

Novachem Pty Ltd

Version No: 2.1

Chemwatch Hazard Alert Code: 2

Issue Date: 02/03/2025

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SECTION 1 Identification of the substance / mixture and of the company / undertaking

Safety Data Sheet according to Work Health and Safety Regulations (Hazardous Chemicals) 2023 and ADG requirements

Product Identifier		
Product name	N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICALPURITY 95%	
Synonyms	Not Available	
Other means of identification	DLM-9261	
CAS number	1173019-26-5	

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses For professional use only1.2.2. Uses

Details of the manufacturer or supplier of the safety data sheet

Registered company name	Novachem Pty Ltd	Novachem Pty Ltd	
Address	25 Crissane Road, Heidelberg West Victoria 3081 Australia	25 Crissane Road, Heidelberg West Victoria 3081 Australia	
Telephone	+61384151255	+61384151255	
Fax	+61386250088	+61386250088	
Website	www.novachem.com.au	www.novachem.com.au	
Email	novachem@novachem.com.au	novachem@novachem.com.au	

Emergency telephone number

Association / Organisation	Victorian Poisons Information Centre	Victorian Poisons Information Centre
Emergency telephone number(s)	13 11 26	13 11 26
Other emergency telephone number(s)	Not Available	Not Available

SECTION 2 Hazards identification

Classification of the substance or mixture

Poisons Schedule	Not Applicable
Classification ^[1]	Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2A
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

Label elements

Hazard pictogram(s)	
Signal word	Warning
Hazard statement(s)	

H315	Causes skin irritation.
H319	Causes serious eye irritation.

Precautionary statement(s) Prevention

P280	Wear protective gloves, protective clothing, eye protection and face protection.
P264	Wash all exposed external body areas thoroughly after handling.

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P302+P352	IF ON SKIN: Wash with plenty of water.
P332+P313	If skin irritation occurs: Get medical advice/attention.

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

SECTION 3 Composition / information on ingredients

Substances

CAS No		%[weight]	Name
1173019-20	6-5	100	N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICAL PURITY 95%
Legend: 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn fr C&L * EU IOELVs available			

Mixtures

See section above for composition of Substances

SECTION 4 First aid measures

Description of first aid measures

Eye Contact	 If this product comes in contact with the eyes: Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	 If skin contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.
Inhalation	 If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary.
Ingestion	 Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Firefighting measures

Extinguishing media

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

Special hazards arising from the substrate or mixture

Fire Incompatibility None known.		
Advice for firefighters		
Fire Fighting	 Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves in the event of a fire. Prevent, by any means available, spillage from entering drains or water courses. Use fire fighting procedures suitable for surrounding area. 	
Fire/Explosion Hazard	 Non combustible. Not considered a significant fire risk, however containers may burn. May emit corrosive fumes. 	
HAZCHEM	Not Applicable	

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	 Clean up all spills immediately. Avoid breathing dust and contact with skin and eyes. Wear protective clothing, gloves, safety glasses and dust respirator. Use dry clean up procedures and avoid generating dust.
Major Spills	Moderate hazard.

- CAUTION: Advise personnel in area.
 - Alert Emergency Services and tell them location and nature of hazard.
 - Control personal contact by wearing protective clothing.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling	
Safe handling	 Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps.
Other information	 Store in original containers. Keep containers securely sealed. Store in a cool, dry area protected from environmental extremes. Store away from incompatible materials and foodstuff containers.
Conditions for safe storage, in	cluding any incompatibilities
Suitable container	 Lined metal can, lined metal pail/ can. Plastic pail. Polyliner drum. Packing as recommended by manufacturer.
Storage incompatibility	None known

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Not Available

Ingredient	Original IDLH	Revised IDLH
N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICAL PURITY 95%	Not Available	Not Available

Exposure controls

Appropriate engineering controls			
Individual protection measures, such as personal protective equipment			
Eye and face protection	 Safety glasses with side shields. Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent] Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. 		
Skin protection	See Hand protection below		
Hands/feet protection	The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care. Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.		
Body protection	See Other protection below		
Other protection	 Overalls. P.V.C apron. Barrier cream. Skin cleansing cream. 		

Respiratory protection

Type -P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	P1	-	PAPR-P1
up to 10 x E3	Air-line*	-	-

up to 50 x ES	Air-line**	P2	PAPR-P2
up to 100 x ES	-	P3	-
		Air-line*	-
100+ x ES	-	Air-line**	PAPR-P3

* - Negative pressure demand ** - Continuous flow

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

· Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.

• The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure - ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).

Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may be government mandated or vendor recommended.

Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.

• Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)

· Use approved positive flow mask if significant quantities of dust becomes airborne.

Try to avoid creating dust conditions.

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	White Powder		
Physical state	Solid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	257-259	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	262.68
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Applicable
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Partly miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available
Heat of Combustion (kJ/g)	Not Available	Ignition Distance (cm)	Not Available
Flame Height (cm)	Not Available	Flame Duration (s)	Not Available
Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	Enclosed Space Ignition Deflagration Density (g/m3)	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7	
Chemical stability	Product is considered stable and hazardous polymerisation will not occur.	
Possibility of hazardous reactions	See section 7	
Conditions to avoid	See section 7	
Incompatible materials	See section 7	
Hazardous decomposition products	See section 5	

SECTION 11 Toxicological information

Information on toxicological effects		
a) Acute Toxicity	Based on available data, the classification criteria are not met.	
b) Skin Irritation/Corrosion	There is sufficient evidence to classify this material as skin corrosive or irritating.	
c) Serious Eye Damage/Irritation	There is sufficient evidence to classify this material as eye damaging or irritating	
d) Respiratory or Skin sensitisation	Based on available data, the classification criteria are not met.	
e) Mutagenicity	Based on available data, the classification criteria are not met.	
f) Carcinogenicity	Based on available data, the classification criteria are not met.	

g) Reproductivity	Based on available data, the classification criteria are not met.		
h) STOT - Single Exposure	Based on available data, the classification criteria are not met.		
i) STOT - Repeated Exposure	Based on available data, the classification criteria	a are not met.	
j) Aspiration Hazard	Based on available data, the classification criteria	a are not met.	
Inhaled	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in ar occupational setting.		
Ingestion	The material has NOT been classified by EC Directives or other classification systems as 'harmful by ingestion'. This is because of the lack of corroborating animal or human evidence.		
Skin Contact	This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.		
Eye	This material can cause eye irritation and damage in some persons.		
Chronic	Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.		
N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICALPURITY 95%	TOXICITY IRRITATION Not Available Not Available		
Legend:	1 Value obtained from Europe ECHA Degistered	l Substansas - Aquita ti	oxicity 2. Value obtained from manufacturer's SDS. Unless otherwi

: 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

Acute Toxicity	×	Carcinogenicity	×
Skin Irritation/Corrosion	×	Reproductivity	×
Serious Eye Damage/Irritation	*	STOT - Single Exposure	×
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	×
		Logond: Y - Data either not a	available or does not fill the criteria for classification

Legend:

Data either not available or does not fill the criteria for classification
 Data available to make classification

SECTION 12 Ecological information

Toxicity

N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL	Endpoint	Test Duration (hr)	Species	Value	Source
(1,1,2,2,3,3,4,4-D8, 98%) CHEMICALPURITY 95%	Not Available	Not Available	Not Available	Not Available	Not Available
Legend:	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data				

Persistence and degr	adability	
Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients
Bioaccumulative pote	ential	
Ingredient	Bioaccumulation	
	No Data available for all ingredients	
Mobility in soil		
Ingredient	Mobility	
	No Data available for all ingredients	

SECTION 13 Disposal considerations

Waste treatment methods		
Product / Packaging disposal	 Recycle wherever possible or consult manufacturer for recycling options. Consult State Land Waste Management Authority for disposal. Bury residue in an authorised landfill. Recycle containers if possible, or dispose of in an authorised landfill. 	

SECTION 14 Transport information

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.7. Maritime transport in bulk according to IMO instruments

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code Not Applicable

14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICAL PURITY 95%	Not Available

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICAL PURITY 95%	Not Available

SECTION 15 Regulatory information

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

N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICAL PURITY 95% is found on the following regulatory lists Not Applicable

Additional Regulatory Information

Not Applicable

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non- Industrial Use	No (N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICAL PURITY 95%)
Canada - DSL	No (N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICAL PURITY 95%)
Canada - NDSL	No (N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICAL PURITY 95%)
China - IECSC	No (N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICAL PURITY 95%)
Europe - EINEC / ELINCS / NLP	No (N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICAL PURITY 95%)
Japan - ENCS	No (N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICAL PURITY 95%)
Korea - KECI	No (N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICAL PURITY 95%)
New Zealand - NZIoC	No (N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICAL PURITY 95%)
Philippines - PICCS	No (N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICAL PURITY 95%)
USA - TSCA	No (N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICAL PURITY 95%)
Taiwan - TCSI	No (N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICAL PURITY 95%)
Mexico - INSQ	No (N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICAL PURITY 95%)
Vietnam - NCI	No (N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICAL PURITY 95%)
Russia - FBEPH	No (N-(3-AMINOPROPYL) BUTANE-1,4-DIAMINE:3HCL (1,1,2,2,3,3,4,4-D8, 98%) CHEMICAL PURITY 95%)
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

SECTION 16 Other information

Revision Date	02/03/2025
Initial Date	02/03/2025

Other information

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

- ▶ PC TWA: Permissible Concentration-Time Weighted Average
- PC STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit.

- IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index

- DNEL: Derived No-Effect Level
 PNEC: Predicted no-effect concentration
 MARPOL: International Convention for the Prevention of Pollution from Ships
- IMSBC: International Maritime Solid Bulk Cargoes Code
- IGC: International Gas Carrier Code
- IBC: International Bulk Chemical Code
- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- IECSC: Inventory of Existing Chemical Substance in China
- EINECS: European INventory of Existing Commercial chemical Substances
 ELINCS: European List of Notified Chemical Substances
 NLP: No-Longer Polymers

- ENCS: Existing and New Chemical Substances Inventory
- KECI: Korea Existing Chemicals Inventory
- NZIoC: New Zealand Inventory of Chemicals
- PICCS: Philippine Inventory of Chemicals and Chemical Substances
- TSCA: Toxic Substances Control Act TCSI: Taiwan Chemical Substance Inventory
- INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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