



PRODUCT MANUAL
FOR
MANCOZEB WETTABLE POWDER
ACCORDING TO IS 8708 : 2006

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.

1.	Product	:	IS 8708 : 2006
	Title	:	Mancozeb Wettable Powder
	No. of Amendments	:	Nil
2.	Sampling Guidelines:		
a)	Raw material	:	Mancozeb, technical employed in the formulation of Mancozeb wettable powder shall conform to IS 8707.
b)	Grouping guidelines	:	NA (No varieties for the product mentioned in IS)
c)	Sample Size	:	500 gm
3.	List of Test Equipment	:	Please refer ANNEX – A
4.	Scheme of Inspection and Testing	:	Please refer ANNEX -B (applicable for both manufacturers and repackers)
5.	Possible tests in a day :		
	i. Description ii. Sieving Requirement iii. Suspensibility iv. Wettability v. Mancozeb Content		
6.	Scope of the Licence :		
	“Licence is granted to use Standard Mark as per IS 8708 : 2006 with the following scope:		
	Name of the product	Mancozeb (75 %) Wettable Powder / Repacked Mancozeb Wettable Powder.	

ANNEX – A

**TO PRODUCT MANUAL
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LIST OF TEST EQUIPMENT

Major test equipment required to test as per the Indian Standard

Sr. No.	Tests used in with Clause Reference	Test Equipment
1.	Sieving Requirement Cl 3.2.2 11.1, IS 6940	45 micron IS sieve, Beaker -250ml , 6 to 6.5 cm, Pressure assembly - a piston or Disc to exert 25g/cm ² pressure, Rubber Hose 10 mm internal diameter, Oven ambient temperature to 100°C, LC 1°C, 100 ml wide mouth neutral Glass bottle with a vinyl Cap, Gooch Crucible, Wide moth bottle with rubber or cork Stopper.
3	Suspensibility Test Cl 3.2.3 11.2, IS 6940	Graduated cylinder - of capacity 250 ml with a ground glass stopper. The distance between 0 and 250-ml marks shall be 21.0 ±0.5 cm with a clearance of 6.0 to 8.0 cm between 250-ml mark and the neck of the cylinder, Glass tube - About 40 cm long, of an internal diameter of about 5 rom, drawn at one end to an opening of 2 to 3 mm diameter, with the other end connected to a vacuum pump, Thermometer 0-100°C , LC 1°C, Anhydrous Calcium Chloride, Magnesium Chloride Hexahydrate.
4	Wettability Test Cl 3.2.4 11.4, IS 6940	Stop Watch LC 1 sec., Beaker - 6.0 to 6.5 cm and 250 ml capacity, Analytical balance, Anhydrous Calcium Chloride, Magnesium Chloride Hexahydrate.
5	Mancozeb content Cl 3.3.1 Annex A, IS 8707	Balance (analytical) LC 0.1mg, Carbon disulphide assembly (Figures 1,2,3 and 4 of IS 8707), Glass vial (Dia 8-12 mm, height 20-25 mm), Water circulation system (as per A-2.2.3 of IS 8707), Vacuum pump, Acetic acid, 30 % solution, Iodine, 0.1 N solution, Lead acetate, 10 percent solution, Phenolphthalein indicator – 0.5 percent ethanolic solution, Potassium hydroxide, 2 N methanolic solution, Starch indicator, Sulphuric acid, 1.1 N solution.
6	Zinc content Cl 3.3.2 Annex B, IS 8707	Conical titration flask-500 ml capacity, Ascorbic acid L (+), Buffer solution pH 10, EDTA solution 0.1 M solution, Erichrome Black T—Carbon indicator powder (0.5 percent), Formaldehyde---37 % solution, Potassium cyanide solution—5 percent (m/m), Analytical balance,

		Burette – 50ml/25ml capacity with least count of 0.05 ml, Conical flask -500ml, Graduated cylinder.
7	Manganese content Cl 3.3.3 Annex C, IS 8707	Wide-mouth conical flask-500 ml, Deionised water, Spatula, Other apparatus and reagents are same as mentioned at s.no.6 above.

The above list is indicative only and may not be treated as exhaustive.

ANNEX - B

**SCHEME OF INSPECTION AND TESTING
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1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare a calibration plan for the test equipments.

2. TEST RECORDS – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. PACKING AND MARKING – The Standard Mark, as given in the Schedule of the licence, shall be marked on the containers of Mancozeb Wettable Powder, or printed on the label applied to it, as the case may be, provided always that the product in each container to which this mark is thus applied, conform to every requirements of the specification.

3.1 MARKING – As per the requirements of clause 5 of IS 8708.

3.1.1 In addition to above, following marking shall also be marked:

- a) BIS Licence No.CM/L_____.
- b) BIS website details i.e- “For details of BIS certification please visit www.bis.gov.in”.
- c) Name and BIS licence number of original manufacturer of Mancozeb wettable powder shall also be mentioned in case of repacking unit.

3.1.2 When bags (above 10 kg) are used for packing the materials, the pictorial marking for “USE NO HOOKS”, as contained in IS1260 Pictorial markings for handling and labeling of goods Part 2 General Goods shall be marked on each bag.

3.2 PACKING – The material shall be packed as per clause 4 of IS 8708.

3.3 The repacker shall maintain details of the repacked material, in format given in table 2.

4. CONTROL UNIT – For the purpose of this scheme, a control unit shall be any one of the following, as applicable:

a) Repacker: The entire quantity of material repacked from a single batch received with Standard Mark shall constitute a control unit.

b) Batch Process: The entire quantity of material blended in the mixer in one operation shall constitute a control unit.

c) Continuous Process: Every 100 drums of 50 kg each of the material or part thereof, manufactured continuously in a day shall constitute a control unit.

5. LEVELS OF CONTROL - The tests as indicated in column 1 of Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the whole production of the factory

which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

5.1 All the production which conforms to the Indian Standards and covered by the licence should be marked with Standard Mark.

6. RAW MATERIALS – Mancozeb technical employed in the manufacture of this material shall conform to IS 8707, specification for Mancozeb, Technical. Each consignment of raw material received, shall be covered by a test certificate from the supplier or manufacturer guaranteeing its conformity to the relevant Indian Standard or shall be ISI marked or alternatively a sample from each consignment shall be tested for the same and records maintained.

7. REJECTIONS – Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.



Table 1
LEVELS OF CONTROL

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Method Cl. Ref.	Test method IS		No. of Sample	Frequency	Remarks
3.2.1	Description	3.2.1	IS 8708	R	Two	Each control unit	
3.2.2	Sieving Requirement	11.1	IS 6940	R	-do-	-do-	
3.2.3	Suspensibility	11.2	-do-	R	-do-	-do-	
3.2.4	Wettability	11.4	-do-	R	-do-	-do-	.
3.3.1	Mancozeb content	Annex A	IS 8707	R	-do-	-do-	
3.3.2	Zinc content	Annex B	-do-	R	-do-	-do-	
3.3.3	Manganese content	Annex C	-do-	R	-do-	-do-	

Note-1: Whether test equipment is required or sub-contracting is permitted in column 2 shall be decided by the Bureau and shall be mandatory. Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-2: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head.

TABLE 2
RECORD FRO REPACKED MANCOZEB WETTABLE POWDER
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Name of the manufacturer	Particulars of test reports received with control unit	Date of manufacture	Quantity received	Date of receipt	Date of repacking	Batch no.	Details of repacking		Total quantity	Details of dispatch
							Size	No.		
1	2	3	4	5	6	7	8	9	10	11