

# Safety data sheet Safety data sheet

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



**Karl-Fischer-ROTI®Hydroquant T5 E , 5 mg H<sub>2</sub>O/ml, pyridine-free**

article number: **22L9**  
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 **Karl-Fischer-ROTI®Hydroquant T5 E , 5 mg H<sub>2</sub>O/ml, pyridine-free**

Article number 22L9

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

Relevant identified uses: Laboratory and analytical use  
Laboratory chemical

Uses advised against: Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household). Food, drink and animal feeding-stuffs.

### 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 sheet: Department Health, Safety and Environment

**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
3.2	Skin corrosion/irritation	2	Skin Irrit. 2	H315
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

# Safety data sheet Safety data sheet

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



## Karl-Fischer-ROTI®Hydroquant T5 E , 5 mg H<sub>2</sub>O/ml, pyridine-free

article number: 22L9

### 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

**Danger**

#### Pictograms

GHS02, GHS07,  
GHS08



#### Hazard statements

H225	Highly flammable liquid and vapour
H315	Causes skin irritation
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 lenses, if present and easy to do. Continue rinsing
P337+P313	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  $\geq 0,1\%$ .

### **Endocrine disrupting properties**

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

# Safety data sheet Safety data sheet

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



Karl-Fischer-ROTI®Hydroquant T5 E , 5 mg H<sub>2</sub>O/ml, pyridine-free

article number: 22L9







## SECTION 3: Composition/information on ingredients

### 3.1 Substances

not relevant (mixture)

### 3.2 Mixtures

#### Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Ethanol	CAS No 64-17-5  EC No 200-578-6  Index No 603-002-00-5	80 – < 100	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319	 	GHS-HC
Imidazole hydriodide	CAS No 68007-08-9  EC No 684-693-0	1 – < 10	Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319		
Iodine	CAS No 7553-56-2  EC No 231-442-4  Index No 053-001-00-3	1 – < 10	Acute Tox. 4 / H302 Acute Tox. 4 / H312 Acute Tox. 4 / H332 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 STOT SE 3 / H335 STOT RE 1 / H372 Aquatic Acute 1 / H400	  	GHS-HC

#### 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 substance	Identifier	Specific Conc. Limits	M-Factors	ATE	Exposure route
Iodine	CAS No 7553-56-2  EC No 231-442-4	-	-	1.500 mg/kg 1.100 mg/kg >4,588 mg/l/ 4h	oral dermal inhalation: dust/ mist
Imidazole hydriodide	CAS No 68007-08-9  EC No 684-693-0	-	-	>300 mg/kg	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.

# Safety data sheet Safety data sheet

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



**Karl-Fischer-ROTI®Hydroquant T5 E , 5 mg H<sub>2</sub>O/ml, pyridine-free**

article number: **22L9**

## **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 case of skin irritation, consult a physician.

## **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, 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 vapour-air 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 (NO<sub>x</sub>), 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.

# Safety data sheet Safety data sheet

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



Karl-Fischer-ROTI®Hydroquant T5 E , 5 mg H<sub>2</sub>O/ml, pyridine-free

article number: 22L9

## 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.

### 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.

# Safety data sheet Safety data sheet

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



Karl-Fischer-ROTI®Hydroquant T5 E , 5 mg H<sub>2</sub>O/ml, pyridine-free

article number: 22L9

## 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

## 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)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [ppm]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
GB	ethanol	64-17-5	WEL	1.000	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 components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Iodine	7553-56-2	DNEL	0,07 mg/m <sup>3</sup>	human, inhalatory	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 substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
Iodine	7553-56-2	PNEC	18,13 µg/l	aquatic organisms	freshwater	short-term (single instance)
Iodine	7553-56-2	PNEC	60,01 µg/l	aquatic organisms	marine water	short-term (single instance)

# Safety data sheet Safety data sheet

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



Karl-Fischer-ROTI®Hydroquant T5 E , 5 mg H<sub>2</sub>O/ml, pyridine-free

article number: 22L9

Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Iodine	7553-56-2	PNEC	11 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Iodine	7553-56-2	PNEC	3,99 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Iodine	7553-56-2	PNEC	20,22 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Iodine	7553-56-2	PNEC	5,95 mg/kg	terrestrial organisms	soil	short-term (single instance)

## 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 considerable 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.

# Safety data sheet Safety data sheet

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



Karl-Fischer-ROTI®Hydroquant T5 E , 5 mg H<sub>2</sub>O/ml, pyridine-free

article number: 22L9

## 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.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	dark brown
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	78 °C at 1.013 hPa
Flammability	flammable liquid in accordance with GHS criteria
Lower and upper explosion limit	not determined
Flash point	12 °C
Auto-ignition temperature	455 °C
Decomposition temperature	not relevant
pH (value)	not determined
Kinematic viscosity	not determined
<u>Solubility(ies)</u>	
Water solubility	not determined
<u>Partition coefficient</u>	
Partition coefficient n-octanol/water (log value):	this information is not available
Vapour pressure	not determined
<u>Density and/or relative density</u>	
Density	0,888 g/cm <sup>3</sup> at 20 °C
Relative vapour density	information on this property is not available
Particle characteristics	not relevant (liquid)



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



**Karl-Fischer-ROTI®Hydroquant T5 E , 5 mg H<sub>2</sub>O/ml, pyridine-free**

article number: **22L9**

## Other safety parameters

Oxidising properties none

### 9.2 Other information

Information with regard to physical hazard classes: There is no additional information.

Other safety characteristics: There is no additional information.

## 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. P<sub>2</sub>O<sub>5</sub>), 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.

# Safety data sheet Safety data sheet

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



Karl-Fischer-ROTI®Hydroquant T5 E , 5 mg H<sub>2</sub>O/ml, pyridine-free

article number: 22L9

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

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 mg/kg	rat
Ethanol	64-17-5	inhalation: vapour	LC50	124,7 mg/l/4h	rat
Iodine	7553-56-2	oral	LD50	14.000 mg/kg	not specified
Iodine	7553-56-2	inhalation: dust/mist	LC50	>4,588 mg/l/4h	rat
Iodine	7553-56-2	dermal	LD50	>2.000 mg/kg	rabbit

## Skin corrosion/irritation

Causes skin irritation.

## 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.

# Safety data sheet Safety data sheet

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



Karl-Fischer-ROTI®Hydroquant T5 E , 5 mg H<sub>2</sub>O/ml, pyridine-free

article number: 22L9

## 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

### • If on skin

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

### • Other information

none

## 11.2 Endocrine disrupting properties

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

## 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 substance	CAS No	Endpoint	Value	Species	Exposure time
Ethanol	64-17-5	LC50	15.400 mg/l	fish	96 h
Ethanol	64-17-5	EC50	>10.000 mg/l	aquatic invertebrates	48 h
Ethanol	64-17-5	ErC50	22.000 mg/l	algae	96 h
Iodine	7553-56-2	LC50	1,67 mg/l	fish	96 h
Iodine	7553-56-2	ErC50	0,13 mg/l	algae	72 h

Aquatic toxicity (chronic) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Ethanol	64-17-5	LC50	1.806 mg/l	aquatic invertebrates	10 d
Ethanol	64-17-5	ErC50	675 mg/l	algae	4 d
Iodine	7553-56-2	EC50	280 mg/l	microorganisms	3 h

# Safety data sheet Safety data sheet

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



Karl-Fischer-ROTI®Hydroquant T5 E , 5 mg H<sub>2</sub>O/ml, pyridine-free

article number: 22L9

## 12.2 Persistence and degradability

### Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
Ethanol	64-17-5	biotic/abiotic	94 %	d		
Ethanol	64-17-5	oxygen depletion	69 %	5 d		ECHA
Ethanol	64-17-5	oxygen depletion	84 %	10 d		ECHA
Ethanol	64-17-5	oxygen depletion	97 %	20 d		ECHA

## 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  $\geq 0,1\%$ .

## 12.6 Endocrine disrupting properties

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

## 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.

# Safety data sheet Safety data sheet

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



## Karl-Fischer-ROTI®Hydroquant T5 E , 5 mg H<sub>2</sub>O/ml, pyridine-free

article number: 22L9

### 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.

## SECTION 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 dangerous goods regulations

### 14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

### 14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

### 14.8 Information for each of the UN Model Regulations

# Safety data sheet Safety data sheet


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




## Karl-Fischer-ROTI®Hydroquant T5 E , 5 mg H<sub>2</sub>O/ml, pyridine-free

article number: 22L9


### Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)Additional information

Proper shipping name	ETHANOL SOLUTION
Particulars in the transport document	UN1170, ETHANOL SOLUTION, 3, II, (D/E)
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
Tunnel restriction code (TRC)	D/E
Hazard identification No	33
<b>Emergency Action Code</b>	2YE

### Regulations concerning the International Carriage of Dangerous Goods by Rail (RID)Additional information

<b>Classification code</b>	F1
<b>Danger label(s)</b>	3
	
<b>Special provisions (SP)</b>	144, 601
<b>Excepted quantities (EQ)</b>	E2
<b>Limited quantities (LQ)</b>	1 L
<b>Transport category (TC)</b>	2
<b>Hazard identification No</b>	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


# Safety data sheet Safety data sheet

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



**Karl-Fischer-ROTI®Hydroquant T5 E , 5 mg H<sub>2</sub>O/ml, pyridine-free**

article number: **22L9**

Stowage category	A
<b>International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information</b>	
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

## 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 (tonnes) for the application of lower and upper-tier requirements	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	90 %
VOC content	799,2 g/l

##### Industrial Emissions Directive (IED)

VOC content	90 %
VOC content	799,2 g/l

##### 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

# Safety data sheet Safety data sheet

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



Karl-Fischer-ROTI®Hydroquant T5 E , 5 mg H<sub>2</sub>O/ml, pyridine-free

article number: 22L9

## 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 environment		a)	
Ethanol	Substances and preparations, or the breakdown products of such, which have been proved to possess 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

### 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 T5 E	this product meets the criteria for classification 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.



# Safety data sheet Safety data sheet

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



## Karl-Fischer-ROTI®Hydroquant T5 E , 5 mg H<sub>2</sub>O/ml, pyridine-free

article number: 22L9

### 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

#### Legend

AIIC	Australian Inventory of Industrial Chemicals
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	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 Reg.	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 concerning 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

# Safety data sheet Safety data sheet

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



## Karl-Fischer-ROTI®Hydroquant T5 E , 5 mg H<sub>2</sub>O/ml, pyridine-free

article number: 22L9

Abbr.	Descriptions of used abbreviations
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 identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
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
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 Nations
IATA	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 (Regulations concerning the International carriage of Dangerous goods by Rail)

# Safety data sheet Safety data sheet

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



## Karl-Fischer-ROTI®Hydroquant T5 E , 5 mg H<sub>2</sub>O/ml, pyridine-free

article number: 22L9

Abbr.	Descriptions of used abbreviations
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).

### 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.