

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name **HEXAMINE TABLETS, COMPRESSED HEXAMINE**
Synonym(s) *NSN: 9110-66-123-2347 • PART NO: DEF(AUST)5595*
FUEL, COMPRESSED HEXAMINE (FORMERLY) • HEXAMETHYLENE TETRAMINE • HEXAMINE • HMTA
• METHENAMINE

1.2 Uses and uses advised against

Use(s) TABLETS USED AS A FUEL SOURCE FOR CAMPING

1.3 Details of the supplier of the safety data sheet

Supplier name **THALES AUSTRALIA LIMITED**
Address Bayly Street, Mulwala, NSW, Australia, 2647
Telephone +61 3 5742 2200
Fax +61 3 5744 1873
Email sales@thalesgroup.com.au
Website <http://www.thalesgroup.com/Countries/Australia/Home/>

1.4 Emergency telephone number(s)

Emergency +61 3 5742 2200

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

GHS Classification(s) Flammable Solids: Category 2
Skin Sensitisation: Category 1
Respiratory Sensitisation: Category 1

2.2 Label elements

Signal word **DANGER**

Pictograms



Hazard statement(s)

H228 Flammable solid.
H317 May cause an allergic skin reaction.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Prevention statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P285 In case of inadequate ventilation wear respiratory protection.

Response statement(s)

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P341 IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.
P321 Specific treatment is advised - see first aid instructions.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

Product name HEXAMINE TABLETS, COMPRESSED HEXAMINE

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
 P363 Wash contaminated clothing before reuse.
 P370 + P378 In case of fire: Use appropriate media for extinction.

Disposal statement(s)

P501 Dispose of contents/container in accordance with relevant regulations.

2.3 Other Hazards

No information provided.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS number	EC number	Content
METHENAMINE	100-97-0	202-905-8	>98%
WAX	Not Available	Not Available	<1%

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

Inhalation If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.

Skin If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.

Ingestion For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once).

First aid facilities Eye wash facilities should be available.

4.2 Most important symptoms and effects, both acute and delayed

No information provided.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Water jets. Prevent contamination of drains and waterways.

5.2 Special hazards arising from the substance or mixture

Flammable - potentially explosive dust. May evolve toxic gases (formaldehyde, amines and carbon/nitrogen oxides) when heated to decomposition.

5.3 Advice for firefighters

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

5.4 Hazchem code

1Z

1 Coarse Water Spray.

Z Wear full fire kit and breathing apparatus. Contain spill and run-off.

6. ACCIDENTAL RELEASE MEASURES

Product name **HEXAMINE TABLETS, COMPRESSED HEXAMINE**

6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Contact emergency services where appropriate.

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities

Store tightly sealed in a cool, dry, well ventilated area, removed from incompatible substances, direct sunlight, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills.

7.3 Specific end use(s)

No information provided.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

No exposure standards have been entered for this product.

Biological limits

No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering Controls Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical explosion proof extraction ventilation is recommended. Maintain dust levels below the recommended exposure standard.

PPE

- Eye/Face** Wear dust-proof goggles.
- Hand** Wear PVC or rubber gloves.
- Body** Wear coveralls.
- Respiratory** Where an inhalation risk exists, wear a Class P1 (Particulate) respirator.



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	WHITE TABLET
Odour	SLIGHT ODOUR
Odour Threshold	NOT AVAILABLE
Flammability	FLAMMABLE SOLID

Product name	HEXAMINE TABLETS, COMPRESSED HEXAMINE
Flash Point	250°C
Boiling Point	NOT AVAILABLE
Melting Point	285°C
Evaporation Rate	NOT AVAILABLE
pH	8.4 (0.2 M solution)
Specific Gravity	1.33
Solubility (water)	SOLUBLE
Vapour Density	4.9 (Air = 1)
Vapour Pressure	NOT AVAILABLE
Upper Explosion Limit	NOT AVAILABLE
Lower Explosion Limit	NOT AVAILABLE
Partition Coefficient	NOT AVAILABLE
Autoignition Temperature	NOT AVAILABLE
Decomposition Temperature	285°C to 295°C
Viscosity	NOT AVAILABLE
Explosive Properties	NOT AVAILABLE
Oxidising Properties	NOT AVAILABLE

9.2 Other information

No information provided.

10. STABILITY AND REACTIVITY

10.1 Reactivity

Carefully review all information in sections 10.2 to 10.6.

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

Hazardous polymerization is not expected to occur.

10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials

Incompatible (violently) with oxidising agents (e.g. hypochlorites), acids (e.g. nitric acid), anhydrides (e.g. acetic anhydride), iodoform (if heated), sodium oxide, heat and ignition sources. When in contact with water may evolve formaldehyde and ammonia.

10.6 Hazardous decomposition products

May evolve toxic gases (formaldehyde, amines and carbon/nitrogen oxides) when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Health hazard summary	May be harmful - irritant. This product has the potential to cause adverse health effects with over exposure. May evolve formaldehyde vapours, which is classified as a confirmed human carcinogen (IARC Group 1). Potential sensitising agent.
Eye	Irritant. Contact may result in irritation, lacrimation, pain, redness and blurring or dimness of vision.

Product name	HEXAMINE TABLETS, COMPRESSED HEXAMINE
Inhalation	Irritant. Over exposure to vapours may result in irritation of the nose and throat, with coughing. Over exposure to amines may cause sensitisation by inhalation. Maintain good personal hygiene standards.
Skin	Irritant. Contact may result in irritation, redness, rash and dermatitis. May cause sensitisation by skin contact.
Ingestion	May be harmful. Ingestion may result in gastrointestinal irritation, nausea, vomiting, abdominal pain and diarrhoea.
Toxicity data	METHENAMINE (100-97-0) LD50 (Ingestion): 569 mg/kg (mouse) LD50 (Intravenous): 9200 mg/kg (mouse) LD50 (Subcutaneous): 215 mg/kg (mouse) LDLo (Subcutaneous): 200 mg/kg (rat) TCLo (Inhalation): 350 mg/m ³ /2 hours/3 weeks (rat)

12. ECOLOGICAL INFORMATION

12.1 Toxicity

No information provided.

12.2 Persistence and degradability

No information provided.

12.3 Bioaccumulative potential

No information provided.

12.4 Mobility in soil

No information provided.

12.5 Results of PBT and vPvB assessment

No information provided.

12.6 Other adverse effects

If released to the atmosphere hexamine will exist solely as a vapour in the ambient atmosphere where it will be rapidly (< 1 day) degraded. Expected to have high mobility in soil. Hydrolysis may be important in some soils. Hydrolyses in water at pH 3 or 7 (with an estimated half-life of 1 day). Readily biodegradable. Potential for bioconcentration is low.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal	For small amounts, absorb with sand, vermiculite or similar and dispose of to an approved landfill site. Contact the manufacturer/supplier for additional information if disposing of large quantities (if required). Prevent contamination of drains and waterways as aquatic life may be threatened and environmental damage may result.
Legislation	Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE



	Land Transport (ADG)	Sea Transport (IMDG/IMO)	Air Transport (IATA/ICAO)
14.1 UN number	1328	1328	1328
14.2 UN proper shipping name	HEXAMETHYLENETETRAMINE		

Product name **HEXAMINE TABLETS, COMPRESSED HEXAMINE**

14.3 Transport hazard classes

DG division	4.1	4.1	4.1
Subsidiary risk(s)	None Allocated	-	-

14.4 Packing group

	III	III	III
--	-----	-----	-----

14.5 Environmental hazards

None Allocated

14.6 Special precautions for user

Hazchem Code	1Z		
EMS		F-A, S-G	

15. REGULATORY INFORMATION

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

Poison schedule A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Classifications F - Flammable
 Xi - Irritant

Risk phrases R11: Highly flammable.
 R42/43: May cause sensitisation by inhalation and skin contact.

Safety phrases S7: Keep container tightly closed.
 S13: Keep away from food, drink and animal feeding stuffs.
 S22: Do not breathe dust.
 S33: Take precautionary measures against static discharges.
 S36/37: Wear suitable protective clothing and gloves.
 S40: To clean the floor and all objects contaminated by this material use [appropriate material to be specified by the manufacturer].
 S41: In case of fire and/or explosion, do not breathe fumes.
 S43: In case of fire use only the recommended extinguishing agents.
 S45: In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).
 S46: If swallowed, contact a doctor or Poisons Information Centre immediately and show container or label.
 S51: Use only in well ventilated areas.
 S56: Dispose of this material and its container at hazardous or special waste collection point.
 S63: In case of accident by inhalation, remove casualty to fresh air and keep at rest.

Inventory listing(s) **AUSTRALIA: AICS (Australian Inventory of Chemical Substances)**
 All components are listed on AICS, or are exempt.

15.2 Chemical safety assessment

No information provided.

16. OTHER INFORMATION

Additional information AMINE: CAUTION: THIS PRODUCT CONTAINS AN AMINE. DO NOT ADD NITRITES or other NITROSATING AGENTS to this product due to the potential for NITROSAMINE formation. Nitrosamines are potent carcinogens and some have been shown to cause severe acute (heart, brain, blood, liver - kidney) damage as well as chronic effects (reproductive effects, liver - lung and kidney tumours).

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is

Product name **HEXAMINE TABLETS, COMPRESSED HEXAMINE**

necessary.

HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS	Central Nervous System
EC No.	EC No - European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonized System
GTEPG	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m ³	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TLV	Threshold Limit Value
TWA	Time Weighted Average

Report Status

This ChemAlert report has been independently compiled by RMT's scientific department utilising the original Safety Data Sheet ('SDS') for the product provided to RMT by the manufacturer. The information is based on the latest chemical and toxicological research and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. It is an independent collation by RMT of information obtained from the original SDS for this product. Its content has not been authorised or verified by the manufacturer / distributor of the chemical to which it relates.

This ChemAlert report does not constitute the manufacturer's original SDS and is not intended to be a replacement for same. It is provided to subscribers of ChemAlert as a reference tool only, is not all-inclusive and does not represent any guarantee as to the properties of the product. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer.

While RMT has taken all due care to include accurate and up-to-date information in this ChemAlert report, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this ChemAlert report.

Product name **HEXAMINE TABLETS, COMPRESSED HEXAMINE**

Prepared By Risk Management Technologies
5 Ventnor Ave, West Perth
Western Australia 6005
Phone: +61 8 9322 1711
Fax: +61 8 9322 1794
Email: info@rmt.com.au
Web: www.rmt.com.au

Last Reviewed: 16 Feb 2016

Date Printed: 11 Nov 2016

Based on SDS dated: 01 Jan 2013

End of Report