

SPECIFICATION

Product Name: Vitamin B1 (Thiamine Hydrochloride) BP Grade
Chemical Formula: $C_{12}H_{17}ClN_4OS \cdot HCl$
CAS Number: 67-03-8
Molecular Weight: 337.27 g/mol
Appearance: White Crystalline Powder
Odor: Odorless

Chemical Composition

Parameter	Unit	Typical Value	Specification (Min./Max.)
Identification	-	Passes Tests A,B & C	A) IR B) Gives blue fluorescence. C) Gives reactions of chlorides
Appearance of solution	-	Passes	The solution is clear and not more intensely coloured than reference solution Y7 to GY7.
pH	-	2.98	2.7 to 3.3
Related Substances			
Impurity A	%	Nil	NMT 0.15%
Impurity B	%	Nil	NMT 0.30%
Impurity C	%	Nil	NMT 0.15%
Unspecified Impurities	%	Nil	NMT 0.10% (for each)
Total Impurities	%	Nil	NMT 0.50%
Sulfates	PPM	Passes	NMT 300 PPM
Sulfated Ash	%	0.03%	NMT 0.1%
Water	%	2.52%	NMT 5.0%
Assay (Anhydrous substances)	%	99.32%	NLT 98.5% & NMT 101.0%

Physical Properties

- Solubility: Soluble in water. Soluble in glycerol. Soluble in ethanol. Insoluble in acetone. Insoluble in chloroform. Insoluble in ether.

Shelf Life & Storage

- Shelf Life: 3 years from date of manufacture under recommended storage.
- Storage Conditions: Store in a cool, dry place at 15–25°C. Protect from light, heat, moisture, and air, as thiamine hydrochloride is sensitive to these conditions. Keep the container tightly closed in the original, properly labeled container and store in a well-ventilated area to maintain product potency and stability.

Applications

- Use: Widely used as a source of vitamin B1 (thiamine) in pharmaceutical, nutraceutical, and food fortification formulations. It supports normal energy metabolism, carbohydrate metabolism, nervous system function, heart function, and psychological function.
- Dosage: Depends on the intended formulation, patient age, nutritional status, and therapeutic indication. It should be used according to product specifications or as directed by a qualified healthcare professional.

Packaging

- Standard Packing: 25 Kgs Fiber Drum or as per customer requirement.
- Labeling: Product name, batch number, net weight, manufacture date, expiry date, and manufacturer details.
* Specifications are based on the manufacturer's provided specifications.