

## Miconazole nitrate PRODUCT DATA SHEET

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Product Name: Miconazole nitrate

Product Number: M005

**CAS Number:** 22832-87-7

Molecular Formula:  $C_{18}H_{14}CI_4N_2O$ 

Form: Powder

**Appearance:** White or off-white powder

Melting Point: 178 - 183°C

Storage Conditions: 2-8 °C

**Description:** Miconazole nitrate is an imidazole antimycotic compound. Miconazole nitrate

targets fungi that cause tinea (ringworm) and athleete's foot.

Mechanism of Action: Miconazole nitrate increases cell permeability by inhibiting enzymes involved

in ergosterol synthesis. The increase of permeability has a toxic effect on the

fungi and leads to cell death.

**Spectrum:** Miconazole targets fungi that cause tinea (ringworm) especially *Trichophyton* 

species.

**References:** Rice L.B. and Ghannoum M.A.. "Antifungal Agents: Mode of Action,

Mechanisms of Resistance, and Correlation of These Mechanisms with Bacterial Resistance. Clinical Microbiology Reviews (1999): 501-17.

Sreedhara, K. H. "Studies on the Mechanism of Action of Miconazole: Effect of

Miconazole on Respiration and Cell Permeability of Candida Albicans." Antimicrobial Agents and Chemotherapy 5.4 (1974): 420-25. www.ncbi.gov.

American Society for Microbiology. Web. 22 Aug. 2012.

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