

Section 1 - Identification

Product Name
M-Prep Neutralizer 5A
Product Code
VMMMN5A1, VMMMN5A2
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 not hazardous according to criteria of Safe Work Australia.

Physical hazards

No hazards identified

Health hazards

No hazards identified

Environmental hazards

No hazards identified

Label Elements

None required

Other information

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	99.92
Tribasic sodium phosphate dodecahydrate	10101-89-0	<0.05
Ammonium hydroxide	1336-21-6	<0.02
Borates, tetra, sodium salts, pentahydrate	12179-04-3	<0.01

Section 4 - First Aid Measures

Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately if symptoms occur.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.
Skin Contact	Wash off immediately with soap and plenty of water. Get medical attention immediately if symptoms occur.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Self-Protection of the First Aider	No special precautions required.
First Aid Facilities	Eyewash, safety shower and washroom.
Most important symptoms and effects	None reasonably foreseeable.
Notes to Physician	Treat symptomatically.

Section 5 - Fire Fighting Measures

Suitable Extinguishing Media

Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons

No information available.

Specific Hazards Arising from the Chemical

Not flammable. May decompose in a fire giving off toxic fumes. When heated, material will emit anhydrous ammonia vapor which necessitates respiratory and eye protection for firefighting.

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

Ensure adequate ventilation. Use personal protective equipment as required.

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

Absorb spillage to prevent material damage. Cover spills with inert absorbent material. Neutralize with dilute acid. Transfer to a

container for disposal. Ventilate the area and wash spill site after material pick-up is complete. Dispose of waste or used sacks/containers according to local regulations.

Clean-up methods - large spillage

Not applicable, packaged goods.

Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

Section 7 - Handling and Storage

Precautions for Safe Handling

Ensure operatives are trained to minimise exposures. Ensure adequate ventilation. Avoid breathing mist/vapours/spray. In case of inadequate ventilation wear respiratory protection. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product.

Conditions for Safe Storage, Including any Incompatibilities

Keep only in original packaging. Keep container tightly closed and in a well ventilated place. Ambient temperatures. <27°C. Stable under normal conditions. Acids, Incompatibilities are Peroxides, metallic copper, tin, zinc and their alloys, halogenated compounds.

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.

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

UK - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020.

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
Borates, tetra, sodium salts, pentahydrate	TWA: 1 mg/m ³	TWA: 1 mg/m ³	TWA: 2 mg/m ³ STEL: 6 mg/m ³	STEL: 3 mg/m ³ 15 min TWA: 1 mg/m ³ 8 hr	TWA: 5 mg/m ³ (8 Stunden). MAK Höhepunkt: 5 mg/m ³

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**

None under normal use conditions.

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 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: Particle filter (or AUS/NZ equivalent)

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	Colourless	
Physical State	Liquid	
Odor	No information available	
Odor Threshold	No data available	
pH	No information available	
Melting Point/Range	0 °C / 32 °F	
Softening Point	No data available	
Boiling Point/Range	100 °C / 212 °F	
Flash Point	No information available	Method - No information available
Evaporation Rate	No data available	
Flammability (solid,gas)	Not applicable	Liquid
Explosion Limits	No data available	
Vapor Pressure	No data available	
Vapor Density	No data available	(Air = 1.0)
Specific Gravity / Density	No data available	
Bulk Density	Not applicable	Liquid
Water Solubility	Soluble in water	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Autoignition Temperature	No data available	
Decomposition Temperature	No data available	
Viscosity	No data available	
Explosive Properties	No information available	
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, Excess heat.
Incompatible Materials	None known.
Hazardous Decomposition Products	None under normal use conditions.
Hazardous Polymerization	Hazardous polymerization does not occur.

Section 11 - Toxicological Information

Information on Toxicological Effects

Product Information

(a) acute toxicity;	
Oral	Based on available data, the classification criteria are not met
Dermal	No data available
Inhalation	No data available

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	LD50 > 90 mL/kg (Rat)		
Tribasic sodium phosphate dodecahydrate	LD50 = 7400 mg/kg (Rat)		
Ammonium hydroxide	LD50 > 350 mg/kg (Rat)		
Borates, tetra, sodium salts, pentahydrate	LD50 = 2403 mg/kg (Rat)		

(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

(e) germ cell mutagenicity;	No data available
------------------------------------	-------------------

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

(g) reproductive toxicity;	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	No information available
---	--------------------------

Section 12 - Ecological Information

Ecotoxicity effects

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Ammonium hydroxide	0.53 mg/l LC50 96h 0.75 - 3.4 mg/l LC50 96h 8.2 mg/L LC50 96h	EC50: 0.66 mg/L/48h	-	-

Persistence and Degradability

Persistence

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

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

Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use empty containers.

Other Information

Chemical wastes should be disposed through a licensed commercial waste collection service.

Section 14 - Transport Information

IMDG/IMO

UN-No UN1760
 Proper Shipping Name Corrosive liquid, n.o.s.
 Technical Shipping Name Ammonium Hydroxide
 Hazard Class 8
 Packing Group III

Component	IMDG Marine Pollutant
Ammonium hydroxide 1336-21-6 (<0.02)	IMDG regulated marine pollutant (UN2073); IMDG regulated marine pollutant (UN2672); IMDG regulated marine pollutant (UN3318)

ADG

UN-No UN1760
 Proper Shipping Name Corrosive liquid, n.o.s.
 Technical Shipping Name Ammonium Hydroxide
 Hazard Class 8
 Packing Group III

Component	Hazchem Code
Ammonium hydroxide 1336-21-6 (<0.02)	2XE 2X

IATA

UN-No UN1760
 Proper Shipping Name Corrosive liquid, n.o.s.
 Technical Shipping Name Ammonium Hydroxide
 Hazard Class 8
 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
Tribasic sodium phosphate dodecahydrate - 10101-89-0	Schedule 5 listed - being the Carbonate, Silicate or Phosphate salts of Sodium or Potassium alone or in any combination: in solid orthodontic device cleaning preparations as an in-use aqueous solution; in solid automatic dishwashing preparations in a 500 g/L aqueous solution or mixture but with pH ≤ 12.5 ; in other solid preparations in a 10 g/L aqueous solution, or in liquid or semi-solid preparations, unless in food additive preparations for domestic use, or in automatic dish washing preparations for domestic use with a pH > 12.5 ; except when separately specified in these Schedules
Ammonium hydroxide - 1336-21-6	Schedule 5 listed - in preparations except: in preparations for human internal therapeutic use, in preparations for inhalation when absorbed in an inert solid material, or in preparations containing $\leq 0.5\%$ of free Ammonia Schedule 6 listed - except: when included in Schedule 5, or in preparations for human internal therapeutic use, or in preparations for inhalation when absorbed in an inert solid material, or in preparations containing $\leq 0.5\%$ of Ammonia
Borates, tetra, sodium salts, pentahydrate - 12179-04-3	Schedule 4 listed - for human therapeutic use except: in preparations for internal use containing ≤ 6 mg Boron per recommended daily dose, or in preparations for dermal use containing $\leq 0.35\%$ of Boron, which are not for paediatric or antifungal use, or when present as an excipient Schedule 5 listed - except: a) when included in Schedule 4, or b) in cosmetic hand cleaning preparations when labelled with a warning to the following effect: NOT TO BE USED FOR CHILDREN UNDER 3 YEARS OF AGE, and if the concentration of free soluble Borates $> 1.5\%$ (as Boric acid), with the words: NOT TO BE USED ON PEELING OR IRRITATED SKIN, or c) in cosmetic Talc preparations containing $\leq 5\%$ calculated as Boric acid when labelled with a warning to the following effect: NOT TO BE USED FOR CHILDREN UNDER 3 YEARS OF AGE, and if the concentration of free soluble Borates $> 1.5\%$ (as Boric acid), with the words: NOT TO BE USED ON PEELING OR IRRITATED SKIN, or d) in cosmetic oral hygiene preparations containing $\leq 0.1\%$ calculated as Boric acid when labelled with a warning to the following effect: NOT TO BE SWALLOWED. NOT TO BE USED FOR CHILDREN UNDER 3 YEARS OF AGE, or e) in other cosmetic preparations containing $\leq 3\%$ calculated as Boric acid when labelled with a warning to the following effect: NOT TO BE USED FOR CHILDREN UNDER 3 YEARS OF AGE, and if the concentration of free soluble Borates $> 1.5\%$ (as Boric acid), with the words: NOT TO BE USED ON PEELING OR IRRITATED SKIN, or f) in preparations, other than insect baits, containing $\leq 6\%$, calculated as Boric acid

Australian Industrial Chemicals Introduction Scheme (AICIS)

Component	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
Water - 7732-18-5	Present	-
Tribasic sodium phosphate dodecahydrate - 10101-89-0	Present	-

Ammonium hydroxide - 1336-21-6	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 licensing 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
Tribasic sodium phosphate dodecahydrate	X	X	-	-	-	-	-	X	X		X	-
Ammonium hydroxide	X	X	215-647-6	-	X	X	-	X	X	X	X	KE-01688
Borates, tetra, sodium salts, pentahydrate	-	X	-	-	-	-	-	X	X	X	X	-

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

MARPOL - International Convention for the Prevention of Pollution from Ships

Component	IMDG Marine Pollutant
Ammonium hydroxide - 1336-21-6	IMDG regulated marine pollutant (UN2073); IMDG regulated marine pollutant (UN2672); IMDG regulated marine pollutant (UN3318)

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

Tribasic sodium phosphate dodecahydrate	10101-89-0	Listed	Not applicable	Not applicable	Not applicable
Ammonium hydroxide	1336-21-6	Listed	Not applicable	Not applicable	Not applicable
Borates, tetra, sodium salts, pentahydrate	12179-04-3	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)
Ammonium hydroxide	-	Use restricted. See entry 75. (see link for restriction details) Use restricted. See entry 65. (see link for restriction details)	-
Borates, tetra, sodium salts, pentahydrate	-	Use restricted. See entry 30. (see link for restriction details) Use restricted. See entry 75. (see link for restriction details)	SVHC Candidate list - 601-808-1 - Toxic for reproduction, Article 57c

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

<https://echa.europa.eu/authorisation-list>

<https://echa.europa.eu/candidate-list-table>

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

Section 16 - Other Information

Legend

AICS - Australian Inventory of Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

IECSC - Chinese Inventory of Existing Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

NZS 5433:2020 - Transport of Dangerous Goods on Land

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

WEL - Workplace Exposure Limit

DNEL - Derived No Effect Level

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

VOC - (Volatile Organic Compound)

NZIoC - New Zealand Inventory of Chemicals

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS - Japanese Existing and New Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

CAS - Chemical Abstracts Service

ACGIH - American Conference of Governmental Industrial Hygienists Predicted No Effect Concentration (PNEC)

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

ADG - Australian Code for the Transport of Dangerous Goods by Road and Rail

OECD - Organisation for Economic Co-operation and Development

LC50 - Lethal Concentration 50%

ATE - Acute Toxicity Estimate

RPE - Respiratory Protective Equipment

NOEC - No Observed Effect Concentration

BCF - Bioconcentration factor

PBT - Persistent, Bioaccumulative, Toxic

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.

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