

Australian statement of hazardous nature : Classified as hazardous according to criteria of Safe Work Australia

## Section 1 - Identification

**Product Name** Hydrogen Peroxide 20% to 60%

<b>Product Code</b>	ACR20246, ACR30286, ACR41188, ACR44438, AJA2430, AJA260, AJA4238, APPA1134.0500, BAK2190-03, BSPA5, FSBBP2633, FSBH/1750, FSBH/1800, FSBH/1820/15, FSBH325, FSBP170, FNNHYPER500, ROA0477, ROA0478, ROA0868, ROA2170, FSBH/1811, ROA4609
<b>Address</b>	ThermoFisher Scientific Australia Pty Ltd 5 Caribbean Drive, Scoresby VICTORIA 3179, Australia
<b>Emergency Tel.</b>	<b>CHEMTREC®</b> <b>03 9757 4559 or +613 9757 4559</b>
<b>Telephone / Fax Numbers</b>	Tel: 1300 735 292 Fax: 1800 067 639
<b>E-mail address</b>	<a href="mailto:auinfo@thermofisher.com">auinfo@thermofisher.com</a>

**Recommended Use** Laboratory chemicals.

## Section 2 - Hazard(s) Identification

### Classification under Safe Work Australia

Classified as hazardous according to criteria of Safe Work Australia

#### Physical hazards

Oxidizing liquids Category 1

#### Health hazards

Acute Oral Toxicity	Category 4
Acute Inhalation Toxicity - Vapors	Category 4
Skin Corrosion/Irritation	Category 1 A
Serious Eye Damage/Eye Irritation	Category 1

#### Environmental hazards

No hazards identified

#### Label Elements



Flame Over Circle



Exclamation Mark



Corrosion

**Signal Word****Danger****Hazard Statements**

H271 - May cause fire or explosion; strong oxidizer  
 H302 - Harmful if swallowed  
 H314 - Causes severe skin burns and eye damage  
 H332 - Harmful if inhaled

**Precautionary Statements**

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
 P220 - Keep/Store away from clothing/ combustible materials  
 P221 - Take any precaution to avoid mixing with combustibles  
 P264 - Wash face, hands and any exposed skin thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P271 - Use only outdoors or in a well-ventilated area  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P283 - Wear fire/flame resistant/retardant clothing  
 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  
 P306 + P360 - IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes  
 P310 - Immediately call a POISON CENTER or doctor/physician  
 P330 - Rinse mouth  
 P331 - Do NOT induce vomiting  
 P353 - Rinse skin with water/shower  
 P363 - Wash contaminated clothing before reuse  
 P370 + P378 - In case of fire: Use CO<sub>2</sub>, dry chemical or foam for extinction  
 P371 + P380 + P375 - In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion  
 P403 + P233 - Store in a well-ventilated place. Keep container tightly closed  
 P501 - Dispose of contents/ container to an approved waste disposal plant

**Other information**

No information available

## Section 3 - Composition and Information on Ingredients

Component	CAS-No	Weight %
Water	7732-18-5	40-80
Hydrogen peroxide	7722-84-1	20-60

## Section 4 - First Aid Measures

**Inhalation**

Remove from exposure, lie down. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician immediately.

**Ingestion**

Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Call a physician immediately.

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

	Immediate medical attention is required. Keep eye wide open while rinsing.
<b>General Advice</b>	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
<b>Self-Protection of the First Aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.
<b>First Aid Facilities</b>	Eyewash, safety shower and washroom.
<b>Most important symptoms and effects</b>	Causes burns by all exposure routes. . Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation
<b>Notes to Physician</b>	Treat symptomatically.

## Section 5 - Fire Fighting Measures

### Suitable Extinguishing Media

CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam.

### Extinguishing media which must not be used for safety reasons

No information available.

### Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes. Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.).

### Special protective equipment and precautions for fire fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

## Section 6 - Accidental Release Measures

### Emergency procedures

Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### Environmental Precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system.

### Methods for Containment and Clean Up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal.

### Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

## Section 7 - Handling and Storage

### Precautions for Safe Handling

Use only under a chemical fume hood. Wear personal protective equipment/face protection. Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from clothing and other combustible materials.

### Conditions for Safe Storage, Including any Incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Do not store near combustible materials.

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

## Section 8 - Exposure Controls and Personal Protection

**Exposure limits**

**AUS** - Exposure Standards for Atmospheric Contaminants in the Occupational Environment - Guidance Note on the Interpretation of Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:3008(1995)]

Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]

updated in August, 2005. Safe Work Australia **ACGIH** - Threshold Limit Values - Ceiling (TLV-C) guidelines by the American Conference of Governmental Industrial Hygienists (ACGIH) for controlling worker exposure to airborne chemical concentrations in the workplace. **UK** - EH40/2005 Work Exposure Limits, Third edition. Published 2018. **DE** - MAK and BAT values of Hazardous Chemical Compounds in the Work Area. Published by German Research Foundation on July 1, 2011

Component	Australia	New Zealand WEL	ACGIH TLV	The United Kingdom	Germany
Hydrogen peroxide	TWA: 1 ppm TWA: 1.4 mg/m <sup>3</sup>	TWA: 1 ppm TWA: 1.4 mg/m <sup>3</sup>	TWA: 1 ppm	STEL: 2 ppm 15 min STEL: 2.8 mg/m <sup>3</sup> 15 min TWA: 1 ppm 8 hr TWA: 1.4 mg/m <sup>3</sup> 8 hr	TWA: 0.5 ppm (8 Stunden). MAK TWA: 0.71 mg/m <sup>3</sup> (8 Stunden). MAK Höhepunkt: 0.5 ppm Höhepunkt: 0.71 mg/m <sup>3</sup>

**Biological limit values**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

**Exposure Controls****Engineering Measures**

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

**Personal protective equipment****Eye Protection**

Goggles (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications)

**Hand Protection**

Protective gloves

Glove material	Breakthrough time	Glove thickness	AUS/NZ Standard	Glove comments
Natural rubber	See manufacturers	-	AS/NZS 2161.1	(minimum requirement)
Nitrile rubber	recommendations			
Neoprene				
PVC				

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

**Skin and body protection**

Long sleeved clothing

**Respiratory Protection**

Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use and maintenance of respiratory protective devices

**Recommended Filter type:**

Particulates filter conforming to EN 143 (or AUS/NZ equivalent)

**Recommended half mask:-**

Particle filtering: EN149:2001 (or AUS/NZ equivalent)

When RPE is used a face piece Fit Test should be conducted

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls**

Prevent product from entering drains. Do not allow material to contaminate ground water

system.

## Section 9 - Physical and Chemical Properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Clear, colorless solution	
<b>Physical State</b>	Liquid	
<b>Odor</b>	No information available	
<b>Odor Threshold</b>	No data available	
<b>pH</b>	No information available	
<b>Melting Point/Range</b>	-33 °C / -27.4 °F	
<b>Softening Point</b>	No data available	
<b>Boiling Point/Range</b>	108 °C / 226.4 °F	
<b>Flash Point</b>	Not applicable	<b>Method</b> - No information available
<b>Evaporation Rate</b>	No data available	
<b>Flammability (solid,gas)</b>	Not applicable	Liquid
<b>Explosion Limits</b>	No data available	
<b>Vapor Pressure</b>	No data available	
<b>Vapor Density</b>	No data available	(Air = 1.0)
<b>Specific Gravity / Density</b>	No data available	
<b>Bulk Density</b>	Not applicable	Liquid
<b>Water Solubility</b>	Soluble	
<b>Solubility in other solvents</b>	No information available	
<b>Partition Coefficient (n-octanol/water)</b>		
<b>Autoignition Temperature</b>	No data available	
<b>Decomposition Temperature</b>	No data available	
<b>Viscosity</b>	No data available	
<b>Explosive Properties</b>	No information available	
<b>Oxidizing Properties</b>	Oxidizer	
<b>Other information</b>		
<b>Molecular Formula</b>	H2O2	
<b>Molecular Weight</b>	34.01	

## Section 10 - Stability and Reactivity

<b>Reactivity</b>	Yes
<b>Stability</b>	Stable under normal conditions. Oxidizer: Contact with combustible/organic material may cause fire.
<b>Conditions to Avoid</b>	Incompatible products, Excess heat, Combustible material.
<b>Incompatible Materials</b>	Strong reducing agents, Combustible material.
<b>Hazardous Decomposition Products</b>	None under normal use conditions.
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.

## Section 11 - Toxicological Information

### Information on Toxicological Effects

### Product Information

**(a) acute toxicity;**

Oral

Category 4

Dermal

Based on available data, the classification criteria are not met

Inhalation

Category 4

**Toxicology data for the components**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	LD50 > 90 mL/kg ( Rat )		
Hydrogen peroxide	801 mg/kg ( Rat ) (~60% soln)	LD50 = 9200 mg/kg ( Rabbit )	LC50 = 2000 mg/m <sup>3</sup> ( Rat ) 4 h

**(b) skin corrosion/irritation;**

Category 1 A

**(c) serious eye damage/irritation;**

Category 1

**(d) respiratory or skin sensitization;**

Respiratory

No data available

Skin

No data available

**(e) germ cell mutagenicity;**

No data available

**(f) carcinogenicity;**

No data available

**(g) reproductive toxicity;**

There are no known carcinogenic chemicals in this product

No data available

**(h) STOT-single exposure;**

No data available

**(i) STOT-repeated exposure;**

No data available

Target Organs

No information available.

**(j) aspiration hazard;**

No data available

**Symptoms / effects, both acute and delayed**

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

## Section 12 - Ecological Information

**Ecotoxicity effects**

Contains a substance which is: Harmful to aquatic organisms. The product contains following substances which are hazardous for the environment. Toxic to aquatic organisms.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Hydrogen peroxide	LC50: 16.4 mg/L/96h (P.promelas)	EC50 7.7 mg/L/24h	EC50 2.5 mg/L/72h	

**Persistence and Degradability****Persistence**

Soluble in water, Persistence is unlikely, based on information available.

**Degradation in sewage treatment plant**

Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

**Bioaccumulative Potential**

Bioaccumulation is unlikely

**Mobility**

The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility Highly mobile in soils

**Endocrine Disruptor Information**

This product does not contain any known or suspected endocrine disruptors

**Persistent Organic Pollutant**

This product does not contain any known or suspected substance

**Ozone Depletion Potential**

This product does not contain any known or suspected substance

## Section 13 - Disposal Considerations

**Waste from Residues/Unused Products**

Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure

conformity with all applicable regulations.

**Contaminated Packaging**

Dispose of this container to hazardous or special waste collection point.

**Other Information**

Chemical wastes should be disposed through a licensed commercial waste collection service. Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Large amounts will affect pH and harm aquatic organisms.

## Section 14 - Transport Information

**IMDG/IMO**

UN-No UN2014  
 Proper Shipping Name HYDROGEN PEROXIDE, AQUEOUS SOLUTION  
 Hazard Class 5.1  
 Subsidiary Hazard Class 8  
 Packing Group II

**ADG**

UN-No UN2014  
 Proper Shipping Name HYDROGEN PEROXIDE, AQUEOUS SOLUTION  
 Hazard Class 5.1  
 Subsidiary Hazard Class 5.1 8  
 Packing Group II

Component	Hazchem Code
Hydrogen peroxide 7722-84-1 ( 20-60 )	2P 2R

**IATA**

UN-No UN2014  
 Proper Shipping Name HYDROGEN PEROXIDE, AQUEOUS SOLUTION  
 Hazard Class 5.1  
 Subsidiary Hazard Class 8  
 Packing Group II

**Environmental hazards** No hazards identified

**Special Precautions** No special precautions required

**Additional information** None known

## Section 15 - Regulatory Information

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

**International Inventories** X = listed

Component	AICS	NZIoC	EINECS	ELINCS	TSCA	DSL	NDSL	PICCS	ENCS	IECSC	KECL
Water	X	X	231-791-2	-	X	X	-	X	X	X	KE-3540 0
Hydrogen peroxide	X	X	231-765-0	-	X	X	-	X	X	X	KE-2020 4

**Standard for the Uniform Scheduling of Medicines and Poisons**

Component	Standard for the Uniform Scheduling of Medicines and Poisons	Health Surveillance

Hydrogen peroxide	<p>Schedule 5 listed - except its salts and derivatives;in other preparations except in preparations containing &lt;=3% or 10 volume of Hydrogen peroxide</p> <p>Schedule 5 listed - except its salts and derivatives;in hair dye preparations except in hair dyes containing &lt;=6% of Hydrogen peroxide</p> <p>Schedule 6 listed - except its salts and derivatives;except: when included in Schedule 5, in hair dye preparations containing &lt;=6% (20 volume) of Hydrogen peroxide, or in other preparations containing &lt;=3% (10 volume) of Hydrogen peroxide</p>	
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**Prohibition or notification/licensing requirements** Shown below are details of specific prohibition/notifications or licencing requirements when they apply.

## Section 16 - Other Information

### Legend

<p><b>AICS</b> - Australian Inventory of Chemical Substances</p> <p><b>TSCA</b> - United States Toxic Substances Control Act Section 8(b) Inventory</p> <p><b>DSL/NDSL</b> - Canadian Domestic Substances List/Non-Domestic Substances List</p> <p><b>IECSC</b> - Chinese Inventory of Existing Chemical Substances</p> <p><b>PICCS</b> - Philippines Inventory of Chemicals and Chemical Substances</p> <p><b>TWA</b> - Time Weighted Average</p> <p><b>IARC</b> - International Agency for Research on Cancer</p> <p><b>ICAO/IATA</b> - International Civil Aviation Organization/International Air Transport Association</p> <p><b>MARPOL</b> - International Convention for the Prevention of Pollution from Ships</p> <p><b>NZS 5433:2012</b> - Transport of Dangerous Goods on Land</p> <p><b>LD50</b> - Lethal Dose 50%</p> <p><b>EC50</b> - Effective Concentration 50%</p> <p><b>WEL</b> - Workplace Exposure Limit</p> <p><b>DNEL</b> - Derived No Effect Level</p> <p><b>POW</b> - Partition coefficient Octanol:Water</p> <p><b>vPvB</b> - very Persistent, very Bioaccumulative</p> <p>VOC (volatile organic compound)</p>	<p><b>NZIoC</b> - New Zealand Inventory of Chemicals</p> <p><b>EINECS/ELINCS</b> - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances</p> <p><b>ENCS</b> - Japanese Existing and New Chemical Substances</p> <p><b>KECL</b> - Korean Existing and Evaluated Chemical Substances</p> <p><b>CAS</b> - Chemical Abstracts Service</p> <p><b>ACGIH</b> - American Conference of Governmental Industrial Hygienists Predicted No Effect Concentration (PNEC)</p> <p><b>IMO/IMDG</b> - International Maritime Organization/International Maritime Dangerous Goods Code</p> <p><b>ADG</b> Australian Code for the Transport of Dangerous Goods by Road and Rail</p> <p><b>OECD</b> - Organisation for Economic Co-operation and Development</p> <p><b>LC50</b> - Lethal Concentration 50%</p> <p><b>ATE</b> - Acute Toxicity Estimate</p> <p><b>RPE</b> - Respiratory Protective Equipment</p> <p><b>NOEC</b> - No Observed Effect Concentration</p> <p><b>BCF</b> - Bioconcentration factor</p> <p><b>PBT</b> - Persistent, Bioaccumulative, Toxic</p>
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### Key literature references and sources for data

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

### Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

<b>Physical hazards</b>	On basis of test data
<b>Health Hazards</b>	Calculation method
<b>Environmental hazards</b>	Calculation method

### Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

<b>Revision Date</b>	04-Jul-2020
<b>Revision Summary</b>	Not applicable.

**This safety data sheet complies with the requirements of Safe Work Australia WHS Regulation**

Disclaimer



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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**