

## Summary of IS 1827:1989 - Dimethyl Amine SL Salts of 2,4-D Specification (Second Revision)



This Indian Standard (IS 1827:1989) specifies the requirements for **Dimethyl Amine SL (Soluble Liquid) salts of 2,4-D**, a widely used herbicide in agriculture and horticulture for controlling weeds. It applies to formulations containing **22.5% and 58% of 2,4-D**, manufactured for effective weed management. The primary chemical component of this product is **2,4-D (2,4-dichlorophenoxyacetic acid)** in the form of **dimethyl amine salts**. The standard provides empirical and structural formulas, with a **molecular mass of 265.9**. The product should meet **specific criteria for purity, acid content, and the melting point range** of the product i.e. **136-140°C** suggests that the product remains **in a stable, solid or liquid state** in a typical **different temperature conditions**.

The product is expected to have a **high purity** and **consistent chemical composition** to ensure **effective weed control**. It should be **free from extraneous impurities** and meet the **declared 2,4-D acid content** within **specified tolerance limits (up to 9% ±1%, above 9% and below 50% ±5%, and above 50% ±3%)**. Additionally, the product should exhibit **minimal alkalinity (max 0.03%)** to guarantee product **effectiveness** and **integrity**.

This standard ensures that the product delivers consistent performance by defining strict **testing methods for identity, extractable acid content, and melting point**. Methods like **sodium nitroprusside reaction** and **diethyl ether extraction** are outlined to **confirm the identity and acid content**, ensuring reliability and effectiveness in use.

**Packaging and Labeling** : Each container should include information such as the **name of the material, manufacturer details, date of manufacture, and nominal acid content**. Proper sampling and testing procedures are detailed to maintain quality throughout production. The standard also mandates appropriate **packaging, labelling, and safety warnings in compliance with the Insecticides Act, 1968**.

In conclusion, IS 1827:1989 addresses customer expectations for quality control, product safety, and consistent performance in the use of Dimethyl Amine SL salts of 2,4-D for effective weed management in agricultural and horticultural applications.