



Technical Data Sheet (TDS) – Hexamine

Brand / Commercial Supplier: ATDM Brand Industrial Chemicals

Product Description

Hexamine (Hexamethylenetetramine) is a highly refined, white crystalline chemical powder. It functions efficiently as a curing agent in plastics, as a stabilizer in rubber vulcanization, and as a raw material for clean solid fuel manufacturing. It is available in both pure unstabilized powder form and anti-caking stabilized varieties depending on international logistical needs.

Applications and Uses

- **Phenolic Resins:** Primary cross-linking agent for novolac phenolic resins used in brake pads, abrasives, and foundry casting molds.
- **Solid Fuels:** Formulated into clean-burning, high-energy fuel tablets for outdoor recreation and military cooking stoves.
- **Rubber Industry:** Acts as a secondary accelerator to prevent premature scorching during compounding phases.
- **Chemical Synthesis:** Serving as a formaldehyde precursor in medical urology and chemical intermediate processing.

Physical and Chemical Properties

- **Appearance:** White crystalline powder or granules
- **Chemical Formula:** C₆H₁₂N₄
- **Molecular Weight:** 140.19 g/mol
- **CAS Number:** 100-97-0
- **Purity (Assay):** greater than or equal to 99.0%
- **Moisture Content:** less than or equal to 0.3% maximum
- **Ash Content:** less than or equal to 0.05% maximum
- **Bulk Density:** 700 to 800 kg/m³
- **Melting / Sublimation Point:** Sublimes at approximately 280°C without melting
- **Solubility in Water (at 20°C):** 867 g/L

Packaging and Logistics

- **Standard Bag Packaging:** Packed in 25-kg net woven polypropylene bags lined with internal polyethylene moisture barriers.
- **Bulk Options:** Available in 500-kg and 1,000-kg flexible intermediate bulk containers (jumbo bags).
- **Shipping Conditions:** Shipments travel inside standard dry ocean containers. Cargo must stay dry and clear of direct high-temperature exposure throughout transit.