Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2020/878 - Ireland

SAFETY DATA SHEET



TEKNOTHERM 4400 - All variants

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

1.1	Product identifier	
Pr	oduct name	

: TEKNOTHERM 4400 - All variants

1.2 Relevant identified uses of the substance or mixture and uses advised againstProduct 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 : Prod-safe@teknos.com responsible for this SDS

National contact

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

1.4 Emergency telephone number

National advisory body/Poison Centre

 Telephone number
 : National Poisons Information Centre: 01 809 2566

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Chronic 3, H412

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

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

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

2.2 Label elements

Hazard pictograms



Signal word Hazard statements

- : Danger
- : H226 Flammable liquid and vapour.
 - H315 Causes skin irritation.
 - H317 May cause an allergic skin reaction.
 - H318 Causes serious eye damage.
 - H373 May cause damage to organs through prolonged or repeated exposure.
 - H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

SECTION 2: Hazards identification

SECTION 2: Hazarus	filincali	
Prevention	P210 - Keep sources. No	protective gloves. Wear eye or face protection. away from heat, hot surfaces, sparks, open flames and other ignition smoking. t breathe vapour.
Response	ninutes. Rer	+ P338 + P310 - IF IN EYES: Rinse cautiously with water for several nove contact lenses, if present and easy to do. Continue rinsing. call a POISON CENTER or doctor.
Storage	Not applicabl	е.
Disposal		se of contents and container in accordance with all local, regional, nternational regulations.
Hazardous ingredients	1-methyleth Reaction pro	ene; Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2,2'-[/lidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane; iso-butanol and duct of 4,4'-Isopropylidenediphenol, oligomeric reaction products with epoxypropane and aqueous phosphoric acid, 2-butoxyethanol, 2- no) ethanol
Supplemental label elements	Narning! Ha	zardous respirable droplets may be formed when sprayed. Do not / or mist.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles		
2.3 Other hazards		
Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	Γhis mixture /ΡνΒ.	does not contain any substances that are assessed to be a PBT or a
Other hazards which do not result in classification	None known.	

SECTION 3: Composition/information on ingredients

3.2 Mixtures	: Mixture				
Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Туре
Solvent Naphta (Petroleum), heavy aromatic	REACH #: 01-2119463583-34 EC: 265-198-5 CAS: 64742-94-5 Index: 649-424-00-3	≤12	STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	-	[1]
Xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≤12	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 (oral, inhalation) Asp. Tox. 1, H304	ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 11 mg/ I	[1] [2]
Phenol, 4,4'- (1-methylethylidene)bis-, polymer with 2,2'-[(1-methylethylidene)bis (4,1-phenyleneoxymethylene)] bis[oxirane	CAS: 25036-25-3	≤10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317	-	[1]
iso-butanol	REACH #:	≤5.2	Flam. Liq. 3, H226	-	[1] [2]
Date of issue/Date of revision: 21/09/2023Date of previous issue: 21/09/2023Version: 22/20TEKNOTHERM 4400 - All variantsLabel No :48597					

SECTION 3: Compo			•	1	1
	01-2119484609-23 EC: 201-148-0 CAS: 78-83-1 Index: 603-108-00-1		Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336		
2-Butoxyethanol	REACH #: 01-2119475108-36 EC: 203-905-0 CAS: 111-76-2 Index: 603-014-00-0	≤5	Acute Tox. 4, H302 Acute Tox. 3, H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319	ATE [Oral] = 1200 mg/kg ATE [Inhalation (vapours)] = 3 mg/l	[1] [2]
Ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≤3	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) (oral, inhalation) Asp. Tox. 1, H304	ATE [Inhalation (vapours)] = 11 mg/ I	[1] [2]
2-(2-butoxyethoxy)ethanol	REACH #: 01-2119475104-44 EC: 203-961-6 CAS: 112-34-5 Index: 603-096-00-8	≤3	Eye Irrit. 2, H319	-	[1] [2]
Butan-1-ol	REACH #: 01-2119484630-38 EC: 200-751-6 CAS: 71-36-3 Index: 603-004-00-6	≤1.2	Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	ATE [Oral] = 790 mg/kg	[1] [2]
Reaction product of 4,4'- Isopropylidenediphenol, oligomeric reaction products with 1-chloro- 2,3-epoxypropane and aqueous phosphoric acid, 2-butoxyethanol, 2- (dimethylamino) ethanol	REACH #: 01-2120768442-51 EC: 945-830-2	<3	Skin Sens. 1B, H317 Repr. 2, H361 Aquatic Chronic 3, H412	-	[1]
2-ethoxy-1-methylethyl acetate	REACH #: 01-2119475116-39 EC: 259-370-9 CAS: 54839-24-6 Index: 603-177-00-8	≤1	Flam. Liq. 3, H226 STOT SE 3, H336	-	[1]
			See Section 16 for the full text of the H statements declared above.		

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. Contains: > 1 % TiO2

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

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

SECTION 4: First aid measures

4.1 Description of first aid measures				
Eye contact	: 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.			
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 : No specific data. **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	: Treat symptomatically. Contact poison treatment specialist immediately if large
	quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.

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SECTION 5: Firefighting measures				
5.1 Extinguishing media				
Suitable extinguishing media	:	Use dry chemical, CO ₂ , water spray (fog) or foam.		
Unsuitable extinguishing media	:	Do not use water jet.		
5.2 Special hazards arising	from	the substance or mixture		
Hazards from the substance or mixture	:	Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.		
Hazardous combustion products	:	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides metal oxide/oxides		
5.3 Advice for firefighters				
Special protective actions for fire-fighters	:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.		
Special protective equipment for fire-fighters		Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.		

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. 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".
6.2 Environmental precautions	:	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

: 21/09/2023 Date of previous issue : 21/09/2023

SECTION 6: Accidental release measures

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. 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.
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. 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.

Seveso Directive - Reporting thresholds

Danger criteria

	Notification and MAPP threshold	Safety report threshold
P5c	5000 tonne	50000 tonne

7.3 Specific end use(s)

Recommendations

- : Not available.
- Industrial sector specific solutions
- : Not available.

Date of issue/Date of revision TEKNOTHERM 4400 - All variants

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
Xylene	NAOSH (Ireland, 5/2021). [xylene mixed isomers] Absorbed
	through skin. Notes: EU derived Occupational Exposure Limit
	Values
	OELV-8hr: 50 ppm 8 hours.
	OELV-8hr: 221 mg/m ³ 8 hours.
	OELV-15min: 100 ppm 15 minutes.
the best of the	OELV-15min: 442 mg/m ³ 15 minutes.
iso-butanol	NAOSH (Ireland, 5/2021). Notes: Advisory Occupational
	Exposure Limit Values (OELVs)
	OELV-8hr: 50 ppm 8 hours.
	OELV-8hr: 150 mg/m ³ 8 hours. OELV-15min: 75 ppm 15 minutes.
	OELV-15min: 225 mg/m ³ 15 minutes.
2-Butoxyethanol	NAOSH (Ireland, 5/2021). Absorbed through skin. Notes: EU
	derived Occupational Exposure Limit Values
	OELV-8hr: 20 ppm 8 hours.
	OELV-8hr: 98 mg/m ³ 8 hours.
	OELV-15min: 50 ppm 15 minutes.
	OELV-15min: 246 mg/m ³ 15 minutes.
Ethylbenzene	NAOSH (Ireland, 5/2021). Absorbed through skin. Notes: EU
	derived Occupational Exposure Limit Values
	OELV-8hr: 100 ppm 8 hours.
	OELV-8hr: 442 mg/m ³ 8 hours.
	OELV-15min: 200 ppm 15 minutes.
	OELV-15min: 884 mg/m ³ 15 minutes.
2-(2-butoxyethoxy)ethanol	NAOSH (Ireland, 5/2021). Notes: EU derived Occupational
	Exposure Limit Values
	OELV-8hr: 10 ppm 8 hours.
	OELV-15min: 101.2 mg/m ³ 15 minutes.
	OELV-8hr: 67.5 mg/m ³ 8 hours.
Defended.	OELV-15min: 15 ppm 15 minutes.
Butan-1-ol	NAOSH (Ireland, 5/2021). Notes: Advisory Occupational
	Exposure Limit Values (OELVs)
	OELV-8hr: 20 ppm 8 hours.

Biological exposure indices

Product/ingredient name	Exposure indices				
Xylene	NAOSH (Ireland, 1/2011) [Xylene] BMGV: 1.5 g/g creatinine, methylhippuric acids [in urine]. Sampling time: end of shift - As soon as possible after exposure ceases.				
2-Butoxyethanol	NAOSH (Ireland, 1/2011) BMGV: 200 mg/g creatinine, BAA [in urine]. Sampling time: end of shift - As soon as possible after exposure ceases.				
Ethylbenzene	NAOSH (Ireland, 1/2011) BMGV: Semi-quantitative, the biological analyte is an indicator of exposure to the substance but the quantitative interpretation of the measurement is ambiguous. These analytes should be used as a screening test if a quantitative test is not practical; or as a confirmatory test if the quantitative test is not specific and the origin of the determinant is in question., ethylbenzene [in endexhaled air]. Sampling time: not critical. BMGV: 0.7 g/g creatinine [Semi-quantitative, the biological analyte is an indicator of exposure to the substance but the				
ate of issue/Date of revision : 21/09/202	3 Date of previous issue : 21/09/2023 Version : 2 7/20				
EKNOTHERM 4400 - All variants	Label No :48597				

SECTION 8: Exposure controls/personal protection

quantitative interpretation of the measurement is ambiguous. These analytes should be used as a screening test if a quantitative test is not practical; or as a confirmatory test if the quantitative test
is not specific and the origin of the determinant is in question.], mandelic acid and phenylglyoxylic acid [in urine]. Sampling time: end of shift at end of workweek.

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	Туре	Exposure	Value	Population	Effects
Solvent Naphta (Petroleum), heavy aromatic	DNEL	Long term Oral	0.03 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.28 mg/ kg bw/day	General population	Systemic
	DNEL	Long term	0.69 mg/m ³	General	Local
	DNEL	Inhalation Long term	0.69 mg/m ³		Systemic
	DNEL	Inhalation Long term Dermal	0.95 mg/ kg bw/day	population Workers	Systemic
	DNEL	Long term Inhalation	2.31 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	2.31 mg/m ³	Workers	Systemic
	DNEL	Short term Oral	25.6 mg/ kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	143.5 mg/ m ³	General population	Local
	DNEL	Short term Inhalation	160.23 mg/ m ³	Workers	Local
	DNEL	Short term Inhalation	226 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	384 mg/m³	Workers	Systemic
Xylene	DNEL	Long term Inhalation	65.3 mg/m ³	General population	Local
	DNEL	Short term Inhalation	260 mg/m ³	General population	Local
	DNEL	Short term Inhalation	260 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	221 mg/m ³	Workers	Local
	DNEL	Long term Oral	12.5 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	65.3 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	125 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	212 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	221 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	442 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	442 mg/m ³	Workers	Systemic
e of issue/Date of revision : 21/0)9/2023	Date of previous issue	: 21/09/20	000	/ersion : 2 8/20

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of issue/Date of revision : 21/09/2023 Date of previous issue : 21/09/2023 Version : 2	: 21/09/2023 Date of prev	Version : 2	9/2

thoxy-1-methylethyl acetate	DNEL	Long term	152 mg/m ³	Workers	Systemic
	DNEL	Inhalation Long term Oral	13.1 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Dermal	62 mg/kg bw/day	General	Systemic
	DNEL	Long term Dermal	103 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	181 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	1420 mg/ m³	General population	Systemic
	DNEL	Short term Inhalation	2366 mg/ m ³	Workers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
Reaction product of 4,4'- Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane and aqueous phosphoric acid, 2-butoxyethanol, 2-(dimethylamino) ethanol	Fresh water	52 μg/l	Assessment Factors
	Marine water Fresh water sediment Marine water sediment Sewage Treatment Plant Soil Secondary Poisoning	5.2 μg/l 0.6 mg/kg 0.06 mg/kg 10 mg/l 0.09 mg/kg 20 mg/kg	Assessment Factors Sensitivity Distribution Sensitivity Distribution Assessment Factors Sensitivity Distribution Assessment Factors

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.
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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.

Date of issue/Date of revision	: 21/09/2023	Date of previous issue	: 21/09/2023	Version	:2	10/20
TEKNOTHERM 4400 - All variants				Label No :4	48597	

SECTION 8: Exposure controls/personal protection

•	· · ·
Body protection	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
Other skin protection	: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Filter type: A
	Filter type (spray application): A P
Environmental exposure controls	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

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

9.1 Information on basic physical and chemical properties

<u>Appearance</u>	
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
F	lammability : Not ava	ilable.		

	er: 0.8% er: 11.3%
Flash point : Close	sed cup: 25°C (77°F)

Auto-ignition temperature

Ingredient name		°C	°F	Method			
2-(2-butoxyethoxy)ethanol		210	410	DIN 51794			
Solvent Naphta (Petroleum), heavy aron	220 to 250	428 to 482	ASTM E 659				
Decomposition temperature	: Not a	vailable.		·			
pH	: Not a	pplicable.					
Viscosity	: Kinen	natic (40°C): >2	0.5 mm²/s				
Solubility(ies)	:						
Not available.							
Solubility in water	: Not available.						
Partition coefficient: n-octanol/ water	: Not a	pplicable.					
Vapour pressure	:						
ate of issue/Date of revision	: 21/09/202	23 Date of previ	ous issue : 21/0	9/2023	Version	:2	11/2
EKNOTHERM 4400 - All variants					Label No	:4859 ⁻	7

	Va	pour Press	ure at 20°C	Vapour pressure at 5		
Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
iso-butanol	<12.00102	<1.6	DIN EN 13016-2			
Ethylbenzene	9.30076	1.2				
Relative density	: Not	available.				
)ensity	: 1.1 9	g/cm³				
/apour density	: Not	available.				
Explosive properties	: Not	available.				
Dxidising properties	: Not	available.				
article characteristics						
Median particle size	: Not	applicable.				

SECTION 10: Stabilit	y 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.

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

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Xylene	LC50 Inhalation Vapour	Rat	21.7 mg/l	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
iso-butanol	LC50 Inhalation Vapour	Rat	19200 mg/m ³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	2460 mg/kg	-
Ethylbenzene	LC50 Inhalation Dusts and	Rat	29000 mg/l	4 hours
5	mists		Ŭ	
	LD50 Dermal	Rabbit	15400 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
2-(2-butoxyethoxy)ethanol	LD50 Dermal	Rabbit	2700 mg/kg	-
	LD50 Oral	Rat	4500 mg/kg	-
Butan-1-ol	LC50 Inhalation Vapour	Rat	24000 mg/m ³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	790 mg/kg	-
Reaction product of 4,4'- Isopropylidenediphenol, oligomeric reaction	LD50 Oral	Rat	>5000 mg/kg	-
products with 1-chloro-				
2,3-epoxypropane and aqueous phosphoric acid, 2-butoxyethanol, 2-				
(dimethylamino) ethanol				
e of issue/Date of revision	: 21/09/2023 Date of previous i	ssue : 21/09/	2023	/ersion : 2 12/2
KNOTHERM 4400 - All variar	nts		Lat	oel No :48597

Conclusion/Summary

: Based on available data, the classification criteria are not met.

Acute toxicity estimates

Route	ATE value
Oral	18034.85 mg/kg
Dermal	9516.95 mg/kg
Inhalation (vapours)	34.56 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Solvent Naphta (Petroleum),	Skin - Mild irritant	Rabbit	-	24 hours 500	-
heavy aromatic				uL	
Xylene	Eyes - Mild irritant	Rabbit	-	87 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5	-
				mg	
	Skin - Mild irritant	Rat	-	8 hours 60 uL	-
	Skin - Moderate irritant	Rabbit	-	100 %	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500	-
	Euro Madausta imitant	Dahhit		mg	
2-Butoxyethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100	-
	Eyes - Severe irritant	Rabbit		mg 100 mg	
	Skin - Mild irritant	Rabbit	-	500 mg	-
Ethylbenzene	Eyes - Severe irritant	Rabbit		500 mg	-
Luiyibenzene	Skin - Mild irritant	Rabbit		24 hours 15	-
		T CODDIC		mg	
2-(2-butoxyethoxy)ethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 20	-
_ (mg	
	Eyes - Severe irritant	Rabbit	-	20 mg	-
Butan-1-ol	Eyes - Severe irritant	Rabbit	-	0.005 MI	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2	-
				mg	
	Skin - Moderate irritant	Rabbit	-	24 hours 20	-
				mg	
Conclusion/Summary	: Causes skin irritation.				
<u>Sensitisation</u>					
Conclusion/Summary	: May cause an allergic skin	reaction.			
Mutagenicity	ý č				
Conclusion/Summary	: Based on available data, th	e classification o	riteria are	not met	
Carcinogenicity				not mot.	
Conclusion/Summary	: Based on available data, th	e classification o	ritoria ara	not met	
· · · · · · · · · · · · · · · · · · ·					
Reproductive toxicity					

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
Reaction product of 4,4'- Isopropylidenediphenol, oligomeric reaction products with 1-chloro- 2,3-epoxypropane and aqueous phosphoric acid, 2-butoxyethanol, 2- (dimethylamino) ethanol	-	-	Positive	Rat	Oral: 300 mg/kg	-
	-	Negative	-	Rat	Oral: 1000 mg/ kg	-
Conclusion/Summary	: Based on	available da	ta, the classificat	ion criteria are not	met.	
Teratogenicity						
Conclusion/Summary	: Based on	available da	ta, the classificat	ion criteria are not	met.	
Specific target organ toxicit	<u>y (single ex</u> t	<u>oosure)</u>				
Date of issue/Date of revision	: 21/09/202	23 Date of pr	evious issue	: 21/09/2023	Version	:2 13/20

Product/ingredient name	Category	Route of exposure	Target organs
Solvent Naphta (Petroleum), heavy aromatic	Category 3	-	Narcotic effects
Xylene	Category 3	-	Respiratory tract irritation
iso-butanol	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
Butan-1-ol	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
2-ethoxy-1-methylethyl acetate	Category 3	-	Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
	- 5 5	oral, inhalation oral, inhalation	- hearing organs

Aspiration hazard

Product/ingredient name	Result
Solvent Naphta (Petroleum), heavy aromatic	ASPIRATION HAZARD - Category 1
Xylene	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure	1	Not available.
Potential acute health effects		
Eye contact	÷	Causes serious eye damage.
Inhalation	÷	No known significant effects or

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 watering redness
Inhalation	: No specific data.
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

<u>Short term exposure</u>		
Potential immediate effects	: Not available.	
Potential delayed effects	: Not available.	
<u>Long term exposure</u>		
Potential immediate effects	: Not available.	
Potential delayed effects	: Not available.	
Potential chronic health effe	ects	

Date of issue/Date of revision: 21/09/2023Date of previous issue: 21/09/2023TEKNOTHERM 4400 - All variants

Not available.

Conclusion/Summary	: 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.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
iso-butanol	Acute LC50 600 mg/l Marine water	Crustaceans - Artemia salina	48 hours
	Acute LC50 1030000 μg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	48 hours
	Acute LC50 1330000 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
2-Butoxyethanol	Acute EC50 >1000 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
-	Acute LC50 800000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 1250000 µg/l Marine water	Fish - Menidia beryllina	96 hours
2-(2-butoxyethoxy)ethanol	Acute LC50 1300000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
Butan-1-ol	Acute EC50 1983000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1730000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Reaction product of 4,4'- Isopropylidenediphenol, oligomeric reaction products with 1-chloro- 2,3-epoxypropane and aqueous phosphoric acid, 2-butoxyethanol, 2- (dimethylamino) ethanol	Acute EC50 68 mg/l	Algae	72 hours
	Acute EC50 >52 mg/l	Daphnia	48 hours
	Acute LC50 90 mg/l	Fish	96 hours

Conclusion/Summary

: Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
iso-butanol	-	74 % - Readily - 28 days	-	-
Conclusion/Summary	: This product	has not been tested for biode	gradation.	
Product/ingredient name	Aquatic half-life	e Phote	olysis	Biodegradability
iso-butanol Reaction product of 4,4'- Isopropylidenediphenol, oligomeric reaction products with 1-chloro- 2,3-epoxypropane and aqueous phosphoric acid, 2-butoxyethanol, 2- (dimethylamino) ethanol	-	-		Readily Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Solvent Naphta (Petroleum), heavy aromatic	2.8 to 6.5	99 to 5780	High
Xylene	3.12	8.1 to 25.9	Low
iso-butanol	1	-	Low
2-Butoxyethanol	0.81	-	Low
Ethylbenzene	3.6	-	Low
2-(2-butoxyethoxy)ethanol	1	-	Low
Butan-1-ol	1	-	Low
2-ethoxy-1-methylethyl acetate	0.76	-	Low

12.4 Mobility in soil	
Soil/water partition coefficient (Koc)	: Not available.
Mobility	: Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

Not available.

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*
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.

: 21/09/2023 Date of previous issue

: 21/09/2023

or ID numberI4.2 UN proper shipping nameI4.3 Transport3	N1263 AINT	ADN UN1263	UN1263	
or ID number14.2 UN proper shipping name14.3 Transport3				
shipping name14.3 Transport3	AINT			UN1263
14.3 Transport 3 hazard class(es)		PAINT	PAINT	PAINT
I		3	3	3
14.4 Packing II group	I			
14.5 N Environmental hazards	lo.	No.	No.	No.
Additional information ADR/RID	<u>1</u> : <u>Tunnel c</u>	<u>code</u> (D/E)		
4.7 Maritime transpor pulk according to IMO instruments SECTION 15: Ref 5.1 Safety, health and EU Regulation (EC) N Annex XIV - List of s Annex XIV None of the composi- None of the composi-	egulatory info I environmental re- lo. 1907/2006 (REA substances subjec nents are listed. y high concern	rmation gulations/legislatior . <u>CH)</u>	nature of the product.	nce or mixture
Annex XVII - Restricti substances, mixtures		acture, placing on th	e market and use of cer	tain dangerous
Product/ingredient	name	% Des	signation [Usage]	
TEKNOTHERM 4400 2-(2-butoxyethoxy)et	-	≥90 3 ≤3 55	[Consumer paint]	
Labelling	:	· · ·		
Other EU regulations Industrial emissions (integrated pollution prevention and cont Air Industrial emissions (integrated pollution	s : Not listed trol) - s : Not listed	_		
prevention and cont Water				
Explosive precursor Ozone depleting sul				

SECTION 15: Regulatory information

Not listed.

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

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category

P5c

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	1	This product contains substances for which Chemical Safety Assessments are still
assessment		required.

SECTION 16: Other information

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

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

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Calculation method
STOT RE 2, H373	Calculation method
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements

SECTION 16: Other information

H225	Highly flammable liquid and vapour.	
H226	Flammable liquid and vapour.	
H302	Harmful if swallowed.	
H304	May be fatal if swallowed and enters airways.	
H312	Harmful in contact with skin.	
H315	Causes skin irritation.	
H317	May cause an allergic skin reaction.	
H318	Causes serious eye damage.	
H319	Causes serious eye irritation.	
H331	Toxic if inhaled.	
H332	Harmful if inhaled.	
H335	May cause respiratory irritation.	
H336	May cause drowsiness or dizziness.	
H361	Suspected of damaging fertility or the unborn child.	
H373	May cause damage to organs through prolonged or repeated exposure.	
H411	Toxic to aquatic life with long lasting effects.	
H412	Harmful to aquatic life with long lasting effects.	
EUH066	Repeated exposure may cause skin dryness or cracking.	

Full text of classifications [CLP/GHS]

Acute Tox. 3	ACUTE TOXICITY - Category 3
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 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
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	: 21/09/2023
revision	
Date of previous issue	e : 21/09/2023
Version	: 2

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.

Date of issue/Date of revision TEKNOTHERM 4400 - All variants