



Safety Data Sheet according to (EC) No 1907/2006 as amended

Page 1 of 16

X32-10i LIQUID FLUX

SDS No. : 175676
V008.0

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

1.1. Product identifier

X32-10i LIQUID FLUX

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

Intended use:

Liquid Flux

1.3. Details of the supplier of the safety data sheet

Henkel Ltd
Wood Lane End
HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 1442 278000

Fax-no.: +44 1442 278071

ua-productsafety.uk@henkel.com

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)1442 278497

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Flammable liquids Category 2

H225 Highly flammable liquid and vapor. Category 2

Serious eye irritation Category 2

H319 Causes serious eye irritation. Category 3

Specific target organ toxicity - single exposure Category 3

H336 May cause drowsiness or dizziness.

Target organ: Central nervous system

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Contains

Propan-2-ol

Signal word:	Danger
Hazard statement:	H225 Highly flammable liquid and vapor. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.
Precautionary statement: Prevention	P210 Keep away from heat/open flames/hot surfaces. - No smoking. P261 Avoid breathing vapors.
Precautionary statement: Response	P337+P313 If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

Fumes evolved at soldering temperatures will irritate the nose, throat and lungs. Prolonged or repeated exposure to flux fumes may result in sensitisation in sensitive workers.

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Propan-2-ol 67-63-0	200-661-7 01-2119457558-25	50- 100 %	Flam. Liq. 2 H225 Eye Irrit. 2 H319 STOT SE 3 H336
adipic acid 124-04-9	204-673-3 01-2119457561-38	1- < 3 %	Eye Dam. 1 H318
Biphenyl-2-ol 90-43-7	201-993-5 01-2119511183-53	0,1- < 1 %	Skin Irrit. 2 H315 Eye Irrit. 2 H319 STOT SE 3 H335 Aquatic Acute 1 H400 Aquatic Chronic 1 H410

For full text of the H - statements and other abbreviations see section 16 "Other information".
Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Move to fresh air. If symptoms persist, seek medical advice.

Skin contact:

Rinse with running water and soap.
Seek medical advice.

Eye contact:

Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

Ingestion:
Do not induce vomiting.
Seek medical advice.

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

EYE: Irritation, conjunctivitis.

Vapors may cause drowsiness and dizziness.

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

See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Alcohol-resistant foam.

5.2. Special hazards arising from the substance or mixture

The flux medium will give rise to irritating fumes.

In the event of a fire, carbon monoxide (CO), carbon dioxide (CO₂) and nitrogen oxides (NO_x) can be released.

5.3. Advice for firefighters

Wear self-contained breathing apparatus.

Additional information:

In case of fire, keep containers cool with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes.

Ensure adequate ventilation.

Wear protective equipment.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

For small spills wipe up with paper towel and place in container for disposal.

For large spills absorb onto inert absorbent material and place in sealed container for disposal.

Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Use only in well-ventilated areas.

Keep away from sources of ignition - no smoking.

Wear suitable protective clothing, safety glasses and gloves.

Avoid skin and eye contact.

See advice in section 8

Take measures to prevent the build-up of electrostatic charges.

Hygiene measures:

Good industrial hygiene practices should be observed.

After handling solder wash hands with soap and water before eating, drinking or smoking.

Do not eat, drink or smoke while working.

7.2. Conditions for safe storage, including any incompatibilities

Ensure good ventilation/extraction.
 Store in a cool, well-ventilated place.
 Keep away from sources of ignition.
 Refer to Technical Data Sheet

7.3. Specific end use(s)

Liquid Flux

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational Exposure Limits**

Valid for
 Great Britain

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Propan-2-ol 67-63-0 [PROPAN-2-OL]	400	999	Time Weighted Average (TWA):		EH40 WEL
Propan-2-ol 67-63-0 [PROPAN-2-OL]	500	1.250	Short Term Exposure Limit (STEL):	15 minutes	EH40 WEL

Occupational Exposure Limits

Valid for
 Ireland

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Propan-2-ol 67-63-0 [ISOPROPYL ALCOHOL]	200		Time Weighted Average (TWA):		IR_OEL
Propan-2-ol 67-63-0 [ISOPROPYL ALCOHOL]			Skin designation:	Can be absorbed through the skin.	IR_OEL
Propan-2-ol 67-63-0 [ISOPROPYL ALCOHOL]	400		Short Term Exposure Limit (STEL):	15 minutes	IR_OEL
Adipic acid 124-04-9 [ADIPIC ACID]		5	Time Weighted Average (TWA):		IR_OEL

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Propan-2-ol 67-63-0	aqua (freshwater)		140,9 mg/l				
Propan-2-ol 67-63-0	aqua (marine water)		140,9 mg/l				
Propan-2-ol 67-63-0	sediment (freshwater)				552 mg/kg		
Propan-2-ol 67-63-0	sediment (marine water)				552 mg/kg		
Propan-2-ol 67-63-0	Soil				28 mg/kg		
Propan-2-ol 67-63-0	aqua (intermittent releases)		140,9 mg/l				
Propan-2-ol 67-63-0	sewage treatment plant (STP)		2251 mg/l				
Propan-2-ol 67-63-0	oral				160 mg/kg		
Adipic acid 124-04-9	aqua (freshwater)		0,126 mg/l				
Adipic acid 124-04-9	aqua (intermittent releases)		0,46 mg/l				
Adipic acid 124-04-9	aqua (marine water)		0,0126 mg/l				
Adipic acid 124-04-9	sewage treatment plant (STP)		59,1 mg/l				
Adipic acid 124-04-9	sediment (freshwater)				0,484 mg/kg		
Adipic acid 124-04-9	sediment (marine water)				0,0484 mg/kg		
Adipic acid 124-04-9	Soil				0,0228 mg/kg		
Biphenyl-2-ol 90-43-7	Soil				2,5 mg/kg		
Biphenyl-2-ol 90-43-7	sewage treatment plant (STP)		0,56 mg/l				
Biphenyl-2-ol 90-43-7	sediment (marine water)				0,01284 mg/kg		
Biphenyl-2-ol 90-43-7	aqua (marine water)		0,00009 mg/l				
Biphenyl-2-ol 90-43-7	aqua (intermittent releases)		0,027 mg/l				
Biphenyl-2-ol 90-43-7	sediment (freshwater)				0,1284 mg/kg		
Biphenyl-2-ol 90-43-7	aqua (freshwater)		0,0009 mg/l				

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Propan-2-ol 67-63-0	Workers	dermal	Long term exposure - systemic effects		888 mg/kg	
Propan-2-ol 67-63-0	Workers	inhalation	Long term exposure - systemic effects		500 mg/m ³	
Propan-2-ol 67-63-0	General population	dermal	Long term exposure - systemic effects		319 mg/kg	
Propan-2-ol 67-63-0	General population	inhalation	Long term exposure - systemic effects		89 mg/m ³	
Propan-2-ol 67-63-0	General population	oral	Long term exposure - systemic effects		26 mg/kg	
Adipic acid 124-04-9	General population	oral	Acute/short term exposure - systemic effects		19 mg/kg	
Adipic acid 124-04-9	General population	dermal	Long term exposure - systemic effects		19 mg/kg	
Adipic acid 124-04-9	General population	oral	Long term exposure - systemic effects		19 mg/kg	
Adipic acid 124-04-9	General population	inhalation	Long term exposure - systemic effects		65 mg/m ³	
Adipic acid 124-04-9	Workers	dermal	Acute/short term exposure - systemic effects		38 mg/kg	
Adipic acid 124-04-9	Workers	inhalation	Acute/short term exposure - systemic effects		264 mg/m ³	
Adipic acid 124-04-9	Workers	inhalation	Acute/short term exposure - local effects		5 mg/m ³	
Adipic acid 124-04-9	Workers	dermal	Long term exposure - systemic effects		38 mg/kg	
Adipic acid 124-04-9	Workers	inhalation	Long term exposure - systemic effects		264 mg/m ³	
Adipic acid 124-04-9	Workers	inhalation	Long term exposure - local effects		5 mg/m ³	
Adipic acid 124-04-9	General population	dermal	Acute/short term exposure - systemic effects		19 mg/kg	
Adipic acid 124-04-9	General population	inhalation	Acute/short term exposure - systemic effects		65 mg/m ³	
Biphenyl-2-ol 90-43-7	General population	oral	Long term exposure - systemic effects		0,4 mg/kg	
Biphenyl-2-ol 90-43-7	Workers	inhalation	Long term exposure - systemic effects		19,25 mg/m ³	
Biphenyl-2-ol 90-43-7	Workers	dermal	Long term exposure - systemic effects		21,84 mg/kg	
Biphenyl-2-ol 90-43-7	General population	dermal	Long term exposure - systemic effects		0,4 mg/kg	
Biphenyl-2-ol 90-43-7	General population	inhalation	Long term exposure - systemic effects		1,2 mg/m ³	

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:

Ensure adequate ventilation, especially in confined areas.

Extraction is necessary to remove fumes evolved during reflow.

Respiratory protection:

Ensure adequate ventilation.

An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area

Filter type: A (EN 14387)

Hand protection:

Chemical-resistant protective gloves (EN 374).

Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):

nitrile rubber (NBR; \geq 0.4 mm thickness)

Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):

nitrile rubber (NBR; \geq 0.4 mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.

Protective eye equipment should conform to EN166.

Skin protection:

Wear suitable protective clothing.

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions. Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Appearance	liquid
	colourless
Odor	alcohol-like
Odour threshold	No data available / Not applicable
pH	Not applicable
Melting point	No data available / Not applicable
Solidification temperature	No data available / Not applicable
Initial boiling point	82 °C (179.6 °F)
Flash point	12 °C (53.6 °F)
Evaporation rate	No data available / Not applicable
Flammability	No data available / Not applicable
Explosive limits	
lower	2 %(V)
upper	12 %(V)
Vapour pressure	6,6 kPa

(25 °C (77 °F))	
Relative vapour density:	No data available / Not applicable
Density	0,816 g/cm ³
(25 °C (77 °F))	
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable
Solubility (qualitative)	Miscible
(25 °C (77 °F); Solvent: Water)	
Partition coefficient: n-octanol/water	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Decomposition temperature	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Oxidising properties	No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Reaction with strong oxidants.
Dissolves aluminium and zinc slowly with formation of hydrogen.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

No decomposition if stored and applied as directed.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 11: Toxicological information

General toxicological information:

Prolonged or repeated contact may cause skin irritation.

11.1. Information on toxicological effects

Acute oral toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Propan-2-ol 67-63-0	LD50	5.840 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
adipic acid 124-04-9	LD50	5.560 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Biphenyl-2-ol 90-43-7	LD50	2.733 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Propan-2-ol 67-63-0	LD50	12.870 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
adipic acid 124-04-9	LD50	> 7.940 mg/kg	rabbit	not specified
Biphenyl-2-ol 90-43-7	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)

Acute inhalative toxicity:

Fumes evolved at soldering temperatures will irritate the nose, throat and lungs. Prolonged or repeated exposure to flux fumes may result in sensitisation in sensitive workers.

Hazardous substances CAS-No.	Value type	Value	Test atmosphere	Exposure time	Species	Method
Propan-2-ol 67-63-0	LC50	72,6 mg/l		4 h	rat	not specified
adipic acid 124-04-9	LC50	> 7,7 mg/l	dust/mist	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Propan-2-ol 67-63-0	slightly irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
adipic acid 124-04-9	slightly irritating	24 h	rabbit	not specified
Biphenyl-2-ol 90-43-7	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Fumes emitted during soldering may irritate the eyes.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Propan-2-ol 67-63-0	Category II		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
adipic acid 124-04-9	corrosive	24 h	rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Species	Method
Propan-2-ol 67-63-0	not sensitising	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
adipic acid 124-04-9	not sensitising	Guinea pig maximisation test	guinea pig	not specified
Biphenyl-2-ol 90-43-7	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Propan-2-ol 67-63-0	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Propan-2-ol 67-63-0	negative	mammalian cell gene mutation assay	with and without		equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
adipic acid 124-04-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
adipic acid 124-04-9	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Biphenyl-2-ol 90-43-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Biphenyl-2-ol 90-43-7	negative	in vitro mammalian chromosome aberration test	with		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Biphenyl-2-ol 90-43-7	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Propan-2-ol 67-63-0	negative	intraperitoneal		mouse	equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Biphenyl-2-ol 90-43-7	negative	oral: feed		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

Carcinogenicity

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
Propan-2-ol 67-63-0		inhalation: vapour	104 w 6 h/d, 5 d/w	rat	male/female	OECD Guideline 451 (Carcinogenicity Studies)
Biphenyl-2-ol 90-43-7		oral: feed	2 y daily	rat	male	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Reproductive toxicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
Propan-2-ol 67-63-0	NOAEL P 853 mg/kg	One generation study	oral: drinking water	rat	equivalent or similar to OECD Guideline 415 (One-Generation Reproduction Toxicity Study)
Propan-2-ol 67-63-0	NOAEL P 500 mg/kg NOAEL F1 1.000 mg/kg	Two generation study	oral: gavage	rat	equivalent or similar to OECD Guideline 416 (Two-Generation Reproduction Toxicity Study)
Biphenyl-2-ol 90-43-7	NOAEL P 460 mg/kg NOAEL F1 460 mg/kg NOAEL F2 460 mg/kg	Two generation study	oral: feed	rat	OECD Guideline 416 (Two-Generation Reproduction Toxicity Study)

STOT-single exposure:

No data available.

STOT-repeated exposure::

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
Propan-2-ol 67-63-0		inhalation: vapour	at least 104 w 6 h/d, 5 d/w	rat	OECD Guideline 451 (Carcinogenicity Studies)
Biphenyl-2-ol 90-43-7	NOAEL 39 mg/kg	oral: feed	2 y daily	rat	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Aspiration hazard:

No data available.

SECTION 12: Ecological information

General ecological information:

Do not empty into drains / surface water / ground water.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Propan-2-ol 67-63-0	LC50	> 9.640 - 10.000 mg/l	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
adipic acid 124-04-9	LC50	97 mg/l	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
Biphenyl-2-ol 90-43-7	LC50	4,5 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Biphenyl-2-ol 90-43-7	NOEC	0,036 mg/l	21 d	Pimephales promelas	other guideline:

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
adipic acid 124-04-9	EC50	46 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Biphenyl-2-ol 90-43-7	EC50	2,7 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Propan-2-ol 67-63-0	NOEC	30 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
adipic acid 124-04-9	NOEC	6,3 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Biphenyl-2-ol 90-43-7	NOEC	0,009 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Propan-2-ol 67-63-0	EC50	> 1.000 mg/l	96 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Propan-2-ol 67-63-0	NOEC	1.000 mg/l	96 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
adipic acid 124-04-9	EC50	59 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
adipic acid 124-04-9	NOEC	41 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Biphenyl-2-ol 90-43-7	EC50	0,98 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Biphenyl-2-ol 90-43-7	NOEC	0,468 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Propan-2-ol 67-63-0	EC50	> 1.000 mg/l	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
adipic acid 124-04-9	EC50	4.747 mg/l	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Biphenyl-2-ol 90-43-7	EC50	56 mg/l	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

12.2. Persistence and degradability

No data available for the product.

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
Propan-2-ol 67-63-0	readily biodegradable	aerobic	70 - 84 %	30 d	EU Method C.4-E (Determination of the "Ready" Biodegradability Closed Bottle Test)
adipic acid 124-04-9	inherently biodegradable	aerobic	> 90 %	5 d	EU Method C.9 (Biodegradation: Zahn-Wellens Test)
adipic acid 124-04-9	readily biodegradable	aerobic	83 %	30 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Biphenyl-2-ol 90-43-7	readily biodegradable	aerobic	75,7 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)

12.3. Bioaccumulative potential

Hazardous substances CAS-No.	Bioconcentration factor (BCF)	Exposure time	Temperature	Species	Method
Biphenyl-2-ol 90-43-7	21,7	53 h		Danio rerio (reported as Brachydanio rerio)	OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)

12.4. Mobility in soil

The product evaporates readily.

Hazardous substances CAS-No.	LogPow	Temperature	Method
Propan-2-ol 67-63-0	0,05		OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
adipic acid 124-04-9	0,093	25 °C	other guideline:
Biphenyl-2-ol 90-43-7	3,18	22,5 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

12.5. Results of PBT and vPvB assessment

Hazardous substances CAS-No.	PBT / vPvB
Propan-2-ol 67-63-0	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
adipic acid 124-04-9	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Biphenyl-2-ol 90-43-7	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Do not empty into drains / surface water / ground water.

Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Waste code

14 06 03 - other solvents and solvent mixtures

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

SECTION 14: Transport information
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14.1. UN number

ADR	1219
RID	1219
ADN	1219
IMDG	1219
IATA	1219

14.2. UN proper shipping name

ADR	ISOPROPANOL (solution)
RID	ISOPROPANOL (solution)
ADN	ISOPROPANOL (solution)
IMDG	ISOPROPANOL (solution)
IATA	Isopropanol (solution)

14.3. Transport hazard class(es)

ADR	3
RID	3
ADN	3
IMDG	3
IATA	3

14.4. Packing group

ADR	II
RID	II
ADN	II
IMDG	II
IATA	II

14.5. Environmental hazards

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

14.6. Special precautions for user

ADR	not applicable Tunnelcode: (D/E)
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

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

VOC content (2010/75/EC)	86,7 %
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15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

National regulations/information (Great Britain):

Remarks	<p>The Health & Safety at Work Act 1974.</p> <p>The Control of Substances Hazardous to Health Regulations. L5:General Approved Code of Practice to the COSHH Regulations. HS(G)97:A Step by Step Guide to the COSHH Regulations. HS(G)193: COSHH essentials: Easy steps to control chemicals.</p> <p>IND (G)248L:Solder fume and you. IND(G)249L:Controlling health risks from rosin (colophony) based solder fluxes.</p> <p>The Control of Lead at Work Regulations. L132:Control of Lead at Work: Approved Code of Practice and Guidance.</p> <p>Employees should be under medical surveillance if the risk assessment made under the Control of Lead at Work Regulations indicates they are likely to be exposed to significant concentrations of lead, or if an Employment Medical Advisor or appointed doctor so certifies.</p> <p>A woman employed on work which exposes her to lead should notify her employer as soon as possible if she becomes pregnant. The Employment Medical Advisor / Appointed Doctor should be informed of the pregnancy.</p> <p>Under the Management of Health and Safety at Work Regulations, employers are required to assess the particular risks to health at work of pregnant workers and workers who have recently given birth or who are breast feeding.</p>
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SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

- H225 Highly flammable liquid and vapor.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

Further information:

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This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

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Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.