

## **IS 11010:2024 – Ziram Suspensible Concentrate**

Ziram is the accepted common name approved by the International Organization for Standardization (ISO) for the pesticide chemical zinc dimethyldithiocarbamate. Ziram, is used in the preparation of formulations which are used as protective sprays on agricultural crops, especially in the control of blast of paddy, tikka disease of groundnut and also to cure zinc deficiency in citrus crops.

Ziram suspension concentrate (SC) is used as a fungicide for the control of many diseases of agricultural crops. In a suspension concentrate a solid active ingredient is dispersed in the water which remains insoluble and suspended under all temperature conditions. Ziram SC is generally formulated to contain 27 percent (m/m) of ziram. Ziram, technical, employed in the manufacture of this material shall conform to IS 3900.

IS 11010:2024 prescribes the requirements and the methods of sampling and test for ziram suspension concentrate (SC). Following parameters have been incorporated in the standard which covers major quality related aspects of the product.

- 1. Description:** The material shall be in the form of off-white to creamish colour viscous liquid.
- 2. Ziram content:** The observed ziram content, percent by mass of any of the samples shall not differ from the declared nominal value by more than the percent tolerance limits specified in the standard. The content is important so that correct dose is applied and overuse of pesticide is not done.
- 3. Suspensibility:** Since the product is used as a suspension concentrate (SC) it is important to measure and specify the suspensibility for the product. The standard specifies a minimum 85% of suspensibility percent by mass. Test for suspensibility measures the percentage of particles that remain suspended in a suspension.
- 4. Colloidal content:** For effective transport of the pesticide a minimum colloidal content of 12 percent by mass is specified in the standard.
- 5. pH at 27°C:** The ph of the suspension should be between 7.5 to 9.5.

### **Packing and Marking requirements**

Apart from abovementioned quality parameters the standard also specifies the suitable packing material for different quantities. The pesticide should be stored in HDPE containers which shall be heat sealed with HDPE plugs and finally stoppered with HDPE screw caps.

All relevant marking requirements such as Name of material, manufacturer, Batch, Date of manufacturing, Expiry date, Net quantity, declared nominal content, cautionary notice

as per insecticides act 1968 and other relevant information as per Legal Metrology (Packaged Commodities) Rules, 2011 is to be mentioned on the container.

In conclusion, compliance to this standard will ensure a safe and efficient use of the product for its intended applications. The standard comprehensively covers all the relevant information w.r.t quality parameters, sampling guidelines and all relevant packing and marking requirements.