acc. to Regulation (EC) No. 1907/2006 (REACH)



### Karl-Fischer-ROTI®Hydroquant T2 E , 2 mg H<sub>2</sub>O/ml, pyridine-free

### article number: **22L8** Version: **1.0 en**

date of compilation: 2023-07-20

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

### 1.1 Product identifier

Identification of the substance

Article number

22L8

H<sub>2</sub>O/ml, pyridine-free

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

Relevant identified uses:

Uses advised against:

Laboratory and analytical use Laboratory chemical

Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household). Food, drink and animal feedingstuffs.

Karl-Fischer-ROTI®Hydroquant T2 E, 2 mg

### 1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

**Telephone:**+49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 **e-mail:** sicherheit@carlroth.de **Website:** www.carlroth.de

Competent person responsible for the safety data :Department Health, Safety and Environment sheet:

e-mail (competent person):

### sicherheit@carlroth.de

### 1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
National Poisons Information Service City Hospital	Dudley Rd	B187QH Birmingham	844 892 0111	

### **SECTION 2: Hazards identification**

### 2.1 Classification of the substance or mixture

### Classification acc. to GHS

Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
2.6	Flammable liquid	2	Flam. Liq. 2	H225
3.3	Serious eye damage/eye irritation	2	Eye Irrit. 2	H319
3.9	Specific target organ toxicity - repeated exposure	2	STOT RE 2	H373

For full text of abbreviations: see SECTION 16

acc. to Regulation (EC) No. 1907/2006 (REACH)



### Karl-Fischer-ROTI®Hydroquant T2 E , 2 mg H<sub>2</sub>O/ml, pyridine-free

#### article number: 22L8

### The most important adverse physicochemical, human health and environmental effects

Delayed or immediate effects can be expected after short or long-term exposure. The product is combustible and can be ignited by potential ignition sources.

### 2.2 Label elements

Labelling

Signal word Dalige	Signal	word	Danger
--------------------	--------	------	--------

#### **Pictograms**

GHS02, GHS07,

GHS08



### **Hazard statements**

H225	Highly flammable liquid and vapour
H319	Causes serious eye irritation
H373	May cause damage to organs (thyroid gland) through prolonged or repeated exposure (if swallowed)

### **Precautionary statements**

### **Precautionary statements - prevention**

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition
	sources. No smoking
P280	Wear protective gloves/eye protection

#### **Precautionary statements - response**

P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact
P337+P313	lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention

Hazardous ingredients for labelling: Iodine

### 2.3 Other hazards

### Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance in a concentration of  $\ge$  0,1%.

### Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\ge 0,1\%$ .

### SECTION 3: Composition/information on ingredients

### 3.1 Substances

not relevant (mixture)

#### 3.2 Mixtures

acc. to Regulation (EC) No. 1907/2006 (REACH)



### Karl-Fischer-ROTI®Hydroquant T2 E , 2 mg H<sub>2</sub>O/ml, pyridine-free

### article number: 22L8

### **Description of the mixture**

Name of sub- stance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Ethanol	CAS No 64-17-5 EC No 200-578-6 Index No	90 - < 100	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319		GHS-HC
	603-002-00-5				
Imidazole hydriodide	CAS No 68007-08-9	3-5	Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319	(!)	
	EC No 684-693-0			•	
Iodine	CAS No 7553-56-2	3-<5	Acute Tox. 4 / H302 Acute Tox. 4 / H312 Acute Tox. 4 / H332	(!)	GHS-HC
	EC No 231-442-4		Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 STOT SE 3 / H335	¥2	
	Index No 053-001-00-3		STOT RE 1 / H372 Aquatic Acute 1 / H400	<b>~</b>	

#### Notes

GHS-HC: Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/ 2008/EC, Annex VI)

Name of sub- stance	Identifier	Specific Conc. Limits	<b>M-Factors</b>	ΑΤΕ	Exposure route
Iodine	CAS No 7553-56-2 EC No 231-442-4	-	-	1.500 <sup>mg</sup> / <sub>kg</sub> 1.100 <sup>mg</sup> / <sub>kg</sub> >4,588 <sup>mg</sup> / <sub>l</sub> / 4h	oral dermal inhalation: dust/ mist
Imidazole hydri- odide	CAS No 68007-08-9 EC No 684-693-0	-	-	>300 <sup>mg</sup> / <sub>kg</sub>	oral

For full text of abbreviations: see SECTION 16

### **SECTION 4: First aid measures**

#### 4.1 **Description of first aid measures**



**General notes** 

Take off contaminated clothing.

### **Following inhalation**

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

### Following skin contact

Rinse skin with water/shower. In all cases of doubt, or when symptoms persist, seek medical advice.

acc. to Regulation (EC) No. 1907/2006 (REACH)



### Karl-Fischer-ROTI $\mbox{B}$ Hydroquant T2 E , 2 mg H $_2$ O/ml, pyridine-free

### article number: 22L8

### Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

### **Following ingestion**

Rinse mouth. Call a doctor if you feel unwell.

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

Irritation, Nausea, Vomiting, Abdominal pain, Breathing difficulties, Vertigo, Drowsiness, Narcosis, Loss of righting reflex, and ataxia

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

none

### SECTION 5: Firefighting measures

### 5.1 Extinguishing media



### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

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

Combustible. In case of insufficient ventilation and/or in use, may form flammable/explosive vapourair mixture. Solvent vapours are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours may form explosive mixtures with air.

#### Hazardous combustion products

In case of fire may be liberated: Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), May produce toxic fumes of carbon monoxide if burning.

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

### **SECTION 6: Accidental release measures**

6.1 Personal precautions, protective equipment and emergency procedures



### For non-emergency personnel

Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray. Avoidance of ignition sources.

acc. to Regulation (EC) No. 1907/2006 (REACH)



### Karl-Fischer-ROTI $\mbox{B}$ Hydroquant T2 E , 2 mg H<sub>2</sub>O/ml, pyridine-free

article number: 22L8

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

### 6.3 Methods and material for containment and cleaning up

### Advice on how to contain a spill

Covering of drains.

### Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

### Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

#### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

### **SECTION 7: Handling and storage**

### 7.1 Precautions for safe handling

Provision of sufficient ventilation.

### Measures to prevent fire as well as aerosol and dust generation



Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharge. Due to danger of explosion, prevent leakage

of vapours into cellars, flues and ditches.

### Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs. When using do not smoke.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight.

### Incompatible substances or mixtures

Observe hints for combined storage.

#### Consideration of other advice:

Ground/bond container and receiving equipment.

#### **Ventilation requirements**

Use local and general ventilation.

### Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C

acc. to Regulation (EC) No. 1907/2006 (REACH)

### Karl-Fischer-ROTI®Hydroquant T2 E , 2 mg H<sub>2</sub>O/ml, pyridine-free

article number: 22L8

#### 7.3 Specific end use(s)

No information available.

### **SECTION 8: Exposure controls/personal protection**

#### 8.1 **Control parameters**

### National limit values

### **Occupational exposure limit values (Workplace Exposure Limits)**

Cou ntr y	Name of agent	CAS No	Identi- fier	TW A [pp m]	TWA [mg/ m³]	STE L [pp m]	STEL [mg/ m³]	Ceil ing- C [pp m]	Ceil- ing-C [mg/ m³]	Nota- tion	Source
GB	ethanol	64-17-5	WEL	1.00 0	1.920						EH40/ 2005
GB	iodine	7553-56- 2	WEL			0,1	1,1				EH40/ 2005

#### Notation

Ceiling-C STEL

TWA

Ceiling value is a limit value above which exposure should not occur

Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified) Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8

hours time-weighted average (unless otherwise specified)

Relevant DNELs	of compone	ents of th	e mixture			
Name of sub- stance	CAS No	End- point	Threshol d level	Protection goal, route of exposure	Used in	Exposure time
Iodine	7553-56-2	DNEL	0,07 mg/ m³	human, inhalat- ory	worker (industry)	chronic - systemic effects
Iodine	7553-56-2	DNEL	0,01 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture						
Name of sub- stance	CAS No	End- point	Threshol d level	Organism	Environmental compartment	Exposure time
Iodine	7553-56-2	PNEC	18,13 <sup>µg</sup> / <sub>l</sub>	aquatic organ- isms	freshwater	short-term (single instance)
Iodine	7553-56-2	PNEC	60,01 <sup>µg</sup> / <sub>l</sub>	aquatic organ- isms	marine water	short-term (single instance)
Iodine	7553-56-2	PNEC	11 <sup>mg</sup> / <sub>l</sub>	aquatic organ- isms	sewage treatment plant (STP)	short-term (single instance)
Iodine	7553-56-2	PNEC	3,99 <sup>mg</sup> / <sub>kg</sub>	aquatic organ- isms	freshwater sedi- ment	short-term (single instance)
Iodine	7553-56-2	PNEC	20,22 <sup>mg</sup> / kg	aquatic organ- isms	marine sediment	short-term (single instance)
Iodine	7553-56-2	PNEC	5,95 <sup>mg</sup> / <sub>kg</sub>	terrestrial organ- isms	soil	short-term (single instance)



acc. to Regulation (EC) No. 1907/2006 (REACH)

### Karl-Fischer-ROTI®Hydroquant T2 E , 2 mg H<sub>2</sub>O/ml, pyridine-free

article number: 22L8

### 8.2 Exposure controls

### Individual protection measures (personal protective equipment)

### Eye/face protection



Use safety goggle with side protection.

### Skin protection



### hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a consider-able reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

### • type of material

Butyl caoutchouc (butyl rubber)

#### • material thickness

0,7mm

### • breakthrough times of the glove material

>480 minutes (permeation: level 6)

#### other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Flame-retardant protective clothing.

### **Respiratory protection**



Respiratory protection necessary at: Aerosol or mist formation. Type: A (against organic gases and vapours with a boiling point of > 65 °C , colour code: Brown).

### **Environmental exposure controls**

Keep away from drains, surface and ground water.



acc. to Regulation (EC) No. 1907/2006 (REACH)

### Karl-Fischer-ROTI $\mbox{B}$ Hydroquant T2 E , 2 mg H $_2$ O/ml, pyridine-free

### article number: 22L8

### **SECTION 9: Physical and chemical properties**

Information on basic physical and chemical properties						
Physical	l state	liquid				
Colour		dark brown				
Odour		characteristic				
Melting	point/freezing point	not determined				
Boiling   range	point or initial boiling point and boiling	78 °C at 1.013 hPa				
Flamma	ibility	flammable liquid in accordance with GHS criteria				
Lower a	nd upper explosion limit	not determined				
Flash po	bint	12 °C				
Auto-igr	nition temperature	455 °C				
Decomp	position temperature	not relevant				
pH (valu	Je)	not determined				
Kinema	tic viscosity	not determined				
Solubilit	ty(ies)					
Water s	olubility	miscible in any proportion				
Partitior	n coefficient					
Partitior	n coefficient n-octanol/water (log value):	this information is not available				
Vapour	pressure	not determined				
Density	and/or relative density					
Density		0,83 <sup>g</sup> / <sub>cm³</sub> at 20 °C				
Relative	vapour density	information on this property is not available				
Particle	characteristics	not relevant (liquid)				
Other sa	afety parameters					
Oxidisin	ng properties	none				
2 Other i	nformation					
Informa classes:	ation with regard to physical hazard	There is no additional information.				
Other sa	afety characteristics:					
Miscibili	ity	completely miscible with water				
Flash po Auto-igr Decomp pH (valu Kinemat Solubilit Water so Partition Partition Vapour Density Relative Particle Other sa Oxidisin 2 Other in Informa classes: Other sa	pint inition temperature position temperature pressure pressure and/or relative density pressure pressure characteristics afety parameters properties	12°C 455°C not relevant not determined not determined miscible in any proportion this information is not available not determined 0,83 <sup>9</sup> / <sub>cm<sup>3</sup></sub> at 20°C information on this property is not available not relevant (liquid) none There is no additional information.				



acc. to Regulation (EC) No. 1907/2006 (REACH)



### Karl-Fischer-ROTI $\mbox{B}$ Hydroquant T2 E , 2 mg H<sub>2</sub>O/ml, pyridine-free

### article number: 22L8

### **SECTION 10: Stability and reactivity**

### 10.1 Reactivity

The mixture contains reactive substance(s). Risk of ignition. Vapours may form explosive mixtures with air.

### If heated

Risk of ignition.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### **10.3** Possibility of hazardous reactions

**Violent reaction with:** strong oxidiser, Alkali metals, Alkaline earth metal, Acetic anhydride, Peroxides, Phosphorus oxides (e.g. P2O5), Nitric acid, Nitrate, Perchlorates, => Explosive properties

### 10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### 10.5 Incompatible materials

There is no additional information.

### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

### **SECTION 11: Toxicological information**

### **11.1** Information on toxicological effects

Test data are not available for the complete mixture.

### Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

### Classification acc. to GHS

### Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity estimate (ATE) of components of the mixture					
Name of substance	CAS No	Exposure route	ΑΤΕ		
Iodine	7553-56-2	oral	1.500 <sup>mg</sup> / <sub>kg</sub>		
Iodine	7553-56-2	dermal	1.100 <sup>mg</sup> / <sub>kg</sub>		
Iodine	7553-56-2	inhalation: dust/mist	>4,588 <sup>mg</sup> /ı/4h		
Imidazole hydriodide	68007-08-9	oral	>300 <sup>mg</sup> / <sub>kg</sub>		

acc. to Regulation (EC) No. 1907/2006 (REACH)



### Karl-Fischer-ROTI $\mbox{B}$ Hydroquant T2 E , 2 mg H $_2$ O/ml, pyridine-free

article number: 22L8

Acute toxicity of components of the mixture					
Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Ethanol	64-17-5	oral	LD50	10.470 <sup>mg</sup> / <sub>kg</sub>	rat
Ethanol	64-17-5	inhalation: va- pour	LC50	124,7 <sup>mg</sup> / <sub>l</sub> /4h	rat
Iodine	7553-56-2	oral	LD50	14.000 <sup>mg</sup> / <sub>kg</sub>	not specified
Iodine	7553-56-2	inhalation: dust/mist	LC50	>4,588 <sup>mg</sup> / <sub>l</sub> / 4h	rat
Iodine	7553-56-2	dermal	LD50	>2.000 <sup>mg</sup> / <sub>kg</sub>	rabbit

### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

### Serious eye damage/eye irritation

Causes serious eye irritation.

### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

### Carcinogenicity

Shall not be classified as carcinogenic.

### **Reproductive toxicity**

Shall not be classified as a reproductive toxicant.

### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

### Specific target organ toxicity - repeated exposure

May cause damage to organs (thyroid gland) through prolonged or repeated exposure (if swallowed).

Hazard category	Target organ	Exposure route
2	thyroid gland	if swallowed

### **Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

### Symptoms related to the physical, chemical and toxicological characteristics

### • If swallowed

vomiting, abdominal pain, nausea, Causes damage to liver through prolonged or repeated exposure if swallowed, loss of righting reflex, and ataxia

### • If in eyes

Causes serious eye irritation

### • If inhaled

drowsiness, narcosis, vertigo, breathing difficulties, Inebriation

acc. to Regulation (EC) No. 1907/2006 (REACH)





### article number: 22L8

### • If on skin

Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation)

### Other information

none

### **11.2** Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\ge 0,1\%$ .

### 11.3 Information on other hazards

There is no additional information.

### **SECTION 12: Ecological information**

### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute) of components of the mixture						
Name of sub- stance	CAS No	Endpoint	Value	Species	Exposure time	
Ethanol	64-17-5	LC50	15.400 <sup>mg</sup> / <sub>l</sub>	fish	96 h	
Ethanol	64-17-5	EC50	>10.000 <sup>mg</sup> / <sub>l</sub>	aquatic invertebrates	48 h	
Ethanol	64-17-5	ErC50	22.000 <sup>mg</sup> / <sub>l</sub>	algae	96 h	
Iodine	7553-56-2	LC50	1,67 <sup>mg</sup> /ا	fish	96 h	
Iodine	7553-56-2	ErC50	0,13 <sup>mg</sup> / <sub>l</sub>	algae	72 h	

### Aquatic toxicity (chronic) of components of the mixture

Name of sub- stance	CAS No	Endpoint	Value	Species	Exposure time
Ethanol	64-17-5	LC50	1.806 <sup>mg</sup> / <sub>l</sub>	aquatic invertebrates	10 d
Ethanol	64-17-5	ErC50	675 <sup>mg</sup> / <sub>l</sub>	algae	4 d
Iodine	7553-56-2	EC50	280 <sup>mg</sup> / <sub>l</sub>	microorganisms	3 h

### 12.2 Persistence and degradability

### Degradability of components of the mixture

5	<b>,</b>					
Name of substance	CAS No	Process	Degrada- tion rate	Time	Method	Source
Ethanol	64-17-5	biotic/abiotic	94 %	d		
Ethanol	64-17-5	oxygen deple- tion	69 %	5 d		ECHA
Ethanol	64-17-5	oxygen deple- tion	84 %	10 d		ECHA
Ethanol	64-17-5	oxygen deple- tion	97 %	20 d		ECHA

acc. to Regulation (EC) No. 1907/2006 (REACH)



### Karl-Fischer-ROTI®Hydroquant T2 E , 2 mg H<sub>2</sub>O/ml, pyridine-free

article number: 22L8

### 12.3 Bioaccumulative potential

### Data are not available.

Bioaccumulative potential of components of the mixture						
Name of substance	CAS No	BCF	Log KOW	BOD5/COD		
Ethanol	64-17-5		-0,31	0,6211		
Iodine	7553-56-2		2,49 (20 °C)			

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance in a concentration of  $\ge$  0,1%.

### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\ge 0,1\%$ .

### 12.7 Other adverse effects

Data are not available.

### **SECTION 13: Disposal considerations**

### 13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains.

### Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

### Properties of waste which render it hazardous

- HP 3 flammable
- HP 5 specific target organ toxicity (STOT)/aspiration toxicity

### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled.

acc. to Regulation (EC) No. 1907/2006 (REACH)

### Karl-Fischer-ROTI $\mbox{B}$ Hydroquant T2 E , 2 mg H $_2$ O/ml, pyridine-free

® Roth

### article number: 22L8

	TION 14: Transport information	
14.1	UN number or ID number	
	ADRRID	UN 1170
	IMDG-Code	UN 1170
	ICAO-TI	UN 1170
14.2	UN proper shipping name	
	ADRRID	ETHANOL SOLUTION
	IMDG-Code	ETHANOL SOLUTION
	ICAO-TI	Ethanol solution
14.3	Transport hazard class(es)	
	ADRRID	3
	IMDG-Code	3
	ICAO-TI	3
14.4	Packing group	
	ADRRID	II
	IMDG-Code	II
	ICAO-TI	II
14.5	Environmental hazards	non-environmentally hazardous acc. to the dan- gerous goods regulations
14.6	Special precautions for user	
	Provisions for dangerous goods (ADR) should	
14.7	Maritime transport in bulk according to IM	
	The cargo is not intended to be carried in bul	К.
14.8	Information for each of the UN Model Reg	ulations
	Agreement concerning the International C information	Carriage of Dangerous Goods by Road (ADR)Additional
	Proper shipping name	ETHANOL SOLUTION
	Particulars in the transport document	UN1170, ETHANOL SOLUTION, 3, II, (D/E)
	Classification code	F1
		3
	Danger label(s)	5
	Danger label(s)	
	Danger label(s)   Special provisions (SP)	144, 601
	Special provisions (SP)	144, 601

acc. to Regulation (EC) No. 1907/2006 (REACH)



### Karl-Fischer-ROTI $\mbox{B}$ Hydroquant T2 E , 2 mg H $_2$ O/ml, pyridine-free

article number: 22L8

Tunnel restriction code (TRC)	D/E
Hazard identification No	33
Emergency Action Code	2YE
Regulations concerning the International ( information	Carriage of Dangerous Goods by Rail (RID)Additional
Classification code	F1
Danger label(s)	3
Special provisions (SP)	144, 601
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
Transport category (TC)	2
Hazard identification No	33
International Maritime Dangerous Goods (	Code (IMDG) - Additional information
Proper shipping name	ETHANOL SOLUTION
Particulars in the shipper's declaration	UN1170, ETHANOL SOLUTION, 3, II, 12°C c.c.
Marine pollutant	-
Danger label(s)	3
Special provisions (SP)	144
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
EmS	F-E, S-D
Stowage category	Α
International Civil Aviation Organization (I	CAO-IATA/DGR) - Additional information
Proper shipping name	Ethanol solution
Particulars in the shipper's declaration	UN1170, Ethanol solution, 3, II
Danger label(s)	3
Special provisions (SP)	A3, A58, A180
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L

acc. to Regulation (EC) No. 1907/2006 (REACH)

### Karl-Fischer-ROTI $\mbox{B}$ Hydroquant T2 E , 2 mg H $_2$ O/ml, pyridine-free



### article number: 22L8

### **SECTION 15: Regulatory information**

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

**Relevant provisions of the European Union (EU)** 

### **Seveso Directive**

2012/	18/EU (Seveso III)			
No	Dangerous substance/hazard categories	Qualifying quantity plication of lower quire	(tonnes) for the ap- and upper-tier re- ments	Notes
P5c	flammable liquids (cat. 2, 3)	5.000	50.000	51)

#### Notation

51) Flammable liquids, categories 2 or 3 not covered by P5a and P5b

### **Deco-Paint Directive**

VOC content	92 %
VOC content	763,6 <sup>g</sup> / <sub>l</sub>

### Industrial Emissions Directive (IED)

VOC content	92 %
VOC content	763,6 <sup>g</sup> / <sub>l</sub>

# Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

# Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

#### Water Framework Directive (WFD)

List of pollutants (WFD)				
Name of substance	Name acc. to inventory	CAS No	Listed in	Remarks
Imidazole hydriodide	Organohalogen compounds and substances which may form such compounds in the aquatic envir- onment		a)	
Ethanol	Substances and preparations, or the breakdown products of such, which have been proved to pos- sess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine- related functions in or via the aquatic environment		a)	

Legend

A)

Indicative list of the main pollutants

acc. to Regulation (EC) No. 1907/2006 (REACH)

### Karl-Fischer-ROTI $\mbox{B}$ Hydroquant T2 E , 2 mg H $_2$ O/ml, pyridine-free

article number: 22L8

### Regulation on the marketing and use of explosives precursors

none of the ingredients are listed

### **Regulation on drug precursors**

none of the ingredients are listed

### Regulation on substances that deplete the ozone layer (ODS)

none of the ingredients are listed

### Regulation concerning the export and import of hazardous chemicals (PIC)

none of the ingredients are listed

### **Regulation on persistent organic pollutants (POP)**

none of the ingredients are listed

### National regulations(GB)

# List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list none of the ingredients are listed

### **Restrictions according to GB REACH, Annex 17**

Dangerous substances with restrictions (GB REACH, Annex 17)			
Name of substance	Name acc. to inventory	CAS No	No
Karl-Fischer-ROTI®Hydroquant T2 E	this product meets the criteria for classi- fication in accordance with Regulation No 1272/2008/EC		3
Ethanol	flammable / pyrophoric		40

### **Other information**

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

### **National inventories**

Country	Inventory	Status
AU	AIIC	all ingredients are listed
CA	DSL	not all ingredients are listed
CN	IECSC	not all ingredients are listed
EU	ECSI	not all ingredients are listed
EU	REACH Reg.	not all ingredients are listed
JP	CSCL-ENCS	not all ingredients are listed
KR	KECI	not all ingredients are listed
MX	INSQ	not all ingredients are listed
NZ	NZIoC	not all ingredients are listed
PH	PICCS	not all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	not all ingredients are listed
US	TSCA	not all ingredients are listed



acc. to Regulation (EC) No. 1907/2006 (REACH)

### Karl-Fischer-ROTI $\mbox{B}$ Hydroquant T2 E , 2 mg H $_2$ O/ml, pyridine-free

### article number: 22L8

Legend	
AIIC	Australian Inventory of Industrial Chemicals
CICR	Chemical Inventory and Control Regulation
	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
KECI	Korea Existing Chemicals Inventory
NZIOC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

### 15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

### **SECTION 16: Other information**

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concern- ing the International Carriage of Dangerous Goods by Road)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
COD	Chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identi fier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-li- cence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid



acc. to Regulation (EC) No. 1907/2006 (REACH)



### Karl-Fischer-ROTI $\mbox{B}$ Hydroquant T2 E , 2 mg H $_2$ O/ml, pyridine-free

### article number: 22L8

Abbr.	Descriptions of used abbreviations
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Na- tions
ΙΑΤΑ	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
log KOW	n-Octanol/water
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regula- tions concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

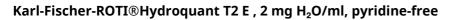
### Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### **Classification procedure**

Physical and chemical properties. The classification is based on tested mixture. Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

acc. to Regulation (EC) No. 1907/2006 (REACH)



article number: 22L8

### List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H372	Causes damage to organs (thyroid gland) through prolonged or repeated exposure (if swallowed).
H373	May cause damage to organs (thyroid gland) through prolonged or repeated exposure (if swallowed).
H400	Very toxic to aquatic life.

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

