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

Catalogue Number	CS-ER-02822
Product Name	Hydrochlorothiazide(Secondary Standards traceble to USP)
CAS No.	58-93-5
Category	USP Standards
Synonyms	3,4-Dihydrochlorothiazide; 6-Chloro-3,4-dihydro-2H-1,2,4-benzothiadiazine-7-sulfonamide 1,1-dioxide; Apo-Hydro; Dihydrochlorothiazide; 7-(Aminosulfonyl)-6-chloro-3,4-dihydro-(2H)-1,2,4-benzothiadiazine 1,1-Dioxide
Brand	Clearsynth Labs Ltd.
Identified uses	Laboratory Chemicals
Uses advised against	Not available
Company	Clearsynth Labs Ltd. Mumbai, India
Emergency Phone #	+91-22-245045900
REACH No.	Not available

SECTION 2: Hazards identification

Disclaimer: This is sample MSDS. Please email **sales@clearsynth.com** for more details.

2.1 Classification of the substance or mixture-Regulation (EC) No 1272/2008:

Acute toxicity (Category 4)

2.2 Label Elements

Signal Word: Warning

Hazard Statement(s)

Code	Statement
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.

H334	Not available
H372	Not available

Precautionary Statement(s)

Code	Statement
P233	Not available
P260	Not available
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P270	Not available
P271	Use only outdoors or in a well-ventilated area.
P272	Not available
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Not available
P301+P317	Not available
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P319	Get medical help if you feel unwell.
P321	Specific treatment (see … on this label).
P330	Not available
P333+P317	Not available
P342+P316	Not available
P362+P364	Take off contaminated clothing and wash it before reuse.
P403	Not available
P501	Dispose of contents/container in accordance with local/regional/national/international regulatio

SECTION 3: Composition / information on ingredients

3.1 Substance

Component : Hydrochlorothiazide(Secondary Standards traceble to USP)
CAS Number : 58-93-5
Molecular Formula : C7H8ClN3O4S2
Molecular Weight : 297.74

Parent Chemical : Hydrochlorothiazide
Synonyms : 3,4-Dihydrochlorothiazide; 6-Chloro-3,4-dihydro-2H-1,2,4-benzothiadiazine-7-sulfonamide 1,1-dioxide; Apo-Hydro; Dihydrochlorothiazide; 7-(Aminosulfonyl)-6-chloro-3,4-dihydro-(2H)-1,2,4-benzothiadiazine 1,1-Dioxide
Concentration : Not available

SECTION 4: First aid measures

SECTION 4: First-aid measures

4.1 Description of first aid measures
- General advice: Remove from exposure. Show this SDS to medical personnel. Seek medical attention if symptoms persist.
- Inhalation: Move person to fresh air. If breathing is difficult, seek medical attention.
- Skin contact: Wash with soap and plenty of water. Remove contaminated clothing and wash before reuse.
- Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get medical attention if irritation persists.
- Ingestion: Rinse mouth. Do not induce vomiting unless directed by medical personnel. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed
- Not available.

4.3 Indication of any immediate medical attention and special treatment needed
- Treat symptomatically. No data available.

SECTION 5: Firefighting measures

SECTION 5: Fire-fighting measures

5.1 Extinguishing media
- Suitable extinguishing media: Use extinguishing measures appropriate to surrounding fire (e.g., water spray, alcohol-resistant foam, dry chemical, carbon dioxide).
- Unsuitable extinguishing media: Not available.

5.2 Special hazards arising from the substance or mixture
- Thermal decomposition may produce irritating and/or toxic fumes.
- Hazardous combustion products: Not available.

5.3 Advice for firefighters
- Wear self-contained breathing apparatus (SCBA) and full protective gear.
- Cool containers with water spray if exposed to fire.
- Prevent fire-fighting water from entering drains or waterways.

SECTION 6: Accidental release measures

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
- Avoid breathing dust. Avoid contact with skin and eyes.
- Use appropriate personal protective equipment (see Section 8).
- Ensure adequate ventilation.

6.2 Environmental precautions
- Avoid release to the environment. Prevent entry into drains, surface water, or soil.

6.3 Methods and material for containment and cleaning up
- Avoid generating dust.
- Collect spilled material using methods that minimize dust generation (e.g., damp wipe, HEPA-filtered vacuum).
- Place in a suitable, closed container for disposal.

6.4 Reference to other sections
- See Section 8 for exposure controls/personal protection and Section 13 for disposal considerations.

SECTION-7: Handling and storage

SECTION 7: Handling and storage

7.1 Precautions for safe handling
- Handle in accordance with good industrial hygiene and safety practice.
- Avoid formation of dust and aerosols.
- Avoid contact with skin, eyes, and clothing.
- Do not eat, drink, or smoke when using this product.
- Wash hands thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities
- Store in a tightly closed container.
- Store in a cool, dry, well-ventilated place.
- Protect from moisture.
- Incompatible materials: Not available.

7.3 Specific end use(s)
- Laboratory/research standard. Specific uses: Not available.

SECTION 8: Exposure controls / personal protection

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
- Occupational exposure limits: Not available.
- Biological limit values: Not available.

8.2 Exposure controls
- Engineering controls: Provide adequate ventilation. Use local exhaust where dust may be generated.
- Personal protective equipment (PPE):
- Eye/face protection: Safety glasses with side shields or chemical goggles.
- Skin protection: Protective gloves. Protective clothing as appropriate.
- Respiratory protection: If ventilation is inadequate or dust is generated, use a suitable particulate respirator in accordance with applicable regulations.
- Hygiene measures: Wash hands after handling. Remove contaminated clothing and wash before reuse.
- Environmental exposure controls: Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Test	Result
Appearance	No data available
IR spectrum	No data available
pH	No data available
Solubility	No data available

Property	Value
a) Physical State	No data available
b) Color	No data available
c) Odor	No data available
d) pH	No data available
e) Vapour Pressure	No data available
f) Viscosity	No data available
g) Initial Boiling Point and boiling range	No data available
h) Melting Point / Freezing Point	No data available
i) Auto Ignition Temperature	No data available
j) Flash Point	No data available
k) Explosion Limit, Lower	No data available
l) Explosion Limit, Upper	No data available
m) Decomposition Temperature	No data available
n) Loss on Drying	No data available
o) Relative Density	No data available
p) Solubility (in DMSO)	No data available
q) Oxidizing Properties	No data available

SECTION 10: Stability and reactivity

SECTION 10: Stability and reactivity

10.1 Reactivity
- No data available.

10.2 Chemical stability
- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
- No data available.

10.4 Conditions to avoid
- Avoid excessive heat. Avoid dust generation.

10.5 Incompatible materials
- Not available.

10.6 Hazardous decomposition products
- Not available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
- Acute toxicity: Clinical toxicity is relatively infrequent and may result from overdosage, adverse reactions or unexpected hypersensitivity. It may cause electrolytes imbalances that may lead to cardiac arrhythmias and orthostatic hypotension, and metabolic disturbances, such as hyperglycemia and hyperuricemia. In addition it may cause aggravation of hepatic and/or renal insufficiency, hypersensitivity reactions, blood dyscrasias, acute noncardiogenic pulmonary edema, as well as gastrointestinal irritability and CNS manifestations. In general the exposure to diuretics was not associated with teratogenicity. A slight association with respiratory malformation was suggested. Other risks include fetal or neonatal jaundice, and thrombocytopenia. After two weeks of abrupt suspension of hydrochlorothiazide, 8 patients developed an intense edema. In patients, positive associations were observed for squamous cell carcinoma of the skin and lip. In rats, no teratogenic, embryotoxic or fetotoxic effect was observed. Toxicology and carcinogenesis studies were conducted by feeding diets containing hydrochlorothiazide to rats and mice of each sex. The incidence of hepatocellular neoplasms was increased in high dose male mice. Changes associated with or secondary to renal injury were increased in dosed rats. These lesions included parathyroid hyperplasia, fibrous osteodystrophy of bone, and mineralization of multiple organs. Hydrochlorothiazide diuretics may increase photosensitivity and lower the threshold for UV-associated phototoxicity.
- Skin corrosion/irritation: No data available.
- Serious eye damage/eye irritation: No data available.
- Respiratory or skin sensitization: No data available.
- Germ cell mutagenicity: Hydrochlorothiazide induced gene mutations in mouse lymphoma cells and sister chromatid exchange in Chinese hamster cells. It did not induce chromosomal aberrations in Chinese hamster cells in vitro or sex-linked recessive lethal mutations in Drosophila. Hydrochlorothiazide induced mitotic recombination and non-disjunction in Aspergillus. It was not mutagenic to Salmonella typhimurium or Escherichia coli.
- Carcinogenicity: There is limited evidence in humans for the carcinogenicity of hydrochlorothiazide. Positive associations were observed for squamous cell carcinoma of the skin and lip. There is limited evidence in experimental animals for the carcinogenicity of hydrochlorothiazide. Overall evaluation: Hydrochlorothiazide is possibly carcinogenic to humans (Group 2B).
- Reproductive toxicity: In general the exposure to diuretics was not associated with teratogenicity. A slight association with respiratory malformation was suggested. Other risks include fetal or neonatal jaundice, and thrombocytopenia. In rats, no teratogenic, embryotoxic or fetotoxic effect was observed.
- STOT-single exposure: No data available.

- STOT-repeated exposure: Changes associated with or secondary to renal injury were increased in dosed rats. These lesions included parathyroid hyperplasia, fibrous osteodystrophy of bone, and mineralization of multiple organs.
- Aspiration hazard: No data available.

Likely routes of exposure
- No data available.

Symptoms related to the physical, chemical and toxicological characteristics
- The most common signs and symptoms observed are those caused by electrolyte depletion (hypokalemia, hypochloremia, hyponatremia) and dehydration resulting from excessive diuresis. If digitalis has also been administered, hypokalemia may accentuate cardiac arrhythmias.

SECTION 12: Ecological information

SECTION 12: Ecological information

12.1 Toxicity
- No data available.

12.2 Persistence and degradability
- No data available.

12.3 Bioaccumulative potential
- No data available.

12.4 Mobility in soil
- No data available.

12.5 Results of PBT and vPvB assessment
- Not available.

12.6 Endocrine disrupting properties
- Not available.

12.7 Other adverse effects
- No data available.

SECTION 13: Disposal considerations

SECTION 13: Disposal considerations

13.1 Waste treatment methods
- Dispose of contents/container in accordance with local/regional/national/international regulations.
- Do not discharge to drains.
- Recommended disposal method: Not available.
- Contaminated packaging: Dispose of as unused product unless cleaned and permitted by regulations.

SECTION 14: Transport information

SECTION 14: Transport information

- UN number: Not available.
- UN proper shipping name: Not available.
- Transport hazard class(es): Not available.
- Packing group: Not available.
- Environmental hazards: Not available.
- Special precautions for user: Not available.
- Transport in bulk according to IMO instruments: Not available.

Note: Transport classification may vary by mode and jurisdiction; consult carrier and applicable regulations.

SECTION 15: Regulatory information

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Regulatory listings (e.g., TSCA/REACH/DSL/ENCS/IECSC): Not available.
- GHS classification: Not available.
- Label elements: Not available.

15.2 Chemical safety assessment
- Not available.

SECTION 16: Other information

SECTION 16: Other information

- Product name: Hydrochlorothiazide (Secondary Standards traceble to USP)
- Catalog No.: CS-ER-02822
- CAS No.: 58-93-5
- Molecular weight: 297.74
- Synonyms: 3,4-Dihydrochlorothiazide; 6-Chloro-3,4-dihydro-2H-1,2,4-benzothiadiazine-7-sulfonamide 1,1-dioxide; Apo-Hydro; Dihydrochlorothiazide; 7-(Aminosulfonyl)-6-chloro-3,4-dihydro-(2H)-1,2,4-benzothiadiazine 1,1-Dioxide
- Supplier: Clearsynth Labs Ltd., Mumbai, India
- Emergency phone: +91-22-245045900

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