

**SAFETY DATA SHEET**  
Australian version - NOHSC:2011 (2003)

## INTEROX® ST-50 (H<sub>2</sub>O<sub>2</sub> < 50 %)

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1. Identification of the substance or mixture

Product name	:	INTEROX® ST-50 (H <sub>2</sub> O <sub>2</sub> < 50 %)
Chemical Name	:	Hydrogen peroxide
Synonyms	:	Hydroperoxide, Hydrogen dioxide
Molecular formula	:	H <sub>2</sub> O <sub>2</sub>
Molecular Weight	:	34 g/mol

#### 1.2. Use of the Substance/Mixture

Recommended use	:	<ul style="list-style-type: none"><li>- Bleaching agent</li><li>- Chemical industry</li><li>- Electronic industry</li><li>- Metal treatment</li><li>- Odour agents</li><li>- Oxidising Agents</li><li>- Textile industry</li><li>- Water treatment</li><li>- Pulp and paper</li></ul>
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#### 1.3. Company/Undertaking Identification

Address	:	SOLVAY INTEROX Pty Ltd MCPHERSON STREET, 20-22 AUS- 2019 BANKSMEADOW
Telephone	:	61293168000
Telefax	:	61293166445

#### 1.4. Emergency and contact telephone numbers

Emergency telephone number	:	+61 2801 44558 [Carechem 24]
E-mail address	:	sdstracking@solvay.com

### 2. HAZARDS IDENTIFICATION

Appearance	:	liquid
Colour	:	colourless
Odour	:	pungent

- Classified as hazardous according to criteria of NOHSC.
- Classified as dangerous goods according to the ADG Code



### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance name (CAS-No. / EC-No. / Annex-1)	Concentration (W/W)	Classification	R-phrases(s)
<b>Hydrogen peroxide</b> (7722-84-1 / 231-765-0 / 008-003-00-9)	<b>&lt; 50 %</b>	O C Xn	R 5 R 8 R35 R20/22

### 4. FIRST AID MEASURES

#### 4.1. Inhalation

- Move to fresh air.
- If symptoms persist, call a physician.

#### 4.2. Eye contact

- Call a physician or poison control centre immediately.
- In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- In the case of difficulty of opening the lids, administer an analgesic eye wash (oxybuprocaine).

#### 4.3. Skin contact

- Remove and wash contaminated clothing before re-use.
- Wash off with soap and water.
- If symptoms persist, call a physician.

#### 4.4. Ingestion

- Rinse mouth with water.
- Do NOT induce vomiting.
- Oxygen or artificial respiration if needed.
- If symptoms persist, call a physician or Poison Control Centre immediately.

### 5. FIRE-FIGHTING MEASURES

#### 5.1. Suitable extinguishing media

- Water
- Water spray

#### 5.2. Extinguishing media which shall not be used for safety reasons

- None.

#### 5.3. Special exposure hazards in a fire

- Oxygen released in thermal decomposition may support combustion
- Contact with combustible material may cause fire.
- Contact with flammables may cause fire or explosions.
- Risk of explosion if heated under confinement.

#### 5.4. Special protective equipment for fire-fighters

- In the event of fire, wear self-contained breathing apparatus.
- Use personal protective equipment.
- Wear chemical resistant oversuit
- Cool containers / tanks with water spray.



## 6. ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions

- Prevent further leakage or spillage if safe to do so.
- Keep away from Incompatible products.
- Evacuate personnel to safe areas.
- Keep people away from and upwind of spill/leak.
- Use personal protective equipment.

### 6.2. Environmental precautions

- Should not be released into the environment.
- If the product contaminates rivers and lakes or drains inform respective authorities.

### 6.3. Methods for cleaning up

- Dam up.
- Do not mix waste streams during collection.
- Soak up with inert absorbent material.
- Keep in properly labelled containers.
- Keep in suitable, closed containers for disposal.
- Treat recovered material as described in the section "Disposal considerations".
- Never return spills in original containers for re-use.

## 7. HANDLING AND STORAGE

### 7.1. Handling

- Use only in well-ventilated areas.
- Use only clean and dry utensils.
- Never return unused material to storage receptacle.
- Keep away from Incompatible products.
- Keep away from heat.

### 7.2. Storage

- Keep only in the original container.
- Store in a receptacle equipped with a vent.
- Store in a well-ventilated place. Keep cool.
- Keep container closed.
- Keep in a bunded area.
- Keep away from Incompatible products.
- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Regularly check the condition and temperature of the containers.
- Electrical equipment should be protected to the appropriate standard.

### 7.3. Specific use(s)

- For further information, please contact: Supplier

### 7.4. Packaging material

- aluminium 99,5 %
- stainless steel 304L / 316L
- Approved grades of HDPE.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Exposure Limit Values

#### Hydrogen peroxide

- US. ACGIH Threshold Limit Values 2009



- time weighted average = 1 ppm
- Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment) 08 2005  
time weighted average = 1 ppm  
time weighted average = 1.4 mg/m<sup>3</sup>
- Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment) 08 2005  
Remarks: Listed

## 8.2. Exposure controls

- Ensure adequate ventilation.
- Apply technical measures to comply with the occupational exposure limits.

### 8.2.1. Occupational exposure controls

#### 8.2.1.1. Respiratory protection

- In case of insufficient ventilation, wear suitable respiratory equipment.
- When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- Recommended Filter type:
  - NO
  - P3

#### 8.2.1.2. Hand protection

- Impervious gloves
- Suitable material : PVC, Natural Rubber, butyl-rubber, Nitrile rubber
- Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

#### 8.2.1.3. Eye protection

- Chemical resistant goggles must be worn.
- If splashes are likely to occur, wear: Tightly fitting safety goggles, Face-shield

#### 8.2.1.4. Skin and body protection

- Chemical resistant apron
- Suitable material
  - PVC
  - Natural Rubber
- If splashes are likely to occur, wear: Apron, Boots

#### 8.2.1.5. Hygiene measures

- Eye wash bottles or eye wash stations in compliance with applicable standards.
- Take off contaminated clothing and shoes immediately.
- Wash contaminated clothing before re-use.
- When using do not eat, drink or smoke.
- Wash hands before breaks and at the end of workday.
- Handle in accordance with good industrial hygiene and safety practice.

### 8.2.2. Environmental exposure controls

- Dispose of rinse water in accordance with local and national regulations.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. General Information (appearance, odour)

Appearance	: liquid
Colour	: colourless
Odour	: pungent

### 9.2. Important health safety and environmental information



<b>pH</b>	: 2.02 (H <sub>2</sub> O <sub>2</sub> 50 %)
<b>pKa</b>	: pKa <sub>1</sub> = 11.62 Temperature: 25 °C
<b>Boiling point/boiling range</b>	: 108 °C (H <sub>2</sub> O <sub>2</sub> 35 %)
<b>Flash point</b>	: Remarks: not applicable
<b>Flammability</b>	: Remarks: The product is not flammable.
<b>Explosive properties</b>	: <u>Explosion danger</u> : Remarks: Not explosive
<b>Oxidizing properties</b>	: Remarks: Non oxidizer
<b>Vapour pressure</b>	: 1 mbar (H <sub>2</sub> O <sub>2</sub> 50 %) Temperature: 30 °C
<b>Relative density / Density</b>	: 1.1 - 1.2
<b>Bulk density</b>	: Remarks: not applicable
<b>Solubility(ies)</b>	: Soluble in: : Water
<b>Partition coefficient: n-octanol/water</b>	: <u>log Pow</u> : -1.57 Method: calculated value
<b>Viscosity</b>	: 1.2 mPa.s (H <sub>2</sub> O <sub>2</sub> 50 %)

### 9.3. Other data

<b>Freezing point:</b>	: -33 °C (H <sub>2</sub> O <sub>2</sub> 35 % )
<b>Auto-flammability</b>	: Remarks: The product is not flammable.
<b>Surface tension</b>	: 75.6 mN/m (H <sub>2</sub> O <sub>2</sub> 50 %) Temperature: 20 °C
<b>Decomposition temperature</b>	: >= 60 °C Remarks: Self-Accelerating decomposition temperature (SADT) : < 60 °C Remarks: Slow decomposition

## 10. STABILITY AND REACTIVITY

### 10.1. Stability

- Stable under recommended storage conditions.

### 10.2. Conditions to avoid

- Contamination
- To avoid thermal decomposition, do not overheat.

### 10.3. Materials to avoid

- Acids, Bases, Metals, Heavy metal salts, Powdered metal salts, Reducing agents, Organic materials, Flammable materials

### 10.4. Hazardous decomposition products

- Oxygen



## 11. TOXICOLOGICAL INFORMATION

### 11.1 Toxicological data

#### **Acute oral toxicity**

- LD<sub>50</sub>, rat, 1,193 - 1,270 mg/kg (H<sub>2</sub>O<sub>2</sub> 35 %)

#### **Acute inhalation toxicity**

- LC<sub>50</sub>, 4 h, rat, > 0.17 mg/l (H<sub>2</sub>O<sub>2</sub> 50 %), Remarks: vapour

#### **Acute dermal toxicity**

- LD<sub>50</sub>, rabbit, > 2,000 mg/kg (H<sub>2</sub>O<sub>2</sub> 35 %)

#### **Skin irritation**

- rabbit, Skin irritation (H<sub>2</sub>O<sub>2</sub> 35 %)

#### **Eye irritation**

- rabbit, Severe eye irritation (H<sub>2</sub>O<sub>2</sub> 10 %)

#### **Irritation (other route)**

- Inhalation, Human experience, Irritating to respiratory system., 665 mg/m<sup>3</sup>, RD 50, (H<sub>2</sub>O<sub>2</sub> 50 %)

#### **Sensitisation**

- guinea pig, Did not cause sensitization on laboratory animals.

#### **Chronic toxicity**

- Oral, 90-day, mouse, Target Organs: Gastrointestinal tract, Lowest observable effect level: 300 ppm, LOAEL
- Oral, 90-day, mouse, NOEL: 100 ppm, NOAEL
- Inhalation, 28-day, rat, Target Organs: Respiratory system, Lowest observable effect level: 10 ppm, LOAEL, vapour
- Inhalation, 28-day, rat, NOEL: 2 ppm, NOAEL, vapour

#### **Carcinogenicity**

- Oral, Prolonged exposure, mouse, Target Organs: duodenum, carcinogenic effects
- Dermal, Prolonged exposure, mouse, Animal testing did not show any carcinogenic effects.

#### **Genetic toxicity in vitro**

- In vitro tests have shown mutagenic effects.

#### **Genetic toxicity in vivo**

- In vivo tests did not show mutagenic effects

#### **Reproductive toxicity**

- Substance is totally biotransformed (metabolised).
- study scientifically unjustified

### 11.2. Health effects

#### **Main effects**

- Irritating to skin and mucous membranes
- Risk of serious damage to eyes.

#### **Inhalation**

- Inhalation of vapours is irritating to the respiratory system, may cause throat pain and cough.
- Risk of: Nose bleeding, chronic bronchitis.

#### **Eye contact**

- Severe eye irritation
- Risk of serious damage to eyes.
- Symptoms: Redness, Lachrymation, Swelling of tissue.

#### **Skin contact**

- Irritation
- Risk of: Burn.

#### **Ingestion**

- Severe irritation



- Symptoms: Nausea, Abdominal pain, Vomiting, Diarrhoea, Risk of chemical pneumonitis from product inhalation..

## 12. ECOLOGICAL INFORMATION

### 12.1. Ecotoxicity effects

#### **Acute toxicity**

- Fishes, Pimephales promelas, LC50, 96 h, 16.4 mg/l
- Fishes, Pimephales promelas, NOEC, 96 h, 4.3 mg/l
- Crustaceans, Daphnia pulex, EC50, 48 h, 2.4 mg/l  
Remarks: fresh water, semi-static test
- Crustaceans, Daphnia pulex, NOEC, 48 h, 1 mg/l  
Remarks: fresh water, semi-static test

#### **Chronic toxicity**

- Algae, Skeletonema costatum, EC50, growth rate, 72 h, 2.6 mg/l
- Algae, Skeletonema costatum, NOEC, 72 h, 0.63 mg/l
- Algae, Chlorella vulgaris, EC50, Growth rate, 72 h, 4.3 mg/l
- Algae, Chlorella vulgaris, NOEC, 72 h, 0.1 mg/l

### 12.2. Mobility

- Air, Volatility, Henry's law constant (H) = 0.75 kPa.m<sup>3</sup>/mol  
Conditions: 20 °C  
Remarks: not significant
- Water  
Remarks: considerable solubility and mobility
- Soil/sediments, log KOC:0.2  
Remarks: non-significant evaporation and adsorption

### 12.3. Persistence and degradability

#### **Abiotic degradation**

- Air, indirect photo-oxidation, t 1/2 24 h  
Conditions: sensitizer: OH radicals
- Water, redox reaction, t 1/2 120 h  
Conditions: mineral and enzymatic catalysis, fresh water, salt water
- Soil, redox reaction, t 1/2 12 h  
Conditions: mineral and enzymatic catalysis

#### **Biodegradation**

- aerobic, t 1/2 < 2 min  
Conditions: biological treatment sludge  
Remarks: Readily biodegradable.
- aerobic, t 1/2 from 0.3 - 5 d  
Conditions: fresh water  
Remarks: Readily biodegradable.
- anaerobic  
Conditions: Soil/sediments  
Remarks: not applicable

### 12.4. Bioaccumulative potential

- Bioaccumulative potential: -1.57  
Result: Does not bioaccumulate.

### 12.5. Other adverse effects

- no data available

### 12.6. Possible hazards (summary)

- no data available



## 13. DISPOSAL CONSIDERATIONS

### 13.1. Waste from residues / unused products

- Limited quantity
- Dilute with plenty of water.
- Flush into sewer with plenty of water.
- Maximum quantity
- Contact manufacturer.
- Contact waste disposal services.
- In accordance with local and national regulations.

### 13.2. Packaging treatment

- Empty containers.
- Clean container with water.
- Dispose of rinse water in accordance with local and national regulations.
- Where possible recycling is preferred to disposal or incineration.
- In accordance with local and national regulations.

## 14. TRANSPORT INFORMATION

UN number	2014
<b>IATA-DGR</b>	
Class	5.1
Sub-risks	Corrosive
Packing group	II
ICAO-Labels	OXIDIZER + CORROSIVE
Remarks	FORBIDDEN
Proper shipping name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION	
<b>IMDG</b>	
Class	5.1
Sub-risks	Corrosive
Packing group	II
IMDG-Labels	OXIDIZING AGENT + CORROSIVE
HI/UN No.	2014
EmS:	F-H, S-Q
Proper shipping name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION	
<b>ADG</b>	
Class	5.1
Sub-risks	8
Packing group	II
ADG-Labels	5.1 + 8
HI/UN No.	58/2014
Proper shipping name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION	

## 15. REGULATORY INFORMATION

### 15.1. Labels

- Hazardous components which must be listed on the label: Hydrogen peroxide
- The product is classified and labelled in accordance with Directive 1999/45/EC.

Symbol(s)                      Xn                      Harmful



R-phrase(s)	R22 R37/38 R41	Harmful if swallowed. Irritating to respiratory system and skin. Risk of serious damage to eyes.
S-phrase(s)	S 1/2 S26  S28  S36/37/39  S45	Keep locked up and out of the reach of children. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water. 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).

### 15.2. Other information

- The percentage concentration of the solution has to be indicated next to the product name.

### 15.3. Inventory Information

<b>Toxic Substance Control Act list (TSCA)</b>	: -	In compliance with inventory.
<b>Australian Inventory of Chemical Substances (AICS)</b>	: -	In compliance with inventory.
<b>Canadian Domestic Substances List (DSL)</b>	: -	In compliance with inventory.
<b>Korean Existing Chemicals Inventory (KECI (KR))</b>	: -	In compliance with inventory.
<b>EU list of existing chemical substances (EINECS)</b>	: -	In compliance with inventory.
<b>Japanese Existing and New Chemical Substances (MITI List) (ENCS)</b>	: -	In compliance with inventory.
<b>Inventory of Existing Chemical Substances (China) (IECS)</b>	: -	In compliance with inventory.
<b>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</b>	: -	In compliance with inventory.
<b>New Zealand Inventory of Chemicals (NZIOC)</b>	: -	In compliance with inventory.

## 16. OTHER INFORMATION

### 16.1. Administrative information

- General revision
- Distribute new edition to clients

### 16.2. Text of R phrases mentioned in Section 3

- R 5: Heating may cause an explosion.
- R 8: Contact with combustible material may cause fire.
- R20/22: Harmful by inhalation and if swallowed.
- R35: Causes severe burns.



The information given corresponds to the current state of our knowledge and experience of the product, and is not exhaustive. This applies to product which conforms to the specification, unless otherwise stated. In this case of combinations and mixtures one must make sure that no new dangers can arise. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and protection of human welfare and the environment.

