

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

## Section 1 - Identification

Product Name

Butan-2-ol

Product Code

AJA112, AJAMF112

Address

ThermoFisher Scientific Australia Pty Ltd  
 5 Caribbean Drive, Scoresby  
 VICTORIA 3179, Australia

Emergency Tel.

**CHEMTREC®**  
**03 9757 4559 or +613 9757 4559**

Telephone / Fax Numbers

Tel: 1300 735 292  
 Fax: 1800 067 639

E-mail address

ANZinfo@thermofisher.com

Recommended Use

Laboratory chemicals.

Uses advised against

This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list. This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction. This product does not contain any substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern.

## Section 2 - Hazard(s) Identification

### Classification under Safe Work Australia

Classified as hazardous according to criteria of Safe Work Australia

#### Physical hazards

Flammable liquids

Category 3

#### Health hazards

Acute Oral Toxicity  
 Skin Corrosion/Irritation  
 Serious Eye Damage/Eye Irritation  
 Specific target organ toxicity - (single exposure)

Category 4  
 Category 2  
 Category 1 Category 2  
 Category 3

#### Environmental hazards

No hazards identified

### Label Elements



Flame



Exclamation Mark



Corrosion

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

H226 - Flammable liquid and vapor  
H302 - Harmful if swallowed  
H315 - Causes skin irritation  
H318 - Causes serious eye damage  
H335 - May cause respiratory irritation  
H336 - May cause drowsiness or dizziness  
H319 - Causes serious eye irritation

**Precautionary Statements**

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P233 - Keep container tightly closed  
P240 - Ground and bond container and receiving equipment  
P242 - Use non-sparking tools  
P243 - Take action to prevent static discharges  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
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  
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower  
P304 + P340 - IF INHALED: Remove person to fresh air and keep 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  
P310 - Immediately call a POISON CENTER or doctor  
P330 - Rinse mouth  
P363 - Wash contaminated clothing before reuse  
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish  
P312 - Call a POISON CENTER or doctor if you feel unwell  
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**

This product does not contain any known or suspected endocrine disruptors

**Section 3 - Composition and Information on Ingredients**

Component	CAS No	Weight %
sec-Butyl alcohol	78-92-2	100

**Section 4 - First Aid Measures**

<b>Inhalation</b>	Remove to fresh air.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
<b>Eye Contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

<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>	Difficulty in breathing. Causes eye burns. Causes severe eye damage. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting
<b>Notes to Physician</b>	Treat symptomatically. Symptoms may be delayed.

## Section 5 - Fire Fighting Measures

### Suitable Extinguishing Media

Water mist may be used to cool closed containers.

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

No information available.

### Specific Hazards Arising from the Chemical

Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

### 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.

## Section 6 - Accidental Release Measures

### Emergency procedures

Remove all sources of ignition. Take precautionary measures against static discharges.

### Environmental Precautions

See Section 12 for additional Ecological Information.

### Methods for Containment and Clean Up

#### Clean-up methods - small spillage

Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

#### Clean-up methods - large spillage

Typically only supplied in small quantities as packaged goods.

If extremely toxic or used in larger quantities ensure a spillage action plan is in place. Evacuate area. Control the source and/or contain the spill if safe and able to do so. Use temporary diking, sand bags, dry sand, earth or proprietary booms/absorbent pads if available. Obtain advice on containment, neutralisation and clean-up from local emergency responders.

### Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

## Section 7 - Handling and Storage

### Precautions for Safe Handling

Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Take precautionary measures against static discharges.

### Conditions for Safe Storage, Including any Incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat, sparks and flame.

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals  
 AS 1940-2004 - The storage and handling of flammable and combustible liquids

## Section 8 - Exposure Controls and Personal Protection

### Exposure limits

**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, Fourth edition. Published 2020.

**DE** - MAK and BAT values of Hazardous Chemical Compounds in the Work Area. Published by German Research Foundation on July 1, 2011

**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

**NZ** - Workplace Exposure Standards and Biological Exposure Indices (6th edition). New Zealand Department of Labor

Component	Australia	New Zealand WEL	ACGIH TLV	The United Kingdom	Germany
sec-Butyl alcohol	TWA: 100 ppm TWA: 303 mg/m <sup>3</sup>	TWA: 100 ppm TWA: 303 mg/m <sup>3</sup>	TWA: 100 ppm	STEL: 150 ppm 15 min STEL: 462 mg/m <sup>3</sup> 15 min TWA: 100 ppm 8 hr TWA: 308 mg/m <sup>3</sup> 8 hr	

### 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. Use explosion-proof electrical/ventilating/lighting equipment.

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
Viton (R)	See manufacturers recommendations	-	AS/NZS 2161	(minimum requirement)

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:

Organic gases and vapours filter Type A Brown conforming to EN14387 (or AUS/NZ equivalent)

<b>Recommended half mask:-</b>	Valve filtering: EN405 or Half mask: EN140 plus filter, EN 141 (or AUS/NZ equivalent) When RPE is used a face piece Fit Test should be conducted
<b>Hygiene Measures</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>Environmental exposure controls</b>	No information available.

## Section 9 - Physical and Chemical Properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Colorless	
<b>Physical State</b>	Liquid	
<b>Odor</b>	No information available	
<b>Odor Threshold</b>	No data available	
<b>pH</b>	Not applicable	
<b>Melting Point/Range</b>	No data available -115 °C / -175 °F	
<b>Softening Point</b>	No data available	
<b>Boiling Point/Range</b>	99 °C / 210.2 °F	
<b>Flash Point</b>	24 °C / 75.2 °F	<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>	No information available	
<b>Solubility in other solvents</b>	No information available	
<b>Partition Coefficient (n-octanol/water)</b>		
<b>Component</b>	<b>log Pow</b>	
sec-Butyl alcohol	0.6	
<b>Autoignition Temperature</b>	No data available	
<b>Decomposition Temperature</b>	No data available	
<b>Viscosity</b>	No data available	
<b>Explosive Properties</b>		explosive air/vapour mixtures possible
<b>Oxidizing Properties</b>	No information available	
<b>Other information</b>		
<b>Molecular Formula</b>	C <sub>2</sub> H <sub>5</sub> CH(OH)CH <sub>3</sub>	
<b>Molecular Weight</b>	74.12	

## Section 10 - Stability and Reactivity

<b>Reactivity</b>	None known, based on information available
<b>Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Keep away from open flames, hot surfaces and sources of ignition.
<b>Incompatible Materials</b>	None known.
<b>Hazardous Decomposition Products</b>	None under normal use conditions.
<b>Hazardous Polymerization</b>	No information available.

## 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

Based on available data, the classification criteria are not met

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
sec-Butyl alcohol	2200 mg/kg ( Rat ) 2193 mg/kg ( Rat )	> 2 g/kg ( Rat )	49 mg/L ( Rat ) 4 h (vapour)

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Category 1

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

Respiratory

Based on available data, the classification criteria are not met

Skin

Based on available data, the classification criteria are not met

Component	Test method	Test species	Study result
sec-Butyl alcohol 78-92-2 ( 100 )	OECD Test Guideline 406	guinea pig	non-sensitising

(e) germ cell mutagenicity; Based on available data, the classification criteria are not met

(f) carcinogenicity; Based on available data, the classification criteria are not met

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; Based on available data, the classification criteria are not met

(h) STOT-single exposure; Category 3

Results / Target organs

Respiratory system  
Central nervous system (CNS)

(i) STOT-repeated exposure; Based on available data, the classification criteria are not met

Target Organs

None known.

(j) aspiration hazard; Based on available data, the classification criteria are not met

Symptoms / effects, both acute and delayed Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

## Section 12 - Ecological Information

### Ecotoxicity effects

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
sec-Butyl alcohol	Pimephales promelas: LC50: 3670 mg/L/96h	EC50: 3750 mg/L/24h		Pseudomonas putida: 500 mg/L/16h

Persistence and Degradability No information available

Persistence

Persistence is unlikely.

Bioaccumulative Potential

Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
sec-Butyl alcohol	0.6	No data available

<b>Mobility</b>	No information available.
<b>Endocrine Disruptor Information</b>	This product does not contain any known or suspected endocrine disruptors
<b>Persistent Organic Pollutant</b>	This product does not contain any known or suspected substance
<b>Ozone Depletion Potential</b>	This product does not contain any known or suspected substance

## Section 13 - Disposal Considerations

<b>Waste from Residues/Unused Products</b>	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.
<b>Contaminated Packaging</b>	Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.
<b>Other Information</b>	Chemical wastes should be disposed through a licensed commercial waste collection service. Waste codes should be assigned by the user based on the application for which the product was used. Do not flush to sewer. Can be landfilled or incinerated, when in compliance with local regulations. Do not empty into drains.

## Section 14 - Transport Information

### IMDG/IMO

<b>UN-No</b>	UN1120
<b>Proper Shipping Name</b>	BUTANOLS
<b>Technical Shipping Name</b>	Sec-Butanol
<b>Hazard Class</b>	3
<b>Packing Group</b>	III

### ADG

<b>UN-No</b>	UN1120
<b>Proper Shipping Name</b>	BUTANOLS
<b>Technical Shipping Name</b>	Sec-Butanol
<b>Hazard Class</b>	3
<b>Packing Group</b>	III

### IATA

<b>UN-No</b>	UN1120
<b>Proper Shipping Name</b>	BUTANOLS
<b>Technical Shipping Name</b>	Sec-Butanol
<b>Hazard Class</b>	3
<b>Packing Group</b>	III

<b>Environmental hazards</b>	No hazards identified
<b>Special Precautions</b>	No special precautions required
<b>Additional information</b>	None known

## Section 15 - Regulatory Information

**Safety, health and environmental regulations/legislation specific for the substance or mixture****National Regulations****Australia**

See section 8 for national exposure control parameters.

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

Classified as a scheduled poison according to the Standard for Uniform Scheduling of Medicines and Poisons.

**Australian Industrial Chemicals Introduction Scheme (AICIS)**

Component	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
sec-Butyl alcohol - 78-92-2	Present	-

**Australian - Illicit Drug Precursors/Reagents Substance List**

This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list.

**Chemicals of Security Concern**

This product does not contain any substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern

**National pollutant inventory**

Not applicable

**Prohibition or notification/licensing requirements**

Shown below are details of specific prohibition/notifications or licencing requirements when they apply.

This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction.

**International Inventories**

Component	AICS	NZIoC	EINECS	ELINCS	TSCA	DSL	NDSL	PICCS	ENCS	ISHL	IECSC	KECL
sec-Butyl alcohol	X	X	201-158-5	-	X	X	-	X	X	X	X	KE-03868

**Legend:** X - Listed. '-' - Not Listed. **KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

**International Regulations****Ozone Depletion Potential**

This product does not contain any known or suspected substance

**Persistent Organic Pollutant**

This product does not contain any known or suspected substance

**Rotterdam Convention (PIC)**

Not applicable

**Basel convention on the control of transboundary movements of hazardous wastes and their disposal**

Not applicable.



Component	CAS No	OECD HPV	Restriction of Hazardous Substances (RoHS)	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
sec-Butyl alcohol	78-92-2	Listed	Not applicable	Not applicable	Not applicable

#### Authorisation/Restrictions according to EU REACH

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
sec-Butyl alcohol	-	Use restricted. See entry 75. (see link for restriction details)	-

<https://echa.europa.eu/substances-restricted-under-reach>

## Section 16 - Other Information

### Legend

<b>AICS</b> - Australian Inventory of Chemical Substances	<b>NZIoC</b> - New Zealand Inventory of Chemicals
<b>TSCA</b> - United States Toxic Substances Control Act Section 8(b) Inventory	<b>EINECS/ELINCS</b> - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
<b>DSL/NDL</b> - Canadian Domestic Substances List/Non-Domestic Substances List	<b>ENCS</b> - Japanese Existing and New Chemical Substances
<b>IECSC</b> - Chinese Inventory of Existing Chemical Substances	<b>KECL</b> - Korean Existing and Evaluated Chemical Substances
<b>PICCS</b> - Philippines Inventory of Chemicals and Chemical Substances	<b>CAS</b> - Chemical Abstracts Service
<b>TWA</b> - Time Weighted Average	<b>ACGIH</b> - American Conference of Governmental Industrial Hygienists Predicted No Effect Concentration (PNEC)
<b>IARC</b> - International Agency for Research on Cancer	<b>IMO/IMDG</b> - International Maritime Organization/International Maritime Dangerous Goods Code
<b>ICAO/IATA</b> - International Civil Aviation Organization/International Air Transport Association	<b>ADG</b> - Australian Code for the Transport of Dangerous Goods by Road and Rail
<b>MARPOL</b> - International Convention for the Prevention of Pollution from Ships	<b>OECD</b> - Organisation for Economic Co-operation and Development
<b>NZS 5433:2020</b> - Transport of Dangerous Goods on Land	<b>LC50</b> - Lethal Concentration 50%
<b>LD50</b> - Lethal Dose 50%	<b>ATE</b> - Acute Toxicity Estimate
<b>EC50</b> - Effective Concentration 50%	<b>RPE</b> - Respiratory Protective Equipment
<b>WEL</b> - Workplace Exposure Limit	<b>NOEC</b> - No Observed Effect Concentration
<b>DNEL</b> - Derived No Effect Level	<b>BCF</b> - Bioconcentration factor
<b>POW</b> - Partition coefficient Octanol:Water	<b>PBT</b> - Persistent, Bioaccumulative, Toxic
<b>vPvB</b> - very Persistent, very Bioaccumulative	
<b>VOC</b> - (Volatile Organic Compound)	

#### Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>  
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

#### 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.

Chemical incident response training.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

#### Revision Date

12-Mar-2025

#### Revision Summary

Update to GHS format.

**This Safety Data Sheet (SDS) is prepared in accordance to and complies with the requirements of Safe Work Australia - Work Health and Safety Regulations (WHS Regulations).**

**Disclaimer**

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**