



IS 14186 : 2024 Diflubenzuron Wettable powder WP - Specification

Diflubenzuron acts by interfering with the deposition of chitin, one of the main components of the insect cuticle. **Diflubenzuron Wettable powder (WP)** is used in the control of **insect pests** of agriculture and public health importance, and is generally manufactured to contain 25 percent (m/m) of the **active ingredient** diflubenzuron. Diflubenzuron is the accepted common name by the ISO for *N*-[(4-chlorophenyl) carbamoyl]-2,6-difluorobenzamide having empirical formula $C_{14}H_9ClF_2N_2O_2$.

IS 14186 was first published in the year 1994 and was later revised in 2024 to incorporate the amendments in the previous version along with updated references to Indian Standards. This standard prescribes the requirements and the methods of sampling and test for diflubenzuron (WP).

Diflubenzuron (WP) shall be in the form of a homogeneous white to yellowish brown powder, which shall wet readily on mixing with water, providing a suspension suitable for use as a spray. In addition, the standard also prescribes other requirements for ascertaining the quality of the **insecticide** such as **sieving characteristic** (material passing through 44 micron IS sieve), **Suspensibility**, **acidity** (as H_2SO_4) and **wettability in seconds**, along with their test methods.

For determining the active ingredient i.e., Diflubenzuron, the standard refers to the test method involving **high performance liquid chromatography (HPLC)**, wherein Diflubenzuron is detected by measuring the absorption at 254 nm and quantitatively estimated by using dibutyl phthalate as the internal standard. The observed Diflubenzuron content, percent (m/m), of the sample shall not differ from the declared nominal value by more than the percent tolerance limits given in the standard, wherein for the most commonly manufactured concentration of 25%, a tolerance of $\pm 5\%$ is prescribed.

The requirements for packing, marking and sampling are also prescribed in the standard.

As on Oct 2024, there are 202 BIS licenses for this product in the country.