

**** MATERIAL SAFETY DATA SHEET ****

1,5-Pentamethylenetetrazole, 98%
51964

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: 1,5-Pentamethylenetetrazole, 98%

Synonyms:

Pentylene-tetrazole, 6,7,8,9-Tetrahydro-5H-Tetrazoloazepine

Company Identification:

SHRENIK PHARMA LIMITED
5 Pankaj Mahal
Dinshaw Wachha Road
Near K. C. College
Churchgate
Mumbai - 400 020 (India)
Telephone : (91-22) 2831012, 2841579
2810347
Facsimile: (91-22) 2047834

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

CAS#	Chemical Name	!	%	!	EINECS#	!
54-95-5	1,5-Pentamethylenetetrazole	!	98	!	200-219-3	!

Hazard Symbols: T
Risk Phrases: 23/24/25

**** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW

Toxic by inhalation, in contact with skin and if swallowed. Moisture sensitive.

Potential Health Effects

Eye:

May cause eye irritation.

Skin:

May cause skin irritation. The toxicological properties of this material have not been fully investigated.

Ingestion:

Harmful if swallowed. May cause irritation of the digestive tract.

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Inhalation:

May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.

Chronic:

Repeated or prolonged exposure may cause CNS stimulation.

**** SECTION 4 - FIRST AID MEASURES ****

Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin:

Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion:

Never give anything by mouth to an unconscious person. Get Medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation:

Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

**** 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:

Use agent most appropriate to extinguish fire. Do NOT get water inside containers. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

**** 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. Avoid generating dusty conditions. Provide ventilation. Do not get water inside containers.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:

Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Do not allow contact with water. Keep from contact with moist air and steam.

Storage:

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:

Use adequate ventilation to keep airborne concentrations low.
Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or Chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent Skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State:	Crystals
Appearance:	white

Odor: None reported.
pH: Not available.
Vapor Pressure: Not available.
Viscosity: Not available.
Boiling Point: 194 deg C @ 12.00mmHg
Freezing/Melting Point: 59.00 - 61.00 deg C
Autoignition Temperature: Not available.
Flash Point: Not available.
Explosion Limits, lower: Not available.
Explosion Limits, upper: Not available.
Decomposition Temperature:
Solubility in water: freely soluble in most organic solvents
Specific Gravity/Density:
Molecular Formula: C6H10N4
Molecular Weight: 138.17

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability:
Stable under normal temperatures and pressures.
Conditions to Avoid:
Incompatible materials, dust generation, moisture, excess heat.
Incompatibilities with Other Materials:
Oxidizing agents.
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# 54-95-5: XF8225000
LD50/LC50:
CAS# 54-95-5: Oral, mouse: LD50 = 88 mg/kg; Oral, rat: LD50 = 140 mg/kg.
Carcinogenicity:
1,5-Pentamethylenetetrazole -
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
See actual entry in RTECS for complete information.

**** SECTION 12 - ECOLOGICAL INFORMATION ****

NOT AVAILABLE AT THIS MOMENT

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**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

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

**** SECTION 14 - TRANSPORT INFORMATION ****

IATA

Shipping Name: TOXIC SOLID, ORGANIC, N.O.S.*
Hazard Class: 6.1
UN Number: 2811
Packing Group: III

IMO

Shipping Name: TOXIC SOLID, ORGANIC, N.O.S.
Hazard Class: 6.1
UN Number: 2811
Packing Group: III

RID/ADR

Shipping Name: TOXIC SOLID, ORGANIC, N.O.S.
Dangerous Goods Code: 6.1(25C)
UN Number: 2811

**** SECTION 15 - REGULATORY INFORMATION ****

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T

Risk Phrases:

R 23/24/25 Toxic by inhalation, in contact with
Skin and if swallowed.

Safety Phrases:

S 22 Do not breathe dust.
S 24/25 Avoid contact with skin and eyes.
S 28A After contact with skin, wash immediately
With plenty of water.
S 37 Wear suitable gloves.
S 45 In case of accident or if you feel unwell,
Seek medical advice immediately (show the label
Where possible).

WGK (Water Danger/Protection)

CAS# 54-95-5: No information available.

Canada

CAS# 54-95-5 is listed on Canada's NDSL List.
CAS# 54-95-5 is not listed on Canada's Ingredient Disclosure
List.

Exposure Limits

US FEDERAL

TSCA

CAS# 54-95-5 is listed on the TSCA inventory.

**** SECTION 16 - ADDITIONAL INFORMATION ****

MSDS Creation Date: 13/03/2002

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 the company 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 the company has been advised of the possibility of such damages.

