

SAFETY DATA SHEET



TEKNOCELL 1311 - All variants

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

1.1 Product identifier

Product name : TEKNOCELL 1311 - All variants

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

Product use : Paint.

1.3 Details of the supplier of the safety data sheet

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

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

National contact

Teknos (UK) Limited, 7 Longlands Rd, Bicester, Oxfordshire OX26 5AH, United Kingdom. Tel. +44 (0) 1869 208005.

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : NHS: 111

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to UK CLP/GHS

Flam. Liq. 2, H225

Skin Irrit. 2, H315

Eye Dam. 1, H318

Skin Sens. 1, H317

STOT SE 3, H335

STOT SE 3, H336

STOT RE 2, H373

Aquatic Chronic 2, H411

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 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.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

H335 - May cause respiratory irritation.

H336 - May cause drowsiness or dizziness.

H373 - May cause damage to organs through prolonged or repeated exposure.

H411 - Toxic to aquatic life with long lasting effects.

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Label No : 115024

SECTION 2: Hazards identification

Precautionary statements

- Prevention** : P280 - Wear protective gloves. Wear eye or face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 - Avoid release to the environment.
- Response** : P391 - Collect spillage.
- Storage** : P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements :

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

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	Type
n-Butyl acetate	REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4 Index: 607-025-00-1	≥10 - ≤25	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	[1] [2]
Xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥10 - ≤25	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 (oral, inhalation) Asp. Tox. 1, H304	[1] [2]
iso-butanol	REACH #: 01-2119484609-23 EC: 201-148-0 CAS: 78-83-1 Index: 603-108-00-1	≤10	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	[1] [2]
Butan-1-ol	REACH #: 01-2119484630-38 EC: 200-751-6 CAS: 71-36-3 Index: 603-004-00-6	≤5	Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	[1] [2]
Trizinc bis(orthophosphate)	REACH #: 01-2119485044-40 EC: 231-944-3 CAS: 7779-90-0 Index: 030-011-00-6	≤5	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
Ethylbenzene	REACH #:	≤3	Flam. Liq. 2, H225	[1] [2]

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Phenol, 4,4'-(1-methylethylidene) bis-, polymer with 2,2'-(1-methylethylidene)bis (4,1-phenyleneoxymethylene)]bis [oxirane o-xylene	01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4		Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) (oral, inhalation) Asp. Tox. 1, H304 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317	[1]
	CAS: 25036-25-3	≤3		
Ethanol	EC: 202-422-2 CAS: 95-47-6 Index: 601-022-00-9	≤0.3	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Asp. Tox. 1, H304 Flam. Liq. 2, H225 Eye Irrit. 2, H319	[1] [2]
	REACH #: 01-2119457610-43 EC: 200-578-6 CAS: 64-17-5 Index: 603-002-00-5	≤0.3		
Phosphoric acid	REACH #: 01-2119485924-24 EC: 231-633-2 CAS: 7664-38-2 Index: 015-011-00-6	≤0.3	Skin Corr. 1B, H314 Eye Dam. 1, H318	[1] [2]
crystalline silica, respirable powder	EC: 238-878-4 CAS: 14808-60-7	≤0.1	Not classified.	[2]
Formaldehyde	REACH #: 01-2119488953-20 EC: 200-001-8 CAS: 50-00-0 Index: 605-001-00-5	<0.1	Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 2, H330 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 STOT SE 3, H335 Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	[1] [2]
Toluene	REACH #: 01-2119471310-51 EC: 203-625-9 CAS: 108-88-3 Index: 601-021-00-3	≤0.1		[1] [2]
Butanone	REACH #: 01-2119457290-43 EC: 201-159-0 CAS: 78-93-3 Index: 606-002-00-3	≤0.1		[1] [2]
bisphenol A	REACH #: 01-2119457856-23 EC: 201-245-8 CAS: 80-05-7 Index: 604-030-00-0	≤0.1	Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 1B, H360F STOT SE 3, H335 Aquatic Chronic 2, H411 See Section 16 for the full text of the H statements declared above.	[1] [2] [3] [4]

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

SECTION 3: Composition/information on ingredients

- [1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[3] Substance of equivalent concern
[4] Substance with carcinogenic, mutagenic or reproductive toxicity properties

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

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. 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. 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** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a 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.
- 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
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

SECTION 4: First aid measures

- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains

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, CO₂, 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 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
nitrogen oxides
phosphorus 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 British standard BS 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. Do not breathe 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. Use spark-proof tools and explosion-proof equipment. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

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

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

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

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. 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

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 E2	5000 tonnes 200 tonnes	50000 tonnes 500 tonnes

SECTION 7: Handling and storage

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

n-Butyl acetate	EH40/2005 WELs (United Kingdom (UK), 1/2020) STEL 15 minutes: 966 mg/m ³ . STEL 15 minutes: 200 ppm. TWA 8 hours: 724 mg/m ³ . TWA 8 hours: 150 ppm.
Xylene	EH40/2005 WELs (United Kingdom (UK), 1/2020) [xylene, o-,m-, p- or mixed isomers] Absorbed through skin. STEL 15 minutes: 441 mg/m ³ . TWA 8 hours: 50 ppm. TWA 8 hours: 220 mg/m ³ . STEL 15 minutes: 100 ppm.
iso-butanol	EH40/2005 WELs (United Kingdom (UK), 1/2020) STEL 15 minutes: 231 mg/m ³ . STEL 15 minutes: 75 ppm. TWA 8 hours: 154 mg/m ³ . TWA 8 hours: 50 ppm.
Butan-1-ol	EH40/2005 WELs (United Kingdom (UK), 1/2020) Absorbed through skin. STEL 15 minutes: 154 mg/m ³ . STEL 15 minutes: 50 ppm.
Ethylbenzene	EH40/2005 WELs (United Kingdom (UK), 1/2020) Absorbed through skin. STEL 15 minutes: 552 mg/m ³ . STEL 15 minutes: 125 ppm. TWA 8 hours: 100 ppm. TWA 8 hours: 441 mg/m ³ .
o-xylene	EH40/2005 WELs (United Kingdom (UK), 1/2020) [xylene, o-,m-, p- or mixed isomers] Absorbed through skin. STEL 15 minutes: 441 mg/m ³ . TWA 8 hours: 50 ppm. TWA 8 hours: 220 mg/m ³ . STEL 15 minutes: 100 ppm.
Ethanol	EH40/2005 WELs (United Kingdom (UK), 1/2020) TWA 8 hours: 1000 ppm. TWA 8 hours: 1920 mg/m ³ .
Phosphoric acid	EH40/2005 WELs (United Kingdom (UK), 1/2020) STEL 15 minutes: 2 mg/m ³ . TWA 8 hours: 1 mg/m ³ .
crystalline silica, respirable powder	EH40/2005 WELs (United Kingdom (UK), 1/2020) [silica, respirable crystalline] Carc. TWA 8 hours: 0.1 mg/m ³ . Form: Respirable fraction.
Formaldehyde	EH40/2005 WELs (United Kingdom (UK), 1/2020) Carc. STEL 15 minutes: 2.5 mg/m ³ . STEL 15 minutes: 2 ppm. TWA 8 hours: 2 ppm. TWA 8 hours: 2.5 mg/m ³ .
Toluene	EH40/2005 WELs (United Kingdom (UK), 1/2020) Absorbed through skin. STEL 15 minutes: 384 mg/m ³ . TWA 8 hours: 191 mg/m ³ . TWA 8 hours: 50 ppm. STEL 15 minutes: 100 ppm.
Butanone	EH40/2005 WELs (United Kingdom (UK), 1/2020) Absorbed

SECTION 8: Exposure controls/personal protection

through skin.

STEL 15 minutes: 899 mg/m³.

STEL 15 minutes: 300 ppm.

TWA 8 hours: 600 mg/m³.

TWA 8 hours: 200 ppm.

bisphenol A

EH40/2005 WELs (United Kingdom (UK), 1/2020)

TWA 8 hours: 2 mg/m³.

Biological exposure indices

Product/ingredient name	Exposure indices
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.
o-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.
Butanone	EH40/2005 BMGVs (United Kingdom (UK), 1/2020) BGV: 70 µmol/l, butan-2-one [in urine]. Sampling time: post shift.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: British Standard BS EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) British Standard BS EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) British Standard BS 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

n-Butyl acetate

Result

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

SECTION 8: Exposure controls/personal protection

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

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

Xylene

SECTION 8: Exposure controls/personal protection

iso-butanol	DNEL - Workers - Short term - Inhalation 442 mg/m ³ <u>Effects</u> : Systemic
	DNEL - General population - Long term - Inhalation 55 mg/m ³ <u>Effects</u> : Local
	DNEL - Workers - Long term - Inhalation 310 mg/m ³ <u>Effects</u> : Local
Butan-1-ol	DNEL - General population - Long term - Oral 1.5625 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Long term - Dermal 3.125 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Long term - Inhalation 55.357 mg/m ³ <u>Effects</u> : Systemic
	DNEL - General population - Long term - Inhalation 155 mg/m ³ <u>Effects</u> : Local
	DNEL - Workers - Long term - Inhalation 310 mg/m ³ <u>Effects</u> : Local
Ethylbenzene	DMEL - Workers - Long term - Inhalation 442 mg/m ³ <u>Effects</u> : Local
	DMEL - Workers - Short term - Inhalation 884 mg/m ³ <u>Effects</u> : Systemic
	DNEL - General population - Long term - Oral 1.6 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Long term - Inhalation 15 mg/m ³ <u>Effects</u> : Systemic
	DNEL - Workers - Long term - Inhalation 77 mg/m ³ <u>Effects</u> : Systemic
	DNEL - Workers - Long term - Dermal 180 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - Workers - Short term - Inhalation 293 mg/m ³ <u>Effects</u> : Local
	DNEL - General population - Long term - Oral 2.5 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Long term - Inhalation
o-xylene	

SECTION 8: Exposure controls/personal protection

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

DNEL - Workers - Long term - Inhalation

380 mg/m³

Effects: Systemic

DNEL - General population - Long term - Oral

87 mg/kg bw/day

Effects: Systemic

DNEL - General population - Long term - Inhalation

114 mg/m³

Effects: Systemic

DNEL - General population - Long term - Dermal

206 mg/kg bw/day

Effects: Systemic

DNEL - Workers - Long term - Dermal

343 mg/kg bw/day

Effects: Systemic

DNEL - General population - Short term - Inhalation

950 mg/m³

Effects: Local

DNEL - Workers - Short term - Inhalation

1900 mg/m³

Ethanol

SECTION 8: Exposure controls/personal protection

Phosphoric acid

Effects: Local

DNEL - Workers - Short term - Inhalation

2 mg/m³

Effects: Local

DNEL - General population - Long term - Oral

0.1 mg/kg bw/day

Effects: Systemic

DNEL - General population - Long term - Inhalation

0.36 mg/m³

Effects: Local

DNEL - Workers - Long term - Inhalation

1 mg/m³

Effects: Local

DNEL - General population - Long term - Inhalation

4.57 mg/m³

Effects: Systemic

DNEL - Workers - Long term - Inhalation

10.7 mg/m³

Effects: Systemic

Formaldehyde

DNEL - General population - Long term - Dermal

12 µg/cm²

Effects: Local

DNEL - Workers - Long term - Dermal

37 µg/cm²

Effects: Local

DNEL - General population - Long term - Inhalation

0.1 mg/m³

Effects: Local

DNEL - Workers - Long term - Inhalation

0.375 mg/m³

Effects: Local

DNEL - Workers - Short term - Inhalation

0.75 mg/m³

Effects: Local

DNEL - General population - Long term - Inhalation

3.2 mg/m³

Effects: Systemic

DNEL - General population - Long term - Oral

4.1 mg/kg bw/day

Effects: Systemic

DNEL - Workers - Long term - Inhalation

9 mg/m³

Effects: Systemic

DNEL - General population - Long term - Dermal

102 mg/kg bw/day

Effects: Systemic

DNEL - Workers - Long term - Dermal

240 mg/kg bw/day

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/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

Butanone

DNEL - General population - Long term - Oral

31 mg/kg bw/day

Effects: Systemic

DNEL - General population - Long term - Inhalation

106 mg/m³

Effects: Systemic

DNEL - General population - Long term - Dermal

412 mg/kg bw/day

Effects: Systemic

DNEL - General population - Short term - Inhalation

450 mg/m³

Effects: Systemic

DNEL - Workers - Long term - Inhalation

600 mg/m³

Effects: Systemic

DNEL - Workers - Short term - Inhalation

SECTION 8: Exposure controls/personal protection

bisphenol A

900 mg/m³

Effects: Systemic

DNEL - Workers - Long term - Dermal

1161 mg/kg bw/day

Effects: Systemic

DNEL - General population - Short term - Dermal

24 µg/kg bw/day

Effects: Systemic

DNEL - General population - Long term - Dermal

24 µg/kg bw/day

Effects: Systemic

DNEL - General population - Short term - Oral

53 µg/kg bw/day

Effects: Systemic

DNEL - General population - Long term - Oral

53 µg/kg bw/day

Effects: Systemic

DNEL - Workers - Short term - Dermal

66 µg/kg bw/day

Effects: Systemic

DNEL - Workers - Long term - Dermal

66 µg/kg bw/day

Effects: Systemic

DNEL - General population - Short term - Inhalation

1 mg/m³

Effects: Local

DNEL - General population - Long term - Inhalation

1 mg/m³

Effects: Local

DNEL - General population - Short term - Inhalation

1 mg/m³

Effects: Systemic

DNEL - General population - Long term - Inhalation

1 mg/m³

Effects: Systemic

DNEL - Workers - Short term - Inhalation

2 mg/m³

Effects: Local

DNEL - Workers - Long term - Inhalation

2 mg/m³

Effects: Local

DNEL - Workers - Short term - Inhalation

2 mg/m³

Effects: Systemic

DNEL - Workers - Long term - Inhalation

2 mg/m³

Effects: Systemic

PNECs

SECTION 8: Exposure controls/personal protection

Not available.

8.2 Exposure controls

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

Individual protection measures

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

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

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

Ingredient name	°C	°F	Method
iso-butanol	108	226.4	OECD 103
Butan-1-ol	119	246.2	OECD 103

Flammability (solid, gas)	: Not available.
Upper/lower flammability or explosive limits	: Lower: 0.8% (xylene) Upper: 11.3% (butan-1-ol)
Flash point	: Closed cup: 21°C (69.8°F)
Auto-ignition temperature	:

Ingredient name	°C	°F	Method
Butan-1-ol	355	671	EU A.15
n-Butyl acetate	415	779	EU A.15

Decomposition temperature	: Not available.
pH	: Not applicable.
Viscosity	: Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C): Not available.

Solubility(ies) :
Not available.

Solubility in water : Not available.

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

Vapour pressure :

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
n-Butyl acetate	11.25096	1.5	DIN EN 13016-2			
iso-butanol	<12.00102	<1.6	DIN EN 13016-2			

Relative density	: Not available.
Density	: 1.2 g/cm ³
Vapour density	: Not available.
Explosive properties	: Not available.
Oxidising properties	: Not available.
<u>Particle characteristics</u>	
Median particle size	: Not applicable.

9.2 Other information

Not available.

SECTION 10: Stability and reactivity

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : The product is stable.
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
- 10.5 Incompatible materials** : Reactive or incompatible with the following materials:
oxidising materials
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name

n-Butyl acetate

Result

Rat - Oral - LD50

10760 mg/kg
EU

Rabbit - Dermal - LD50

14112 mg/kg

Rat - Inhalation - LC50 Vapour

0.74 mg/l [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]

iso-butanol

Rat - Oral - LD50

2460 mg/kg

Rabbit - Dermal - LD50

3400 mg/kg

Rat - Inhalation - LC50 Vapour

19200 mg/m³ [4 hours]

Butan-1-ol

Rat - Oral - LD50

790 mg/kg

Toxic effects: Liver - Fatty liver degeneration
Kidney, Ureter, and Bladder - Other changes
Blood - Other changes

Rabbit - Dermal - LD50

3400 mg/kg

Rat - Inhalation - LC50 Vapour

24000 mg/m³ [4 hours]

Ethylbenzene

Rat - Oral - LD50

3500 mg/kg

SECTION 11: Toxicological information

	Rabbit - Dermal - LD50 15400 mg/kg
	Rat - Inhalation - LC50 Dusts and mists 29000 mg/l [4 hours]
o-xylene	Rat - Oral - LD50 3567 mg/kg
Ethanol	Rat - Oral - LD50 7 g/kg
	Rat - Inhalation - LC50 Vapour 124700 mg/m ³ [4 hours]
Phosphoric acid	Rat - Oral - LD50 1.25 g/kg <u>Toxic effects:</u> Lung, Thorax, or Respiration - Acute pulmonary edema Liver - Changes in liver weight
Formaldehyde	Rat - Oral - LD50 100 mg/kg
	Rabbit - Dermal - LD50 270 mg/kg
	Rat - Inhalation - LC50 Gas. 250 ppm [4 hours]
Toluene	Rat - Oral - LD50 636 mg/kg
	Rat - Inhalation - LC50 Vapour 49 g/m ³ [4 hours]
Butanone	Rabbit - Dermal - LD50 6480 mg/kg
	Rat - Oral - LD50 2737 mg/kg
bisphenol A	Rat - Oral - LD50 1200 mg/kg <u>Toxic effects:</u> Effects on Fertility - Female fertility index (e.g., number of females pregnant per number of sperm-positive females; number of females pregnant per number of females mated)

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)
TEKNOCELL 1311	17801.2	8836.3	N/A	72.4	N/A
n-Butyl acetate	10760	14112	N/A	N/A	N/A
Xylene	4300	1100	N/A	11	N/A
iso-butanol	2460	3400	N/A	N/A	N/A
Butan-1-ol	790	3400	N/A	24	N/A
Ethylbenzene	3500	15400	N/A	11	29000
o-xylene	3567	1100	N/A	11	N/A
Ethanol	7000	N/A	N/A	124.7	N/A
Formaldehyde	100	270	250	N/A	N/A

SECTION 11: Toxicological information

Toluene	N/A	N/A	N/A	49	N/A
Butanone	2737	6480	N/A	N/A	N/A

Skin corrosion/irritation

Product/ingredient name

n-Butyl acetate

Result

Rabbit - Skin - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 500 mg

Xylene

Rat - Skin - Mild irritant

Duration of treatment/exposure: 8 hours

Amount/concentration applied: 60 uL

Rabbit - Skin - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 500 mg

Butan-1-ol

Rabbit - Skin - Moderate irritant

Amount/concentration applied: 100 %

Rabbit - Skin - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 20 mg

Ethylbenzene

Rabbit - Skin - Mild irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 15 mg

Ethanol

Rabbit - Skin - Mild irritant

Amount/concentration applied: 400 mg

Rabbit - Skin - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 20 mg

Formaldehyde

Human - Skin - Mild irritant

Duration of treatment/exposure: 72 hours

Amount/concentration applied: 150 ug l

Human - Skin - Severe irritant

Amount/concentration applied: 0.01 %

Rabbit - Skin - Mild irritant

Amount/concentration applied: 540 mg

Rabbit - Skin - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 50 mg

Rabbit - Skin - Severe irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 2 mg

Rabbit - Skin - Severe irritant

Amount/concentration applied: 0.8 %

Mouse - Skin - Moderate irritant

Amount/concentration applied: 7 %

Rat - Skin - Moderate irritant

Amount/concentration applied: 7 %

Toluene

Pig - Skin - Mild irritant

Duration of treatment/exposure: 24 hours

SECTION 11: Toxicological information

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

Butanone

Rabbit - Skin - Mild irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 14 mg

Rabbit - Skin - Mild irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 402 mg

Rabbit - Skin - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 500 mg

bisphenol A

Rabbit - Skin - Mild irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 500 mg

Rabbit - Skin - Mild irritant

Amount/concentration applied: 250 mg

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name

n-Butyl acetate

Result

Rabbit - Eyes - Moderate irritant

Amount/concentration applied: 100 mg

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

Butan-1-ol

Rabbit - Eyes - Severe irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 2 mg

Rabbit - Eyes - Severe irritant

Amount/concentration applied: 0.005 MI

Rabbit - Eyes - Severe irritant

Amount/concentration applied: 1.62 mg

Ethylbenzene

Rabbit - Eyes - Severe irritant

Amount/concentration applied: 500 mg

Ethanol

Rabbit - Eyes - Mild irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 500 mg

Rabbit - Eyes - Moderate irritant

Duration of treatment/exposure: 0.066666667 minutes

SECTION 11: Toxicological information

Formaldehyde

Amount/concentration applied: 100 mg

Rabbit - Eyes - Moderate irritant

Amount/concentration applied: 100 uL

Rabbit - Eyes - Severe irritant

Amount/concentration applied: 500 mg

Human - Eyes - Mild irritant

Duration of treatment/exposure: 6 minutes

Amount/concentration applied: 1 ppm

Rabbit - Eyes - Severe irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 750 ug

Rabbit - Eyes - Severe irritant

Amount/concentration applied: 750 ug

Rabbit - Eyes - Severe irritant

Amount/concentration applied: 37 %

Rabbit - Eyes - Severe irritant

Amount/concentration applied: 10 mg

Mouse - Eyes - Moderate irritant

Amount/concentration applied: 3 %

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

bisphenol A

Rabbit - Eyes - Severe irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 250 ug

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.

SECTION 11: Toxicological information

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

n-Butyl acetate
Xylene
iso-butanol

Butan-1-ol

o-xylene
Formaldehyde
Toluene
Butanone
bisphenol A

Result

STOT SE 3, H336 (Narcotic effects)
STOT SE 3, H335 (Respiratory tract irritation)
STOT SE 3, H335 (Respiratory tract irritation)
STOT SE 3, H336 (Narcotic effects)
STOT SE 3, H335 (Respiratory tract irritation)
STOT SE 3, H336 (Narcotic effects)
STOT SE 3, H335 (Respiratory tract irritation)
STOT SE 3, H335 (Respiratory tract irritation)
STOT SE 3, H336 (Narcotic effects)
STOT SE 3, H336 (Narcotic effects)
STOT SE 3, H335 (Respiratory tract irritation)

Specific target organ toxicity (repeated exposure)

Product/ingredient name

Xylene
Ethylbenzene
Toluene

Result

STOT RE 2, H373 (oral, inhalation)
STOT RE 2, H373 (hearing organs) (oral, inhalation)
STOT RE 2, H373

Aspiration hazard

Product/ingredient name

Xylene
Ethylbenzene
o-xylene
Toluene

Result

ASPIRATION HAZARD - Category 1
ASPIRATION HAZARD - Category 1
ASPIRATION HAZARD - Category 1
ASPIRATION HAZARD - Category 1

Information on likely routes of exposure

Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
Skin contact : Causes skin irritation. May cause an allergic skin reaction.
Ingestion : Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

SECTION 11: Toxicological information

Eye contact	: Adverse symptoms may include the following: pain watering redness
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	: Adverse symptoms may include the following: pain or irritation redness blistering may occur
Ingestion	: Adverse symptoms may include the following: stomach pains

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 : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name

n-Butyl acetate

Result

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

iso-butanol

Acute - LC50 - Fresh water

Fish - Rainbow trout, donaldson trout - *Oncorhynchus mykiss*
Weight: 1.67 g

SECTION 12: Ecological information

1330000 µg/l [96 hours]

Effect: Mortality

Acute - LC50 - Marine water

Crustaceans - Brine shrimp - *Artemia salina*

600 mg/l [48 hours]

Effect: Mortality

Butan-1-ol

Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas*

Age: 33 days; Size: 20.6 mm; Weight: 0.119 g

1730000 µg/l [96 hours]

Effect: Mortality

Acute - EC50 - Fresh water

Daphnia - Water flea - *Daphnia magna*

Age: 6 to 24 hours

1983000 µg/l [48 hours]

Effect: Intoxication

Trizinc bis(orthophosphate)

Acute - EC50

Crustaceans - *Ceriodaphnia dubia*

0.96 mg/l [48 hours]

Acute - EC50

Algae - *Selenastrum capricornutum*

0.32 mg/l [72 hours]

o-xylene

Acute - EC50 - Fresh water

Algae - Green algae - *Pseudokirchneriella subcapitata*

4700 µg/l [72 hours]

Effect: Growth

Acute - LC50 - Fresh water

Fish - Rainbow trout,donaldson trout - *Oncorhynchus mykiss*

7600 µg/l [96 hours]

Effect: Mortality

Acute - EC50 - Fresh water

Daphnia - Water flea - *Daphnia magna* - Neonate

Age: ≤24 hours

1.39 mg/l [48 hours]

Effect: Intoxication

Ethanol

Acute - EC50 - Fresh water

Daphnia - Water flea - *Daphnia magna*

2000 µg/l [48 hours]

Effect: Physiology

Acute - LC50 - Fresh water

Fish - Rainbow trout,donaldson trout - *Oncorhynchus mykiss*

42000 µg/l [4 days]

Effect: Mortality

Acute - EC50 - Marine water

Algae - Green algae - *Ulva pertusa*

17.921 mg/l [96 hours]

Effect: Reproduction

Chronic - NOEC - Marine water

Algae - Green algae - *Ulva pertusa*

4.995 mg/l [96 hours]

Effect: Reproduction

Chronic - NOEC - Fresh water

SECTION 12: Ecological information

Fish - Eastern mosquitofish - *Gambusia holbrooki* - Larvae

Age: 3 days

0.375 µl/l [12 weeks]

Effect: Morphology

Chronic - NOEC - Fresh water

Daphnia - Water flea - *Daphnia magna* - Neonate

Age: <24 hours

100 µl/l [21 days]

Effect: Mortality

Formaldehyde

Acute - EC50 - Fresh water

Daphnia - Water flea - *Daphnia pulex* - Neonate

Age: <24 hours

5800 µg/l [48 hours]

Effect: Intoxication

Acute - EC50 - Marine water

Algae - Green algae - *Ulva pertusa*

0.788 mg/l [96 hours]

Effect: Reproduction

Acute - LC50 - Fresh water

US EPA

Fish - Rainbow trout,donaldson trout - *Oncorhynchus mykiss*

1.41 ppm [96 hours]

Effect: Mortality

Chronic - NOEC - Fresh water

Fish - Chinook salmon - *Oncorhynchus tshawytscha* - Egg

953.9 ppm [43 days]

Effect: Mortality

Chronic - NOEC - Marine water

Algae - Haptophyte - *Isochrysis galbana* - Exponential growth phase

Age: 4 to 5 days

0.005 mg/l [96 hours]

Effect: Population

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

Butanone

Acute - EC50 - Fresh water

Daphnia - Water flea - *Daphnia magna* - Larvae

SECTION 12: Ecological information

Age: <24 hours
5091000 µg/l [48 hours]
Effect: Intoxication

Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas*
Age: 31 days; Size: 22 mm; Weight: 0.167 g
3220000 µg/l [96 hours]
Effect: Mortality

Acute - EC50 - Marine water

Algae - Diatom - *Skeletonema costatum*
>500000 µg/l [96 hours]
Effect: Population

bisphenol A

Acute - EC50 - Marine water

Algae - Diatom - *Skeletonema costatum*
1000 µg/l [96 hours]
Effect: Growth

Chronic - NOEC - Fresh water

Fish - Goldfish - *Carassius auratus* - Adult
Age: 2 to 3 years
0.2 µg/l [90 days]
Effect: Reproduction

Chronic - NOEC - Fresh water

Algae - Algae - *Chlorolobion braunii* - Exponential growth phase
2 mg/l [4 days]
Effect: Population

Acute - LC50 - Marine water

Fish - Rivulus - *Rivulus marmoratus* - Embryo
3.5 mg/l [96 hours]
Effect: Mortality

Chronic - NOEC - Marine water

Crustaceans - Harpacticoid copepod - *Tigriopus japonicus* - Nauplii
Age: <24 hours
10 µg/l [21 days]
Effect: Reproduction

Acute - LC50 - Marine water

Crustaceans - Brine shrimp - *Artemia sinica*
Age: 15 days
50.4 µg/l [48 hours]
Effect: Mortality

Conclusion/Summary [Product] : Not available.

12.2 Persistence and degradability

Product/ingredient name

Result

iso-butanol

74% [28 days] - Readily

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
iso-butanol	-	-	Readily

12.3 Bioaccumulative potential

SECTION 12: Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
n-Butyl acetate	2.3	-	Low
Xylene	3.12	8.1 to 25.9	Low
iso-butanol	1	-	Low
Butan-1-ol	1	-	Low
Trizinc bis(orthophosphate)	-	60960	High
Ethylbenzene	3.6	-	Low
o-xylene	3.12	8.1 to 25.9	Low
Ethanol	-0.35	-	Low
Toluene	2.73	90	Low
Butanone	0.3	-	Low
bisphenol A	3.4	20 to 67	Low

12.4 Mobility in soil

Soil/water partition coefficient : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
n-Butyl acetate	No	No	No	No	No	No	No
Xylene	No	No	No	Yes	No	No	No
iso-butanol	No	No	No	No	No	No	No
Butan-1-ol	No	No	No	No	No	No	No
Trizinc bis(orthophosphate)	No	No	No	No	No	No	No
Ethylbenzene	No	No	No	Yes	No	No	No
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2,2'-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bis[oxirane	No	No	No	No	No	No	No
o-xylene	No	No	No	No	No	No	No
Ethanol	No	No	No	No	No	No	No
Phosphoric acid	No	No	No	No	No	No	No
crystalline silica, respirable powder	No	No	No	No	No	No	No
Formaldehyde	No	No	No	Yes	No	No	No
Toluene	No	No	No	Yes	No	No	No
Butanone	No	No	No	No	No	No	No
bisphenol A	No	No	No	Yes	No	No	No

12.6 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.





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	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	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

ADR/RID : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Special provisions 640 (C)
Tunnel code (D/E)

ADN : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Special provisions 640 (C)

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

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 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
UK (GB)/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
Toxic to reproduction Substance of equivalent concern for human health Substance of equivalent concern for environment	4,4'-isopropylidenediphenol	Candidate	-	1/12/2017
	4,4'-isopropylidenediphenol	Candidate	-	1/12/2017
	4,4'-isopropylidenediphenol	Candidate	-	1/12/2017

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not 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]
TEKNOCELL 1311	≥90	3
Formaldehyde	<0.1	72
Toluene	≤0.1	48
bisphenol A	≤0.1	66

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
P5c E2

National regulations

Product/ingredient name	List name	Name on list	Classification	Notes
crystalline silica, respirable powder	EH40/2005 WELs	silica, respirable crystalline	Carc	-
Formaldehyde	EH40/2005 WELs	-	Carc	-

EU regulations

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

SECTION 15: Regulatory information

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

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
GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and
Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019
No. 720 and amendments
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = GB 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

Classification	Justification
Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335 STOT SE 3, H336 STOT RE 2, H373 Aquatic Chronic 2, H411	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method

Full text of abbreviated H statements

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

SECTION 16: Other information

H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H360F	May damage fertility.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Full text of classifications

Acute Tox. 2	ACUTE TOXICITY - Category 2
Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Carc. 1B	CARCINOGENICITY - Category 1B
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Muta. 2	GERM CELL MUTAGENICITY - Category 2
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
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

Date of issue/ Date of revision : 02/04/2025

Date of previous issue : No previous validation

Version : 3

TEKNOCELL 1311

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.

