

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 28.08.2013

Version 3.2

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

### 1.1 Product identifier

Catalogue No. 114731  
Product name Hydrogen Peroxide Cell Test Method: photometric 2.0 - 20.0 mg/l H<sub>2</sub>O<sub>2</sub>  
Spectroquant®

H<sub>2</sub>O<sub>2</sub>

REACH Registration Number This product is a mixture. REACH Registration Number see section 3.

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

Identified uses Reagent for analysis  
For additional information on uses please refer to the Merck Chemicals portal ([www.merck-chemicals.com](http://www.merck-chemicals.com)).

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

Company WTW \* 82362 Weilheim \* Germany \* Tel. ++49(0)881 183-0  
Responsible Department e-mail: [Info.WTW@Xyleminc.com](mailto:Info.WTW@Xyleminc.com)

1.4 Emergency telephone number +49 (0)6151/722440 \* Telefax: +49 (0)6151/727780

## SECTION 2. Hazards identification

### 2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquid, Category 2, H225  
Corrosive to metals, Category 1, H290  
Acute toxicity, Category 3, Oral, H301  
Acute toxicity, Category 3, Inhalation, H331  
Acute toxicity, Category 3, Dermal, H311  
Skin corrosion, Category 1A, H314  
Specific target organ toxicity - single exposure, Category 1, Eyes, H370  
For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification (67/548/EEC or 1999/45/EC)

F	Highly flammable	R11
T	Toxic	R23/24/25 - 39/23/24/25
C	Corrosive	R35

For the full text of the R-phrases mentioned in this Section, see Section 16.

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## 2.2 Label elements

### Labelling (REGULATION (EC) No 1272/2008)

#### Hazard pictograms



*Signal word*  
Danger

#### Hazard statements

H225 Highly flammable liquid and vapour.  
H290 May be corrosive to metals.  
H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled  
H314 Causes severe skin burns and eye damage.  
H370 Causes damage to organs (Eyes).

#### Precautionary statements

##### Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

##### Response

P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P309 + P310 IF exposed or if you feel unwell: Immediately call a POISON CENTER or doctor/physician.

##### Storage

P403 + P235 Store in a well-ventilated place. Keep cool.

### Reduced labelling (≤125 ml)

#### Hazard pictograms



*Signal word*  
Danger

#### Hazard statements

H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled  
H314 Causes severe skin burns and eye damage.  
H370 Causes damage to organs (Eyes).

#### Precautionary statements

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P309 + P310 IF exposed or if you feel unwell: Immediately call a POISON CENTER or doctor/physician.

Contains: methanol, sulphuric acid

### 2.3 Other hazards

None known.

## SECTION 3. Composition/information on ingredients

Chemical nature Mixture of inorganic and organic compounds

### 3.1 Substance

not applicable

### 3.2 Preparation

#### Hazardous components (REGULATION (EC) No 1272/2008)

*Chemical Name (Concentration)*

CAS-No.	Registration number	Classification
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methanol ( $\geq 50\%$  -  $\leq 100\%$ )

*Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.*

67-56-1	01-2119433307-44-XXXX	Flammable liquid, Category 2, H225 Acute toxicity, Category 3, H301 Acute toxicity, Category 3, H331 Acute toxicity, Category 3, H311 Specific target organ toxicity - single exposure, Category 1, H370
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sulphuric acid ( $\geq 20\%$  -  $< 25\%$ )

*Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.*

7664-93-9	01-2119458838-20-XXXX	Corrosive to metals, Category 1, H290 Skin corrosion, Category 1A, H314
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Tetraethylorthotitanate ( $\geq 1\%$  -  $< 3\%$ )

3087-36-3	*)	Flammable liquid, Category 3, H226 Eye irritation, Category 2, H319
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\*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### Hazardous components (1999/45/EC)

*Chemical Name (Concentration)*

CAS-No.	Classification
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methanol ( $\geq 50\%$  -  $\leq 100\%$ )

67-56-1	F, Highly flammable; R11 T, Toxic; R23/24/25-39/23/24/25
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sulphuric acid ( $\geq 20\%$  -  $< 25\%$ )

7664-93-9	C, Corrosive; R35
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Tetraethylorthotitanate (>= 1 % - < 10 % )  
3087-36-3 R10  
Xi, Irritant; R36

For the full text of the R-phrases mentioned in this Section, see Section 16.

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## SECTION 4. First aid measures

### 4.1 Description of first aid measures

#### *General advice*

First aider needs to protect himself.

After inhalation: fresh air. If breathing stops: immediately apply artificial respiration, if necessary oxygen. Immediately call in physician.

After skin contact: wash off with plenty of water. Immediately remove contaminated clothing. If available swab with polyethylene glycol 400. Call a physician immediately.

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

After swallowing: fresh air. Make victim drink ethanol (e.g. 1 drinking glass of a 40% alcoholic beverage). Call a doctor immediately (mention methanol ingestion). Only in exceptional cases, if no medical care is available within one hour, induce vomiting (only in fully conscious persons) and make victim drink ethanol again (approx. 0.3 ml of a 40% alcoholic beverage/kg body weight/hour).

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

Drowsiness, Dizziness, narcosis, agitation, spasms, inebriation, Nausea, Vomiting, Headache, Impairment of vision, Coma, Irritation and corrosion, Cough, Shortness of breath, Risk of blindness!

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

No information available.

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## SECTION 5. Firefighting measures

### 5.1 Extinguishing media

#### *Suitable extinguishing media*

Carbon dioxide (CO<sub>2</sub>), Foam, Dry powder

#### *Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

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

Combustible.

Vapours are heavier than air and may spread along floors.

Forms explosive mixtures with air at ambient temperatures.

Pay attention to flashback.

Development of hazardous combustion gases or vapours possible in the event of fire.

Fire may cause evolution of:

Sulphur oxides

### 5.3 Advice for firefighters

#### *Special protective equipment for firefighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

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*Further information*

Cool closed containers exposed to fire with water spray. Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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**SECTION 6. Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Avoid substance contact. Do not breathe vapours, aerosols. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

**6.2 Environmental precautions**

Do not empty into drains. Risk of explosion.

**6.3 Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Take up with liquid-absorbent and neutralising material (e.g. Chemisorb® H<sup>+</sup>, Merck Art. No. 101595). Dispose of properly. Clean up affected area.

**6.4 Reference to other sections**

Indications about waste treatment see section 13.

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**SECTION 7. Handling and storage**

**7.1 Precautions for safe handling**

*Advice on safe handling*

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Observe label precautions.

*Advice on protection against fire and explosion*

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

*Hygiene measures*

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

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

*Storage conditions*

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorised persons.

Store at +15°C to +25°C.

The data applies to the entire pack.

**7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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**SECTION 8. Exposure controls/personal protection**

**8.1 Control parameters**

**Components with workplace control parameters**

*Components*

Basis	Value	Threshold limits	Remarks
<i>methanol (67-56-1)</i>			
EH40 WEL	Short Term Exposure Limit (STEL):	250 ppm 333 mg/m <sup>3</sup>	
	Skin designation:		Can be absorbed through the skin.
	Time Weighted Average (TWA):	200 ppm 266 mg/m <sup>3</sup>	

**Derived No Effect Level (DNEL)**

*methanol (67-56-1)*

Worker DNEL, acute	Systemic effects	dermal	40 mg/kg Body weight
Worker DNEL, acute	Systemic effects	inhalation	260 mg/m <sup>3</sup>
Worker DNEL, acute	Local effects	inhalation	260 mg/m <sup>3</sup>
Worker DNEL, longterm	Systemic effects	dermal	40 mg/kg Body weight
Worker DNEL, longterm	Systemic effects	inhalation	260 mg/m <sup>3</sup>
Worker DNEL, longterm	Local effects	inhalation	260 mg/m <sup>3</sup>
Consumer DNEL, acute	Systemic effects	dermal	8 mg/kg Body weight
Consumer DNEL, acute	Systemic effects	inhalation	50 mg/m <sup>3</sup>
Consumer DNEL, acute	Systemic effects	oral	8 mg/kg Body weight
Consumer DNEL, acute	Local effects	inhalation	50 mg/m <sup>3</sup>
Consumer DNEL, longterm	Systemic effects	dermal	8 mg/kg Body weight
Consumer DNEL, longterm	Systemic effects	inhalation	50 mg/m <sup>3</sup>
Consumer DNEL, longterm	Systemic effects	oral	8 mg/kg Body weight
Consumer DNEL, longterm	Local effects	inhalation	50 mg/m <sup>3</sup>
<i>sulphuric acid (7664-93-9)</i>			
Worker DNEL, acute	Local effects	inhalation	0.1 mg/m <sup>3</sup>

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Worker DNEL, Local effects inhalation 0.05 mg/m<sup>3</sup>  
longterm

**Recommended monitoring procedures**

Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

**Predicted No Effect Concentration (PNEC)**

*methanol (67-56-1)*

PNEC Fresh water	154 mg/l
PNEC Fresh water sediment	570.4 mg/kg
PNEC Marine water	15.4 mg/l
PNEC Soil	23.5 mg/kg
PNEC Sewage treatment plant	100 mg/l

*sulphuric acid (7664-93-9)*

PNEC Fresh water	0.0025 mg/l
PNEC Fresh water sediment	0.002 mg/kg
PNEC Marine water	0.00025 mg/l
PNEC Marine sediment	0.002 mg/kg
PNEC Sewage treatment plant	8.8 mg/l

**8.2 Exposure controls**

**Engineering measures**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

**Individual protection measures**

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

*Eye/face protection*

Tightly fitting safety goggles

*Hand protection*

full contact:

Glove material:	butyl-rubber
Glove thickness:	0.7 mm
Break through time:	> 480 min

splash contact:

Glove material:	Viton (R)
Glove thickness:	0.70 mm
Break through time:	> 120 min

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The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 898 Butoject® (full contact), KCL 890 Vitoject® (splash contact).

This recommendation applies only to the product stated in the safety data sheet(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

*Other protective equipment*

Flame retardant antistatic protective clothing

*Respiratory protection*

required when vapours/aerosols are generated.

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

**Environmental exposure controls**

Do not empty into drains.

Risk of explosion.

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**SECTION 9. Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

Form	liquid
Colour	colourless
Odour	of methanol
Odour Threshold	No information available.
pH	No information available.
Melting point	No information available.
Boiling point	No information available.
Flash point	12 °C
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapour pressure	No information available.
Relative vapour density	No information available.



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Relative density	ca.0.8 g/cm <sup>3</sup> at 20 °C
Water solubility	at 20 °C soluble
Partition coefficient: n-octanol/water	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	No information available.

#### 9.2 Other data

Ignition temperature	ca. 450 °C
Corrosion	May be corrosive to metals.

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### SECTION 10. Stability and reactivity

#### 10.1 Reactivity

Vapours may form explosive mixture with air.

#### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

#### 10.3 Possibility of hazardous reactions

A risk of explosion and/or of toxic gas formation exists with the following substances:

Violent reactions possible with:

Water, Alkali metals, alkali compounds, Ammonia, Aldehydes, acetonitrile, Alkaline earth metals, alkalines, Acids, alkaline earth compounds, Metals, metal alloys, Oxides of phosphorus, phosphorus, hydrides, halogen-halogen compounds, oxyhalogenic compounds, permanganates, nitrates, carbides, combustible substances, organic solvent, acetylidene, Nitriles, organic nitro compounds, anilines, Peroxides, picrates, nitrides, lithium silicide, iron(III) compounds, bromates, chlorates, Amines, perchlorates, hydrogen peroxide, Oxidizing agents, perchloric acid, salts of oxyhalogenic acids, chromium(VI) oxide, chromosulfuric acid, halogen oxides, nitrogen oxides, nonmetallic oxides, zinc diethyl, halogens, magnesium, Nitric acid

Exothermic reaction with:

acid halides, Acid anhydrides, Reducing agents, acids

#### 10.4 Conditions to avoid

Warming.

#### 10.5 Incompatible materials

Metals, various plastics, animal/vegetable tissues  
Gives off hydrogen by reaction with metals.

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**10.6 Hazardous decomposition products**

in the event of fire: See section 5.

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**SECTION 11. Toxicological information**

**11.1 Information on toxicological effects**

**Preparation**

*Acute oral toxicity*

absorption

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Acute toxicity estimate: 133.12 mg/kg

Calculation method

*Acute inhalation toxicity*

absorption

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Acute toxicity estimate: 3.99 mg/l; 4 h ; vapour

Calculation method

*Acute dermal toxicity*

absorption

Acute toxicity estimate : 399.36 mg/kg

Calculation method

*Skin irritation*

Mixture causes severe burns.

*Eye irritation*

Mixture causes serious eye damage.

Risk of blindness!

*Sensitisation*

This information is not available.

*Germ cell mutagenicity*

This information is not available.

*Carcinogenicity*

This information is not available.

*Reproductive toxicity*

This information is not available.

*Teratogenicity*

This information is not available.

*Specific target organ toxicity - single exposure*

Target Organs: Eyes

Mixture causes damage to organs.

*Specific target organ toxicity - repeated exposure*

This information is not available.

*Aspiration hazard*

This information is not available.

**11.2 Further information**

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**Systemic effects:**

acidosis, drop in blood pressure, agitation, spasms, inebriation, Dizziness, Drowsiness,  
Headache, Nausea, Vomiting, Impairment of vision, blindness, narcosis, Coma  
Symptoms may be delayed.

**Damage to:**

Liver, Kidney, Cardiac

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

**Components**

*methanol*

*Acute oral toxicity*

LDLO human: 143 mg/kg (RTECS)

LD50 rat: 5,628 mg/kg (IUCLID)

*Acute inhalation toxicity*

LC50 rat: 85.26 mg/l; 4 h (IUCLID)

*Acute dermal toxicity*

LD50 rabbit: ca. 17,100 mg/kg (External MSDS)

*Sensitisation*

Sensitisation test: guinea pig

Result: negative

(IUCLID)

*Germ cell mutagenicity*

*Genotoxicity in vivo*

Mutagenicity (mammal cell test): micronucleus.

Result: negative

(IUCLID)

*Genotoxicity in vitro*

Ames test

Result: negative

(IUCLID)

*sulphuric acid*

*Acute inhalation toxicity*

LC50 rat: 0.25 mg/l; 4 h (IUCLID)

*Germ cell mutagenicity*

*Genotoxicity in vitro*

Ames test

Salmonella typhimurium

Result: negative

(HSDB)

*Tetraethylorthotitanate*

No information available.

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**SECTION 12. Ecological information**

**Preparation**

**12.1 Toxicity**

No information available.

**12.2 Persistence and degradability**

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No information available.

**12.3 Bioaccumulative potential**

No information available.

**12.4 Mobility in soil**

No information available.

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

**12.6 Other adverse effects**

*Additional ecological information*

Harmful effect due to pH shift. Caustic even in diluted form. Does not cause biological oxygen deficit. Endangers drinking-water supplies if allowed to enter soil or water. Neutralisation possible in waste water treatment plants.

Discharge into the environment must be avoided.

**Components**

*methanol*

*Toxicity to fish*

LC50 *Lepomis macrochirus* (Bluegill sunfish): 15,400 mg/l; 96 h (in soft water) (ECOTOX Database)

*Toxicity to daphnia and other aquatic invertebrates*

EC5 *E.sulcatum*: > 10,000 mg/l; 72 h (Lit.)

EC50 *Daphnia magna* (Water flea): > 10,000 mg/l; 48 h (IUCLID)

*Toxicity to algae*

EC50 *Pseudokirchneriella subcapitata* (green algae): ca. 22,000 mg/l; 96 h (External MSDS)

IC5 *Scenedesmus quadricauda* (Green algae): 8,000 mg/l; 8 d (IUCLID)

*Toxicity to bacteria*

EC5 *Pseudomonas fluorescens*: 6,600 mg/l; 16 h (IUCLID)

*Toxicity to fish (Chronic toxicity)*

NOEC *Oryzias latipes* (Orange-red killifish): 7,900 mg/l; 200 h (External MSDS)

*Biodegradability*

99 %; 30 d

OECD Test Guideline 301D

Readily biodegradable.

*Biochemical Oxygen Demand (BOD)*

600 - 1,120 mg/g (5 d)  
(IUCLID)

*Chemical Oxygen Demand (COD)*

1,420 mg/g  
(IUCLID)

*Theoretical oxygen demand (ThOD)*

1,500 mg/g  
(Lit.)

*Ratio BOD/ThBOD*

BOD5 76 %

Closed Bottle test

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

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*Stability in water*  
2.2 yr  
reaction with hydroxyl radicals (IUCLID)

*sulphuric acid*  
*Toxicity to daphnia and other aquatic invertebrates*  
EC50 Daphnia magna (Water flea): 29 mg/l; 24 h (IUCLID)

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

*Tetraethylorthotitanate*  
No information available.

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### SECTION 13. Disposal considerations

*Waste treatment methods*  
Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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### 14. Transport information

#### Land transport (ADR/RID)

14.1 UN number	UN 3316
14.2 Proper shipping name	CHEMICAL KIT
14.3 Class	9
14.4 Packing group	II
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
Tunnel restriction code	E

#### Inland waterway transport (ADN)

Not relevant

#### Air transport (IATA)

14.1 UN number	UN 3316
14.2 Proper shipping name	CHEMICAL KIT
14.3 Class	9
14.4 Packing group	II
14.5 Environmentally hazardous	--

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14.6 Special precautions for user no

Sea transport (IMDG)

14.1 UN number UN 3316  
14.2 Proper shipping name CHEMICAL KIT  
14.3 Class 9  
14.4 Packing group II  
14.5 Environmentally hazardous --  
14.6 Special precautions for user yes  
EmS F-A S-P

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
Not relevant

THIS TRANSPORT DATA APPLIES TO THE ENTIRE PACK!

---

SECTION 15. Regulatory information

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

*EU regulations*

Major Accident Hazard Legislation 96/82/EC  
Toxic  
2  
Quantity 1: 50 t  
Quantity 2: 200 t  
  
96/82/EC  
Highly flammable  
7b  
Quantity 1: 5,000 t  
Quantity 2: 50,000 t  
  
96/82/EC  
Methanol  
26  
Quantity 1: 500 t  
Quantity 2: 5,000 t

Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work.  
  
Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC not regulated

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H<sub>2</sub>O<sub>2</sub>

---

Regulation (EC) No 689/2008 concerning the export not regulated  
and import of dangerous chemicals

Substances of very high concern (SVHC) This product does not contain substances  
of very high concern above the respective  
regulatory limit (> 0.1 % (w/w) Regulation  
(EC) No 1907/2006 (REACH), Article 57).

*National legislation*

Storage class 3

The data applies to the entire pack.

### 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

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### SECTION 16. Other information

#### Full text of H-Statements referred to under sections 2 and 3.

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H290	May be corrosive to metals.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H370	Causes damage to organs.



#### Full text of R-phrases referred to under sections 2 and 3

R10	Flammable.
R11	Highly flammable.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R35	Causes severe burns.
R36	Irritating to eyes.
R39/23/24/25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

#### Training advice

Provide adequate information, instruction and training for operators.

#### Labelling (67/548/EEC or 1999/45/EC)

<i>Symbol(s)</i>	 F  T	Highly flammable Toxic
<i>R-phrase(s)</i>	11-23/24/25-35- 39/23/24/25	Highly flammable. Toxic by inhalation, in contact with skin and if swallowed. Causes severe burns. Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
<i>S-phrase(s)</i>	16-26-36/37/39-45	Keep away from sources of ignition - No smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing,

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gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**Reduced labelling (≤125 ml)**

Symbol(s)



F



T

R-phrases 23/24/25-35-39/23/24/25

S-phrases 26-36/37/39-45

Highly flammable  
Toxic

Toxic by inhalation, in contact with skin and if swallowed. Causes severe burns. Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Contains: methanol, sulphuric acid

**Key or legend to abbreviations and acronyms used in the safety data sheet**

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

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*The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.*



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 28.08.2013

Version 3.2

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

### 1.1 Product identifier

Catalogue No. 114731  
Product name Hydrogen Peroxide Cell Test Method: photometric 2.0 - 20.0 mg/l H<sub>2</sub>O<sub>2</sub>  
Spectroquant®

Water for analysis EMSURE®

REACH Registration Number A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

Identified uses Reagent for analysis  
For additional information on uses please refer to the Merck Chemicals portal ([www.merck-chemicals.com](http://www.merck-chemicals.com)).

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

Company WTW \* 82362 Weilheim \* Germany \* Tel. ++49(0)881 183-0  
Responsible Department e-mail: [Info.WTW@Xyleminc.com](mailto:Info.WTW@Xyleminc.com)

1.4 Emergency telephone number +49 (0)6151/722440 \* Telefax: +49 (0)6151/727780

## SECTION 2. Hazards identification

### 2.1 Classification of the substance or mixture

This substance is not classified as dangerous according to European Union legislation.

### 2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

### 2.3 Other hazards

None known.

## SECTION 3. Composition/information on ingredients

### 3.1 Substance

Formula	H <sub>2</sub> O	H <sub>2</sub> O (Hill)
CAS-No.	7732-18-5	
Molar mass	18.02 g/mol	

For the full text of the H-Statements mentioned in this Section, see Section 16.

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Remarks	No disclosure requirement according to Regulation (EC) No. 1907/2006.
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### 3.2 Preparation

not applicable

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## SECTION 4. First aid measures

### 4.1 Description of first aid measures

#### *General advice*

No hazards which require special first aid measures.

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

We have no description of any toxic symptoms.

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

No information available.

---

## SECTION 5. Firefighting measures

### 5.1 Extinguishing media

#### *Suitable extinguishing media*

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### *Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

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

Not combustible.

### 5.3 Advice for firefighters

#### *Special protective equipment for firefighters*

none

#### *Further information*

none

---

## SECTION 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

none

### 6.2 Environmental precautions

No special precautionary measures necessary.

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

Observe possible material restrictions (see sections 7 and 10).

Pour into drain.

### 6.4 Reference to other sections

Indications about waste treatment see section 13.

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**SECTION 7. Handling and storage**

**7.1 Precautions for safe handling**

*Advice on safe handling*

Observe label precautions.

*Hygiene measures*

not required

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

*Storage conditions*

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorised persons.

Store at +15°C to +25°C.

The data applies to the entire pack.

**7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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**SECTION 8. Exposure controls/personal protection**

**8.1 Control parameters**

Contains no substances with occupational exposure limit values.

**8.2 Exposure controls**

**Engineering measures**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

**Individual protection measures**

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

*Eye/face protection*

not required

*Hand protection*

not required

*Respiratory protection*

not required

**Environmental exposure controls**

No special precautionary measures necessary.

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**SECTION 9. Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

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Form	liquid
Colour	colourless
Odour	odourless
Odour Threshold	not applicable
pH	at 20 °C neutral
Melting point	0 °C
Boiling point/boiling range	100 °C at 1,013 hPa
Flash point	not applicable
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Vapour pressure	23 hPa at 20 °C
Relative vapour density	No information available.
Relative density	1.00 g/cm <sup>3</sup> at 20 °C
Water solubility	completely soluble
Partition coefficient: n-octanol/water	not applicable
Auto-ignition temperature	not applicable
Decomposition temperature	Distillable in an undecomposed state at normal pressure.
Viscosity, dynamic	0.952 mPa.s at 20 °C
Explosive properties	Not classified as explosive.
Oxidizing properties	none

## 9.2 Other data

Ignition temperature not applicable

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Minimum ignition energy not applicable

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**SECTION 10. Stability and reactivity**

**10.1 Reactivity**

See section 10.3

**10.2 Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature) .

**10.3 Possibility of hazardous reactions**

Violent reactions possible with:

The generally known reaction partners of water.

**10.4 Conditions to avoid**

none

**10.5 Incompatible materials**

no information available

**10.6 Hazardous decomposition products**

none

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**SECTION 11. Toxicological information**

**11.1 Information on toxicological effects**

*Acute oral toxicity*

This information is not available.

*Acute inhalation toxicity*

This information is not available.

*Acute dermal toxicity*

This information is not available.

*Skin irritation*

This information is not available.

*Eye irritation*

This information is not available.

*Sensitisation*

This information is not available.

*Germ cell mutagenicity*

This information is not available.

*Carcinogenicity*

This information is not available.

*Reproductive toxicity*

This information is not available.

*Teratogenicity*

This information is not available.

*Specific target organ toxicity - single exposure*

This information is not available.

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### *Specific target organ toxicity - repeated exposure*

This information is not available.

### *Aspiration hazard*

This information is not available.

## 11.2 Further information

No toxic effects are to be expected when the product is handled appropriately.

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## SECTION 12. Ecological information

### 12.1 Toxicity

No information available.

### 12.2 Persistence and degradability

No information available.

### 12.3 Bioaccumulative potential

*Partition coefficient: n-octanol/water*

not applicable

### 12.4 Mobility in soil

No information available.

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

### 12.6 Other adverse effects

*Additional ecological information*

No ecological problems are to be expected when the product is handled and used with due care and attention.

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## SECTION 13. Disposal considerations

### *Waste treatment methods*

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## 14. Transport information

### Land transport (ADR/RID)

14.1 UN number	UN 3316
14.2 Proper shipping name	CHEMICAL KIT
14.3 Class	9
14.4 Packing group	II
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
Tunnel restriction code	E

### Inland waterway transport (ADN)

---

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---

Not relevant

**Air transport (IATA)**

14.1 UN number UN 3316  
14.2 Proper shipping name CHEMICAL KIT  
14.3 Class 9  
14.4 Packing group II  
14.5 Environmentally hazardous --  
14.6 Special precautions for user no

**Sea transport (IMDG)**

14.1 UN number UN 3316  
14.2 Proper shipping name CHEMICAL KIT  
14.3 Class 9  
14.4 Packing group II  
14.5 Environmentally hazardous --  
14.6 Special precautions for user yes  
EmS F-A S-P

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
Not relevant

THIS TRANSPORT DATA APPLIES TO THE ENTIRE PACK!

---

**SECTION 15. Regulatory information**

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

*EU regulations*

Major Accident Hazard 96/82/EC  
Legislation Directive 96/82/EC does not apply

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC not regulated

Regulation (EC) No 689/2008 concerning the export and import of dangerous chemicals not regulated

Substances of very high concern (SVHC) This product does not contain substances of very high concern above the respective regulatory limit (> 0.1 % (w/w) Regulation (EC) No 1907/2006 (REACH), Article 57).

*National legislation*

Storage class 3

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---

The data applies to the entire pack.

### 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

---

### SECTION 16. Other information

**Full text of H-Statements referred to under sections 2 and 3.**

**Full text of R-phrases referred to under sections 2 and 3**

#### **Training advice**

Provide adequate information, instruction and training for operators.

#### **Labelling (67/548/EEC or 1999/45/EC)**

The product does not need to be labelled in accordance with EC directives or respective national laws.

#### **Key or legend to abbreviations and acronyms used in the safety data sheet**

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

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*The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.*