical instruction on air quality control (TA Luft)

Number [Class]	Description	%
 5.2.1	Total dust	47.8
5.2.5	Organic substances	45.8
5.2.5 [I]	Organic substances	5.5
5.2.7.1.3	Reproductive toxic substances	6.4

- AOX** : The product contains organically bound halogens and can contribute to the AOX value in waste water.

### Italy

- D.Lgs. 152/06** : Not determined.

### Netherlands

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

## SECTION 15: Regulatory information

Ingredient name	Carcinogen	Mutagen	Reproductive toxicity - Fertility	Reproductive toxicity - Development	Harmful via breastfeeding
tolueen	-	-	-	Development 2	-

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

**Norway**

**Sweden**

**Epoxy/Isocyanate** : The product is covered by the specific rules for certain allergenic chemical products (acrylates, epoxies, diisocyanates, formaldehyde resins and organic acid anhydrides) in provision AFS 2023:10 Chemical Hazards in the Working Environment. Pay attention to that handling the product requires certificate of undergone necessary training and can require medical examination (AFS 2023:15). Waste must be labelled with named substance and as Hazardous waste. This requirement is in addition to the training requirement described in the REACH regulation, Annex XVII, entry 74 (COMMISSION REGULATION (EU) 2020/1149).

**Switzerland**

**VOC content** :  VOC (w/w): 5.4%

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

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]**

## SECTION 16: Other information

Classification	Justification
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Skin Sens. 1, H317	Calculation method
Repr. 1B, H360F	Calculation method
Aquatic Chronic 2, H411	Calculation method

### Full text of abbreviated H statements

☑H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H360F	May damage fertility.
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.

### Full text of classifications [CLP/GHS]

☑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
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

**Date of issue/ Date of revision** : 06/02/2026

**Date of previous issue** : 21/10/2024

**Version** : 11

TEKNOPOX FILLER 2112

All variants

### 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.

