

Technical Data Sheet (TDS)

Issue Date: 20 FEB 2026

1. Product Identification

- Product Name: Melatonin Hydrochloride
- CAS: 86347-14-0
- Molecular Formula: $C_{13}H_{16}N_2O_2 \cdot HCl$
- Molecular Weight: 268.74
- Appearance: White to off-white crystalline powder
- Grade: Pharmaceutical / Food grade

2. Specifications

Item	Standard
Assay (dry basis)	98.0–102.0%
Appearance	White to off-white powder
Identification	Conforms
pH (1% solution)	3.0–5.0
Loss on Drying	≤0.5%
Residue on Ignition	≤0.1%
Heavy Metals	≤10 ppm
Arsenic	≤2 ppm
Related Substances	≤1.0%
Microbial Limits	Complies

3. Characteristics & Applications

- Water-soluble form of melatonin; better absorption and stability.
- Used for:
 - Sleep-support dietary supplements
 - Pharmaceutical oral formulations
 - Cosmetic raw materials (anti-oxidation, anti-aging)
 - Laboratory research

4. Solubility

- Freely soluble in water
- Soluble in methanol, ethanol
- Slightly soluble in chloroform

5. Handling & Formulation Guide

- Processing temperature: ≤60°C
- Stable in acidic conditions; avoid strong alkali.
- Suitable for tablets, capsules, oral liquids, drinks, powders.



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6. Packaging & Storage

- Packaging: 1kg, 5kg, 10kg, 25kg sealed drums/bags
- Storage: Cool, dry, dark, $\leq 25^{\circ}\text{C}$
- Shelf Life: 24 months (unopened)

7. Safety & Quality

- Manufactured under GMP environment.
- Full COA provided per batch.
- Low irritation; safe for intended uses.



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