

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

Section 1 - Identification

Product Name

Bluing Reagent

Product Code

ALP6769002, ALP6769001

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

Category 3

Acute Dermal Toxicity

Category 3

Acute Inhalation Toxicity - Vapors

Category 3

Specific target organ toxicity - (single exposure)

Category 1

Environmental hazards

No hazards identified

Label Elements



Flame



Skull and Crossbones



Health Hazard

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

H226 - Flammable liquid and vapor

H370 - Causes damage to organs

H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled

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

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

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor

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

P311 - 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

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

Toxic to terrestrial vertebrates

This product does not contain any known or suspected endocrine disruptors

Section 3 - Composition and Information on Ingredients

Component	CAS No	Weight %
Water	7732-18-5	50-55
Methyl alcohol	67-56-1	45-50
Sodium bicarbonate	144-55-8	< 1
Lithium carbonate	554-13-2	< 1

Section 4 - First Aid Measures**Inhalation**

Remove to fresh air. 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. Immediate medical attention is required. If not breathing, give artificial respiration.

Ingestion

Do NOT induce vomiting. Call a physician or poison control center immediately.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Self-Protection of the First Aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination.

First Aid Facilities

Eyewash, safety shower and washroom.

Most important symptoms and effects

Difficulty in breathing. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

Notes to Physician

Treat symptomatically.

Section 5 - Fire Fighting Measures

Suitable Extinguishing Media

Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.

Extinguishing media which must not be used for safety reasons

No information available.

Hazardous Decomposition Products

Carbon monoxide (CO), Formaldehyde.

Specific Hazards Arising from the Chemical

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

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. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Take precautionary measures against static discharges. Do not get in eyes, on skin, or on clothing.

Environmental Precautions

Should not be released into the environment. See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up**Clean-up methods - small spillage**

Remove all sources of ignition. Soak up with inert absorbent material. Take precautionary measures against static discharges. Keep in suitable, closed containers for disposal. 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

Use only under a chemical fume hood. Use spark-proof tools and explosion-proof equipment. Take precautionary measures

against static discharges. Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

Conditions for Safe Storage, Including any Incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Flammables area. 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

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, 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

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
Methyl alcohol	STEL: 250 ppm STEL: 328 mg/m ³ TWA: 200 ppm TWA: 262 mg/m ³	TWA: 200 ppm TWA: 262 mg/m ³ STEL: 250 ppm STEL: 328 mg/m ³ Skin	TWA: 200 ppm STEL: 250 ppm Skin	WEL - TWA: 200 ppm TWA: 266 mg/m ³ TWA WEL - STEL: 250 ppm STEL: 333 mg/m ³ STEL	100 ppm TWA MAK; 130 mg/m ³ TWA MAKSkin absorber
Lithium carbonate					TWA: 0.2 mg/m ³ (8 Stunden). MAK inorganic compounds, except Lithium and strong irritant Lithium compounds such as Lithium amide, Lithium hydride, Lithium hydroxide, Lithium nitride, Lithium oxide, Lithium tetrahydroaluminate, Lithium tetrahydroborate

Biological limit values

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

Component	Australia	New Zealand	European Union	United Kingdom	Germany
Methyl alcohol		15 mg/L (urine) end of shift (Methyl alcohol)			Methanol: 15 mg/L urine (end of shift) Methanol: 15 mg/L urine (for long-term exposures: at the end of the shift after several shifts)

Exposure Controls

Engineering Measures

Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting equipment. 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

Wear safety glasses with side shields (or 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
Disposable gloves	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 compatability, 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

Wear appropriate protective gloves and clothing to prevent skin exposure

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 (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

No information available.

Section 9 - Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Clear	
Physical State	Liquid	
Odor	Alcohol-like	
Odor Threshold	No data available	
pH	Not applicable	
Melting Point/Range	No data available	
Softening Point	No data available	
Boiling Point/Range	Not applicable °C / °F	
Flash Point	Not applicable °C / °F	Method - No information available
Evaporation Rate	4.6 (Butyl Acetate = 1.0)	
Flammability (solid,gas)	Not applicable	Liquid
Explosion Limits	No data available	
Vapor Pressure	96 mmHg	
Vapor Density	1.11 (Air = 1.0)	(Air = 1.0)
Specific Gravity / Density	No data available 0.9 (H2O=1)	
Bulk Density	Not applicable	Liquid
Water Solubility	No information available	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Component	log Pow	
Methyl alcohol	-0.74	
Autoignition Temperature	No data available	
Decomposition Temperature	No data available	
Viscosity	No data available	
Explosive Properties		Vapors may form explosive mixtures with air

Oxidizing Properties No information available

Other information

Section 10 - Stability and Reactivity

Reactivity None known, based on information available

Stability Stable under normal conditions.

Conditions to Avoid Incompatible products, Heat, flames and sparks, Keep away from open flames, hot surfaces and sources of ignition.

Incompatible Materials Strong oxidizing agents, Strong acids, Acid anhydrides, Acid chlorides, Strong bases, Metals, Peroxides.

Hazardous Decomposition Products Carbon monoxide (CO). Formaldehyde.

Hazardous Polymerization Hazardous polymerization does not occur.

Section 11 - Toxicological Information

Information on Toxicological Effects

Product Information

(a) acute toxicity;

Oral	Category 3
Dermal	Category 3
Inhalation	Category 3

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	-	-	-
Methyl alcohol	LD50 = 1187 – 2769 mg/kg (Rat)	LD50 = 17100 mg/kg (Rabbit)	LC50 = 128.2 mg/L (Rat) 4 h
Sodium bicarbonate	LD50 = 4220 mg/kg (Rat)		
Lithium carbonate	LD50 = 525 mg/kg (Rat)	LD50 > 3000 mg/kg (Rabbit)	>2.17 mg/L (Rat) 4 h

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;

Respiratory	No data available
Skin	No data available

Component	Test method	Test species	Study result
Methyl alcohol 67-56-1 (45-50)	OECD Test Guideline 406 Guinea Pig Maximisation Test (GPMT)	guinea pig	non-sensitising

(e) germ cell mutagenicity; No data available

Mutagenic effects have occurred in experimental animals

(f) carcinogenicity; No data available
There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

Component	Test method	Test species / Duration	Study result
Methyl alcohol 67-56-1 (45-50)	OECD Test Guideline 416	Rat / Inhalation 2 Generation	NOAEC = 1.3 mg/l (air)

(h) STOT-single exposure; Category 1

Results / Target organs Optic nerve
Central nervous system (CNS)

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; No data available

Other Adverse Effects The toxicological properties have not been fully investigated.

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
Methyl alcohol	Pimephales promelas: LC50 > 10000 mg/L 96h	EC50 > 10000 mg/L 24h		EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min
Sodium bicarbonate	LC50: 8250 - 9000 mg/L, 96h static (Lepomis macrochirus)	EC50: 2350 mg/L/48h	EC50: 650 mg/L/120h	-
Lithium carbonate	LC50: = 30.3 mg/L, 96h static (Oncorhynchus mykiss)			

Persistence and Degradability No information available

Component	Degradability
Methyl alcohol 67-56-1 (45-50)	DT50 ~ 17.2d >94% after 20d

Bioaccumulative Potential No information available

Component	log Pow	Bioconcentration factor (BCF)
Methyl alcohol	-0.74	<10 dimensionless

Mobility No information available.

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. 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.

Other Information

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.

Section 14 - Transport Information

IMDG/IMO

UN-No UN1987
Proper Shipping Name ALCOHOLS, N.O.S.
Technical Shipping Name Bluing Reagent (Ethanol, Methanol, Propanol)
Hazard Class 3
Packing Group III

ADG

UN-No UN1987
Proper Shipping Name ALCOHOLS, N.O.S.
Technical Shipping Name Bluing Reagent (Ethanol, Methanol, Propanol)
Hazard Class 3
Packing Group III

Component	Hazchem Code
Methyl alcohol 67-56-1 (45-50)	2WE

IATA

UN-No UN1987
Proper Shipping Name ALCOHOLS, N.O.S.
Technical Shipping Name Bluing Reagent (Ethanol, Methanol, Propanol)
Hazard Class 3
Packing Group III

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**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.

Component	Standard for the Uniform Scheduling of Medicines and Poisons
Methyl alcohol - 67-56-1	Schedule 5 listed - except its derivatives; in preparations except a) when included in Schedule 10, or b) in preparations containing $\leq 2\%$ of Methanol, or c) when Methanol is present only as a denaturant of Ethanol Schedule 6 listed - except its derivatives; except a) when included in Schedule 5, or b) when included in Schedule 10, or c) in preparations containing $\leq 2\%$ of Methanol Schedule 10 listed
Lithium carbonate - 554-13-2	Schedule 2 listed Schedule 4 listed - for therapeutic use except: when included in Schedule 2, when present as an excipient in preparations for dermal use containing $\leq 0.25\%$ of Lithium, or in preparations containing $\leq 0.01\%$ of Lithium

Australian Industrial Chemicals Introduction Scheme (AICIS)

Component	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
Water - 7732-18-5	Present	-
Methyl alcohol - 67-56-1	Present	-
Sodium bicarbonate - 144-55-8	Present	-
Lithium carbonate - 554-13-2	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

Subject to reporting requirements

Component	National pollutant inventory
Methyl alcohol - 67-56-1	10 tonne/yr. Threshold category 1

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
Water	X	X	231-791-2	-	X	X	-	X	X		X	KE-35400
Methyl alcohol	X	X	200-659-6	-	X	X	-	X	X	X	X	KE-23193
Sodium bicarbonate	X	X	205-633-8	-	X	X	-	X	X	X	X	KE-31360
Lithium carbonate	X	X	209-062-5	-	X	X	-	X	X	X	X	KE-22550

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
Water	7732-18-5	Listed	Not applicable	Not applicable	Not applicable
Methyl alcohol	67-56-1	Listed	Not applicable	500 tonne	5000 tonne
Sodium bicarbonate	144-55-8	Listed	Not applicable	Not applicable	Not applicable
Lithium carbonate	554-13-2	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)
Methyl alcohol	-	Use restricted. See item 69. (see link for restriction details) Use restricted. See item 75. (see link for restriction details)	-

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

Section 16 - Other Information

Legend

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

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

Physical hazards	On basis of test data
Health Hazards	Calculation method
Environmental hazards	Calculation method

Training Advice

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

Revision Date

14-Jul-2023

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