

ALKALI METALS LTD.,	Material Safety Data Sheet
Product	5-AMINO-1H-TETRAZOLE (MONOHYDRATE)

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: 5-Amino-1H-Tetrazole Monohydrate & 5-Amino-1H-Tetrazole

Company Identification:

Alkali Metals Ltd.,

Plot B-5, Block III, IDA Uppal, Hyderabad –500 039. INDIA

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SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS #	Chemical Name	%	EINECS#
[15454-54-3]	5-Aminotetrazole (Monohydrate)	99	224-581-7

Risk Phrases: 1

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance: white adhering crystals.

Target Organs: None.

Potential Health Effects

The toxicological properties of this material have not been investigated. Use appropriate procedures to prevent opportunities for direct contact with the skin or eyes and to prevent inhalation.

SECTION 4 - FIRST AID MEASURES

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids.

Skin: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Do NOT induce vomiting. Allow the victim to rinse his mouth and then to drink 2-4 cupfuls of water, and seek medical advice.

Inhalation: Remove from exposure to fresh air immediately.

Notes to Physician: Treat symptomatically and supportively.

SECTION 5 - FIRE FIGHTING MEASURES

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

Autoignition Temperature: Not available.

Flash Point: 200 deg C (392.00 deg F)

NFPA Rating: Not published.

Explosion Limits, Lower: Not available.

Upper: Not available.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal.

SECTION 7 - HANDLING and STORAGE

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

Storage: Store in a cool, dry place. Keep container closed when not in use.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA – Final PELs
5-Aminotetrazole Monohydrate 99%	None listed	None listed	None listed

OSHA Vacated PELs: 5-Aminotetrazole monohydrate, 99%: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear safety glasses and chemical goggles if splashing is possible.

Skin: Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

Respirators: Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State	:	Not available.
Appearance	:	Not available.
Odor	:	None reported.
PH	:	Not available.
Vapor Pressure	:	Not available.
Vapor Density	:	Not available.
Evaporation Rate	:	Not available.
Viscosity	:	Not available.
Boiling Point	:	@ 760.00mm Hg
Freezing/Melting Point	:	200.00 - 204.00 deg C
Decomposition Temperature	:	200 deg C
Solubility	:	1.36% in ethanol
Specific Gravity/Density	:	Not available.
Molecular Formula	:	CH ₃ N ₅ .H ₂ O
Molecular Weight	:	103.08

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, strong oxidants.

Incompatibilities with Other Materials: Strong oxidizing agents - strong acids - acid chlorides – acid anhydrides.

Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, nitrogen.

Hazardous Polymerization: Has not been reported.

SECTION 11 - TOXICOLOGICAL INFORMATION

RTECS#: CAS# 4418-61-5: XF7465000

LD50/LC50: Not available.

Carcinogenicity: 5-Aminotetrazole monohydrate, 99% - Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity : Not available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

RCRA D-Series Maximum Concentration of Contaminants: None listed.

RCRA D-Series Chronic Toxicity Reference Levels: None listed.

RCRA F-Series: None listed.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Not listed as a material banned from land disposal according to RCRA.

SECTION 14 - TRANSPORT INFORMATION

US DOT	
Shipping Name	FLAMMABLE SOLIDS, ORGANIC, N.OS.
Chemical name	5-AMINO-1H-TETRAZOLE (MONOHYDRATE)
UN No.	1325
Class	4.1
Packing gr.	II
Hazard	flammable solid
IMO	Information not known / available.
IATA	Not listed under the chemical name
RID/ADR	Information not known / available
Canadian TDG	Information not known / available

SECTION 15 - REGULATORY INFORMATION

US FEDERAL

TSCA : CAS# 4418-61-5 is listed on the TSCA inventory.

Health & Safety Reporting List : None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules : None of the chemicals in this product are under a Chemical Test Rule.

Section 12b : None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule : None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 302 (RQ) : None of the chemicals in this material have an RQ.

Section 302 (TPQ) : None of the chemicals in this product have a TPQ.

Section 313 : No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA: None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

5-Aminotetrazole monohydrate, 99% is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations : European Labeling in Accordance with EC Directives

Hazard Symbols: Not available.

Risk Phrases: R 1 Explosive when dry.

Safety Phrases: : S 16 Keep away from sources of ignition – No smoking.

WGK (Water Danger/Protection)

CAS# 4418-61-5: No information available.

Canada

None of the chemicals in this product are listed on the DSL/NDSL list.

WHMIS: Not available.

CAS# 4418-61-5 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

SECTION 16 - ADDITIONAL INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall Alkali Metals be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Alkali Metals has been advised of the possibility of such damages.