



**PRODUCT MANUAL FOR
METALAXYL MANCOZEB -WP
ACCORDING TO IS 13692 : 1993**

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 13692:1993
	Title	:	METALAXYL MANCOZEB -WP
	No. of Amendments	:	Nil
2.	Sampling Guidelines:		
a)	Raw material	:	a) Metalaxyl, technical employed in the manufacture of the material, shall conform to IS 13458: 1992. b) Mancozeb, technical employed in the manufacture of the material shall conform to IS 8707:1978
b)	Grouping guidelines	:	NA (No varieties of the product mentioned in IS)
c)	Sample Size	:	1 x 250 g.
3.	List of Test Equipment	:	Please refer ANNEX – <u>A</u>
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – <u>B</u>
5.	Possible tests in a day : (i) Description (ii) Metalaxyl content (iii) Mancozeb content (iv) Wettability		
6.	Scope of the Licence :		
	“Licence is granted to use Standard Mark as per IS 13692:1993 with the following scope:		
	Name of the product	:	METALAXYL MANCOZEB -WP



ANNEX A
TO PRODUCT MANUAL
FOR METALAXYL MANCOZEB -WP
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LIST OF TEST EQUIPMENT

Major test equipment required to test as per the Indian Standard

Sl. No.	Tests used in with Clause Reference	Test Equipment
2.	Metalaxyl content (S.No. i, Table 1, Cl 3.3 of IS 13692 Annex B of IS 13458	i) .Microlitre Syringe - 5-10 μ l ii).Gas Chromatograph (GLC) with FID detector and attached to computer or a graph plotter iii). Column-Glass, 1.8 m length and 2 mm ID packed with 10 % OV 101 on Gaschrom Q (80-100 mesh) iv) Gases with regulators;- Hydrogen, Air & Nitrogen. v). Acetone AR Grade vi) Internal Standard- Stearic acid Methyl Ester, Pure Grade vii) Metalaxyl Reference Standard - of known Purity viii) Weighing Balance 0-200 g LC= 1 mg ix) 10 ml Volumetric Flasks
3.	Mancozeb content (S.No. ii, Table 1, Cl 3.3 of IS 13692 Annex B of IS 13692	i) Lead Acetate Solution - 10 percent (m/v). ii) Sulphuric Acid - 5 N. iii) Glacial Acetic Acid iv) Dilute Acetic Acid - 30 percent (v/v). v) Methanolic Potassium Hydroxide Solution - 2 N. vi) Standard Iodine Solution - 0.1 N. vii) Starch Indicator Solution - freshly prepared. viii).Phenolphthalein Indicator Solution - 1 %t (m/v) in 96 % ethyl alcohol. ix) 500 Flask x) Distilled water xi) Measuring Cylinder -50 ml xii) Burette 50 ml LC 0.1 ml xiii) Decomposition assembly as per IS 8707. with vacuum Pump
4.	Sieving (S.No. iii, Table 1, Cl 3.3 of IS 13692, Clause 11.1 of IS 6940	i). Beaker 250ml , 6 to 6.5 cm ii) Pressure assembly a piston of Disc to exert 25g/cm ² pressure iii). Test sieve 75 μ iv). Rubber Hose 10 mm internal diameter.

		<p>v) Oven ambient temperature to 100°C, LC 1°C. vi) 100 ml wide mouth neutral Glass bottle with a vinyl Cap vii) Gooch Crucible viii) Wide moth bottle with rubber or cork Stopper</p>
5.	<p>Suspensibility (S.No. iv, Table 1, Cl 3.3 of IS 13692, Clause 11.2 of IS 6940</p>	<p>i). 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 ii). Glass tube - About 40 cm long, of an internal diameter of about 5 mm, drawn at one end to an opening of 2 to 3 mm diameter, with the other end connected to a vacuum pump iii). Standard Hard Water:- Dissolve 0.3040 g of calcium chloride anhydrous and 0.1390 g of magnesium chloride hexahydrate in distilled water and make up to one litre in a volumetric flask iv). Thermometer 0-100°C , LC 1°C</p>
6.	<p>Wettability (S. No. v, Table 1, Cl 3.3 of IS 13692, Clause 11.4 of IS 6940</p>	<p>i). Beaker - of 6.0 to 6.5 cm and 250 ml capacity. ii). Stop Watch LC 1 sec</p>

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

ANNEX B

**SCHEME OF INSPECTION AND TESTING
FOR METALAXYL MANCOZEB -WP
ACCORDING TO IS 13692 : 1993**

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 Metalaxyl Mancozeb -WP, 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 Packing and marking shall be done as per clause 4 and 5 of the Indian Standard. In addition, the following details shall be mentioned on each container legibly and indelibly:

a) BIS Licence No.CM/L_____.

b) BIS website details i.e-“For details of BIS certification please visit www.bis.gov.in”.

4. CONTROL UNIT – For the purpose of this scheme, the entire quantity of the material finally blended in a blender at a time in one operation in case of a batch process and every 100 containers of 50 kg each of the material or part thereof manufactured, not exceeding a day’s production in case of a continuous process shall constitute a batch (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. 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
3.1	Constituents: i). The material shall consist of metalaxyl, technical and mancozeb, technical, together with suitable carrier(s), stabilizer(s) and other formulants (s).	-	-	-	--	---	---
	ii). Metalaxyl Technical	-	IS 13458	S	One	Each consignment	No further testing is required, if accompanied with the Test Certificate or ISI Marked.
	iii). Mancozeb Technical	-	IS 8707	S	One		
3.2	Description	3.2	Visual	R	One	Each control unit	--
3.3 & Table 1	Metalaxyl content	Annex B	IS 13458	R	One	-do-	--
-do-	Mancozeb content	Annex B	IS 13692	R	One	-do-	--
-do-	Sieving	Cl 11.1	IS 6940	R	One	-do-	--
-do-	Suspensibility	Cl 11.2	IS 6940	R	One	-do-	--
-do-	Wettability	Cl 11.4	IS 6940	R	One	-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.