

SPECIFICATION

Product Name: Vitamin B1 (Thiamine Hydrochloride) IP Grade
Chemical Formula: C ₁₂ H ₁₇ ClN ₄ OS·HCl
CAS Number: 67-03-8
Molecular Weight: 337.27 g/mol
Appearance: A white or almost white Crystalline powder.
Odor: Odorless.

Chemical Composition

Parameter	Unit	Typical Value	Specification (Min/Max)
Identification: (A) By IR	-	Complies	The infrared absorption spectrum of the sample should be concordant with the spectrum of Thiamine Hcl W.std. It gives reaction (a) of chlorides.
(C) Reaction (a) of chloride	-	Complies	
Appearance of solution	-	Complies	Clear, not more intense than reference solution YS7 or GYS6.
PH	-	2.95	2.7 to 3.3
Sulphates	PPM	Complies	NMT 300 PPM
Limit of nitrate	-	Complies	No brown ring is produced at the junction of the two layers.
Heavy metals	PPM	Complies	NMT 20 PPM
Loss on drying	%	1.02%	NMT 5.0%
Sulphated Ash	%	0.06%	NMT 0.1%

Related substances by HPLC			
A) Thiamine impurity A	%	0.06%	NMT 0.15%
B) Thiamine impurity B	%	0.10%	NMT 0.30%
C) Thiamine impurity C	%	0.07%	NMT 0.15%
D) Any other secondary peak	%	0.05%	NMT 0.10%
E) Sum of all secondary peak	%	0.29%	NMT 0.50%
Assay (On dried basis)	%	100.05%	98.50% to 101.5%

Physical Properties

- Solubility: Freely soluble in water. Slightly soluble in glycerin. Slightly soluble in ethanol. Practically insoluble in chloroform. Practically insoluble in ether.

Shelf Life & Storage

- Shelf Life: 3 years from date of manufacture under recommended storage.
- Storage Conditions: Store in a tightly closed, light-resistant container in a cool, dry, and well-ventilated place, protected from moisture, heat, and direct sunlight. Keep the container tightly sealed when not in use to prevent degradation and moisture absorption.

Applications

- Use: Widely used as a nutritional supplement and vitamin fortification ingredient in pharmaceutical, nutraceutical, food, and beverage products. It is essential for carbohydrate metabolism, energy production, and normal nervous system function.
- Dosage: Depends on the intended application, age group, and nutritional requirements.

Packaging

- Standard Packing: 25 kgs Fiber Drum and 5 Kgs, 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.