

ZOTRONE CHEMICALS

Powering Chemistry. Delivering Trust.

DIBOC (Di-tert-butyl dicarbonate), also commonly known as **Boc anhydride**, is a critical chemical reagent used primarily in organic synthesis and pharmaceutical manufacturing. It is most famous for its role as a "protecting group" for amines.

Key Product Specifications

Feature	Details
Chemical Name	Di-tert-butyl dicarbonate
CAS Number	24424-99-5
Molecular Formula	C₁₀H₁₈O₅
Molecular Weight	218.25 g/mol
Physical Appearance	Colourless liquid or white crystalline solid (Melting point is approx. 23°C)
Purity	Typically, 98% to 99%+ (Reagent or Industrial Grade)
Boiling Point	56–57°C at 0.5 mmHg
Flash Point	~37°C (98.6°F)

Common Applications

- **Peptide Synthesis:** Used to protect amino acid groups, ensuring that chemical reactions occur only at the intended sites.
- **Pharmaceutical Manufacturing:** Essential for creating complex drug intermediates and Active Pharmaceutical Ingredients (APIs).
- **Organic Chemistry:** Acts as a reagent for the introduction of the "Boc" group to prevent unwanted reactions of primary and secondary amines.
- **Polymer Chemistry:** Occasionally used as a blowing agent because it decomposes into gaseous products (CO₂ and isobutylene) when heated.

Storage & Handling

Warning: DIBOC is highly toxic if inhaled (LC₅₀ of 100mg/m³).⁸ It is also flammable and can cause skin/eye irritation.

- **Temperature:** Best stored under refrigeration (typically **2°C to 8°C**) to prevent slow decomposition.
- **Pressure:** Sealed containers can build up internal pressure over time due to the release of carbon dioxide; it is often stored in plastic bottles rather than glass for this reason.
- **Environment:** Must be kept in a dry, well-ventilated area away from moisture and oxidizing agents.

CONTACT US

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