

## **IS 9666:2023 (Blank Granules)**

IS 9666: 2023 defines requirements and methods of sampling and test for blank granules used in manufacturing pesticidal granules, fertilizers, bio-stimulants, and bio-fertilizers. First published in 1980 and revised in 2023, the standard updates materials and processes to reflect modern practices and safety requirements.

Blank granules, used as carriers for active ingredients in agricultural applications, are manufactured from materials like sand, gypsum, natural calcium carbonate, and kaolin clays such as bentonite and china clay. IS 9666 emphasizes that these granules must be free from contaminants, with optional additives like binders and stabilizers included to enhance granule stability and effectiveness.

The standard specifies technical requirements for these granules, such as maximum moisture content, bulk density ranges for different materials, particle size distribution, and liquid holding capacity (LHC). For example, the LHC is a critical factor, indicating the amount of liquid formulation the granules can effectively hold. The testing methods, as referenced in IS 6940, are established to ensure consistent granule quality across batches. Packaging should use polypropylene (PP) or high-density polyethylene (HDPE) bags, with size requirements determined between buyers and suppliers.

Clear marking of each container is required, detailing the material type, manufacturer, batch number, and net weight. Products conforming to IS 9666's specifications can bear the BIS certification mark, symbolizing adherence to Indian quality standards.

Sampling and testing protocols ensure that products meet quality benchmarks within 90 days of manufacture, with additional tolerance criteria for inspections conducted after this period. Aligning with the Insecticides Act, 1968, IS 9666: 2023 aims to standardize quality and safety across India's agricultural sector, ensuring safe and effective usage of blank granules in agriculture.