

**Material Safety Data Sheet**

acc. to OSHA and ANSI

Printing date 02/03/2006

Reviewed on 09/05/2003

**1 Identification of substance:****Product details:****Product name:** 1H-Tetrazole**Stock number:** 36656**Manufacturer/Supplier:**

Alfa Aesar, A Johnson Matthey Company  
 Johnson Matthey Catalog Company, Inc.  
 30 Bond Street  
 Ward Hill, MA 01835-8099  
 Emergency Phone: (978) 521-6300  
 CHEMTREC: (800) 424-9300  
 Web Site: www.alfa.com

**Information Department:** Health, Safety and Environmental Department**Emergency information:**

During normal hours the Health, Safety and Environmental Department.  
 After normal hours call Chemtrec at (800) 424-9300.

**2 Composition/Data on components:****Chemical characterization:****Description: (CAS#)**

1H-Tetrazole (CAS# 288-94-8), 100%

**Identification number(s):****EINECS Number:** 206-023-4**3 Hazards identification****Hazard description:**

E Explosive

**Information pertaining to particular dangers for man and environment**

R 2 Risk of explosion by shock, friction, fire or other sources  
 of ignition.

R 4 Forms very sensitive explosive metallic compounds.

**Classification system****HMIS ratings (scale 0-4)****(Hazardous Materials Identification System)**

HEALTH	2
FIRE	3
REACTIVITY	4

Health (acute effects) = 2

Flammability = 3

Reactivity = 4

**4 First aid measures****After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep  
 patient warm.

Seek immediate medical advice.

**After skin contact**

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

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**After eye contact**

Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing** Seek immediate medical advice.

**5 Fire fighting measures****Suitable extinguishing agents**

Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards caused by the material, its products of combustion or resulting gases:**

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

**Protective equipment:**

Wear self-contained respirator.

Wear fully protective impervious suit.

**Additional information** Cool endangered receptacles with water spray.

**6 Accidental release measures****Person-related safety precautions:**

Remove persons from danger area.

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

**Measures for environmental protection:**

Do not allow material to be released to the environment without proper governmental permits.

**Measures for cleaning/collecting:** Pick up mechanically.

**Additional information:**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

**7 Handling and storage****Handling****Information for safe handling:**

Keep away from heat and direct sunlight.

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

**Information about protection against explosions and fires:**

Protect from heat.

**Storage****Requirements to be met by storerooms and receptacles:**

Store in a cool location.

**Information about storage in one common storage facility:**

Keep away from heat and direct sunlight.

Do not store together with acids.

Store away from metals.

**Further information about storage conditions:**

Keep container tightly sealed.

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Store in cool, dry conditions in well sealed containers.

**8 Exposure controls and personal protection****Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

**Components with limit values that require monitoring at the workplace:**

Not required.

**Additional information:** No data

**Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

**Breathing equipment:**

Use suitable respirator when high concentrations are present.

**Protection of hands:** Impervious gloves

**Eye protection:** Safety glasses

**Body protection:** Protective work clothing.

**9 Physical and chemical properties:**

General Information	
<b>Form:</b>	Solid
<b>Color:</b>	Off-white
<b>Odor:</b>	Not determined
<b>Change in condition</b>	
<b>Melting point/Melting range:</b>	156°C (313°F) ((explodes))
<b>Boiling point/Boiling range:</b>	Not determined
<b>Sublimation temperature / start:</b>	Not determined
<b>Flash point:</b>	Not applicable
<b>Ignition temperature:</b>	Not determined
<b>Decomposition temperature:</b>	Not determined
<b>Danger of explosion:</b>	Risk of explosion by shock, friction, fire or other sources of ignition. Forms very sensitive explosive metallic compounds.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined
<b>Upper:</b>	Not determined
<b>Vapor pressure:</b>	Not determined
<b>Density:</b>	Not determined

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**Solubility in / Miscibility with  
Water:**

Not determined

**10 Stability and reactivity****Thermal decomposition / conditions to be avoided:**

Decomposition will not occur if used and stored according to specifications.

**Stable approx. until:** 155°C**Materials to be avoided:**

Acids

Oxidizing agents

Acid chlorides

Acid anhydrides

Metal powders

Heat

**Dangerous reactions**

Danger of explosion

May form shock sensitive compounds

**Dangerous products of decomposition:**

Carbon monoxide and carbon dioxide

Nitrogen oxides (NOx)

**11 Toxicological information****Acute toxicity:****Primary irritant effect:****on the skin:** Irritant to skin and mucous membranes.**on the eye:** Irritating effect.**Sensitization:** No sensitizing effects known.**Subacute to chronic toxicity:**

Other than potential irritation (see above), no information on illness or injury to humans from acute or chronic exposure to this product is available.

**Additional toxicological information:**

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

**12 Ecological information:****General notes:**

Do not allow material to be released to the environment without proper governmental permits.

**13 Disposal considerations****Product:****Recommendation**

Consult state, local or national regulations to ensure proper disposal.

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**Uncleaned packagings:****Recommendation:** Disposal must be made according to official regulations.**14 Transport information****DOT regulations:**

**Hazard class:** 1.1D  
**Identification number:** 0475  
**Packing group:** II  
**Proper shipping name (technical name):** Substances, explosive, n.o.s.

**Land transport ADR/RID (cross-border)**

**ADR/RID class:** 1.1D  
**Item:** 4  
**UN-Number:** 0475  
**Description of goods:** Substances, explosive, n.o.s.

**Maritime transport IMDG:**

**IMDG Class:** 1.1D  
**UN Number:** 0475  
**Packaging group:** II  
**Proper shipping name:** Substances, explosive, n.o.s.

**Air transport ICAO-TI and IATA-DGR:**

**ICAO/IATA Class:** 1.1D  
**UN/ID Number:** 0475  
**Packaging group:** II  
**Proper shipping name:** Substances, explosive, n.o.s.

**15 Regulations****Product related hazard informations:****Hazard symbols:**

E Explosive

**Risk phrases:**

- 2 Risk of explosion by shock, friction, fire or other sources of ignition.  
 4 Forms very sensitive explosive metallic compounds.

**Safety phrases:**

60 This material and its container must be disposed of as hazardous waste.

**National regulations**

This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only.

**Information about limitation of use:**

For use only by technically qualified individuals.

USA

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**16 Other information:**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing MSDS:** Health, Safety and Environmental Department.

**Contact:** Darrell R. Sanders

USA