

**SAFETY DATA SHEET**

according to the Global Harmonized System (and with all of the information required by the HPR)

Revision Date 06/17/2018

Version 1.4

**SECTION 1. Identification****Product identifier**

Product number                      HX0645  
Product name                        Hydrogen Peroxide Solution 3% (w/v), Stabilized TITRISTAR®

**Relevant identified uses of the substance or mixture and uses advised against**

Identified uses                      Reagent for analysis

**Details of the supplier of the safety data sheet**

Company                              Millipore (Canada) Ltd | 109 Woodbine Downs Blvd. Unit 5 | Etobicoke  
| Ontario M9W 6Y1 | Canada | General Inquiries: +1 800-645-5476 |  
Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)  
MilliporeSigma is a business of Merck KGaA, Darmstadt, Germany.

**Emergency telephone**            800-424-9300 CHEMTREC (USA)  
+1-703-527-3887 CHEMTREC (International)  
24 Hours/day; 7 Days/week

**SECTION 2. Hazards identification****GHS-Labeling**

Not a dangerous substance according to GHS.

**Other hazards**

None known.

**SECTION 3. Composition/information on ingredients****Hazardous ingredients**

*Chemical name (Concentration)*

CAS-No.

*hydrogen peroxide (>= 1 % - < 5 % )*

7722-84-1

**SECTION 4. First aid measures****Description of first-aid measures**

*Inhalation*

After inhalation: fresh air.

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### *Skin contact*

After skin contact: wash off with plenty of water. Remove contaminated clothing.

### *Eye contact*

After eye contact: rinse out with plenty of water.

### *Ingestion*

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

Never give anything by mouth to an unconscious person.

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

We have no description of any toxic symptoms.

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

No information available.

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## **SECTION 5. Fire-fighting measures**

### **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.

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

Not combustible.

Ambient fire may liberate hazardous vapors.

### **Advice for firefighters**

#### *Special protective equipment for fire-fighters*

In the event of fire, wear self-contained breathing apparatus.

#### *Further information*

Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## **SECTION 6. Accidental release measures**

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

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

### **Environmental precautions**

Do not let product enter drains.

### **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 material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

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**SECTION 7. Handling and storage**

**Precautions for safe handling**

Observe label precautions.

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

Tightly closed.

Refrigerator

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

**Exposure limit(s)**

*Ingredients*

Basis	Value	Threshold limits	Remarks
<i>hydrogen peroxide 7722-84-1</i>			
CAD AB OEL	Time Weighted Average (TWA):	1 ppm 1.4 mg/m <sup>3</sup>	
CAD BC OEL	Time Weighted Average (TWA):	1 ppm	
CAD MB OEL	Time Weighted Average (TWA):	1 ppm	
CAD ON OEL	Time Weighted Average (TWA):	1 ppm	
OEL (QUE)	Time Weighted Average (TWA):	1 ppm 1.4 mg/m <sup>3</sup>	

**Engineering measures**

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

**Individual protection measures**

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

*Hygiene measures*

Change contaminated clothing. Wash hands after working with substance.

*Eye/face protection*

Safety glasses

*Hand protection*

full contact:

Glove material: Nitrile rubber  
Glove thickness: 0.11 mm  
Break through time: > 480 min

splash contact:

Glove material: Nitrile rubber  
Glove thickness: 0.11 mm  
Break through time: > 480 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 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. 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)).

### *Respiratory protection*

Not required; except in case of aerosol formation.

## SECTION 9. Physical and chemical properties

Physical state	liquid
Color	colorless
Odor	odorless
Odor Threshold	Not applicable
pH	acidic
Melting point	No information available.
Boiling point	No information available.
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
Vapor pressure	No information available.
Relative vapor density	No information available.
Density	1.01 g/cm <sup>3</sup> at 68 °F (20 °C)
Relative density	No information available.
Water solubility	soluble
Partition coefficient: n-octanol/water	No information available.

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Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none

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## SECTION 10. Stability and reactivity

### Reactivity

See below

### Chemical stability

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

#### *Stabilizer*

Acetanilide

### Possibility of hazardous reactions

Violent reactions possible with:

The generally known reaction partners of water.

### Conditions to avoid

no information available

### Incompatible materials

no information available

### Hazardous decomposition products

no information available

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## SECTION 11. Toxicological information

### Information on toxicological effects

#### *Likely route of exposure*

Eye contact, Skin contact

#### *Acute oral toxicity*

Acute toxicity estimate: > 2,000 mg/kg

Calculation method

#### *Acute inhalation toxicity*

Acute toxicity estimate: > 20 mg/l; 4 h ; vapor

Calculation method

#### *Specific target organ systemic toxicity - single exposure*

The substance or mixture is not classified as specific target organ toxicant, single exposure.

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

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The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

### *Aspiration hazard*

Regarding the available data the classification criteria are not fulfilled.

### **Carcinogenicity**

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH

Confirmed animal carcinogen with unknown relevance to humans.

hydrogen peroxide

7722-84-1

### **Further information**

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Handle in accordance with good industrial hygiene and safety practice.

### **Ingredients**

#### *hydrogen peroxide*

##### *Acute oral toxicity*

Acute toxicity estimate: 500.1 mg/kg

Expert judgment

##### *Acute dermal toxicity*

LD50 Rabbit: > 2,000 mg/kg

US-EPA

##### *Repeated dose toxicity*

Mouse

male

Oral

90 d

daily

NOAEL: 26 mg/kg

LOAEL: 76 mg/kg

OECD Test Guideline 408

Subchronic toxicity

Rat

male and female

inhalation (dust/mist/fume)

28 d

daily

NOAEL: 0.0029 mg/l

LOAEL: 0.0146 mg/l

OECD Test Guideline 412

Subacute toxicity

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*Germ cell mutagenicity*

*Genotoxicity in vivo*

In vivo micronucleus test

Mouse

Result: negative

Method: OECD Test Guideline 474

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## SECTION 12. Ecological information

### Ecotoxicity

No information available.

### Persistence and degradability

No information available.

### Bioaccumulative potential

No information available.

### Mobility in soil

No information available.

## Ingredients

### *hydrogen peroxide*

#### *Toxicity to fish*

semi-static test LC50 Pimephales promelas (fathead minnow): 16.4 mg/l; 96 h

Analytical monitoring: yes

US-EPA

semi-static test NOEC Pimephales promelas (fathead minnow): 5 mg/l; 96 h

Analytical monitoring: yes

US-EPA

#### *Toxicity to daphnia and other aquatic invertebrates*

semi-static test LC50 Daphnia pulex (Water flea): 2.4 mg/l; 48 h

Analytical monitoring: yes

US-EPA

semi-static test NOEC Daphnia pulex (Water flea): 1 mg/l; 48 h

Analytical monitoring: yes

US-EPA

#### *Toxicity to algae*

IC50 Pseudokirchneriella subcapitata (green algae): 5.7 mg/l; 72 h (ECOTOX Database)

Growth rate NOEC Skeletonema costatum (marine diatom): 0.63 mg/l; 72 h (External MSDS)

#### *Toxicity to bacteria*

static test EC50 activated sludge: 466 mg/l; 30 min

Analytical monitoring: yes

OECD Test Guideline 209

static test EC50 activated sludge: > 1,000 mg/l; 3 h

Analytical monitoring: yes

OECD Test Guideline 209

#### *Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)*

flow-through test NOEC Daphnia magna (Water flea): 0.63 mg/l; 21 d

(ECHA)

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*Biodegradability*

> 99 %; 0.5 h; aerobic

(ECHA)

Readily biodegradable.

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

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## SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

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## SECTION 14. Transport information

### Land transport (DOT)

Not classified as dangerous in the meaning of transport regulations.

### Air transport (IATA)

Not classified as dangerous in the meaning of transport regulations.

### Sea transport (IMDG)

Not classified as dangerous in the meaning of transport regulations.

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## SECTION 15. Regulatory information

### United States of America

### Canada

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

### Notification status

TSCA: All components of the product are listed in the TSCA-inventory.

DSL: All components of this product are on the Canadian DSL

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## SECTION 16. Other information

### Training advice

Provide adequate information, instruction and training for operators.

### 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 characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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