PM/ IS 8707/ 1/June 2019

PRODUCT MANUAL FOR MANCOZEB, TECHNICAL According to IS: 8707:2013

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 :8707:2013
	Title	:	MANCOZEB, TECHNICAL-SPECIFICATION
	No. of Amendments	:	01
2.	**Sampling Guidelines:**		
a)	Raw material	:	No specific requirement
b)	Grouping guidelines	:	NA
c)	Sample Size	:	250 ml
3.	**List of Test Equipment**	:	Please refer ANNEX – A
4.	**Scheme of Inspection and Testing**	:	Please refer ANNEX – B
5.	**Possible tests in a day**	**:**	All tests
6.	**Scope of the Licence :**		
	Licence is granted to use Standard Mark as per IS 8707:2013 with the following scope:-		
	Name of the product		Mancozeb, Technical

BUREAU OF INDIAN STANDARDS
Manak Bhawan, 9, Bahadur Shah Zafar Marg,
New Delhi – 110002

ANNEX –A
TO PRODUCT MANUAL
FOR MANCOZEB, TECHNICAL
According to IS: 8707:2013
List of Test Equipment

Sr. No.	Test Equipment	Tests used in with Clause Reference
1	Visual	Description as per Cl 3.2.1
2	a) Balance (analytical) 0.1mg b) Carbon disulphide assembly.(Figures 1,2,3 and 4 of IS). c) Glass vial (Dia 8-12 mm, height 20-25 mm) d) Water circulation system (as per A-2.2.3 of IS) e) Vacuum pump.pump. f) Acetic acid, 30 % solution. g) Iodine, 0.1 N solution. h) Lead acetate, 10 percent solution. i) Phenolphthalein indicator – 0.5 percent ethanolic solution. j) Potassium hydroxide, 2 N methanolic solution k) Starch indicator l) Sulphuric acid, 1.1 N solution	Mancozeb content, percent by mass. (Clause 3.3, of Table 1. (i))
3	Burette – 50ml/25ml capacity with least count of 0.05 ml. a) Conical titration flask---500 ml capacity. b) Ascorbic acid L (+) c) Buffer solution pH 10 d) EDTA solution 0.1 M solution. e) Eriochrome Black T—Carbon indicator powder (0.5 percent) f) Formaldehyde---37 % solution. g) Potassium cyanide solution—5 percent (m/m)	Zinc content in Mancozeb. (Clause 3.3 of Table 1. (ii))
4	Apparatus and reagents same as mentioned at s.no.3 above.	Manganese content in Mancozeb. (Clause 3.3 of Table. (iii))
5	a) High performance liquid chromatograph (as per description given in D-2.1 of IS. b) Analytical balance –least count 0.1 mg. c) Ultrasonic bath. d) Syringe—20 micro liter capacity. e) Sintered glass crucible. f) Glassware—25 ml, 50 ml, 100 ml. g) Pipettes 1 ml and 2 ml. h) Ethylene Thiourea---reference standard of known purity. i) Tetrahdrofuran---Analytical reagent grade or equivalent.	Ethylene Thiourea (ETU). (Clause 3.3 of Table 1. (iv))

ANNEX - B
TO PRODUCT MANUAL
FOR MANCOZEB, TECHNICAL
According to IS: 8707:2013
(SCHEME OF INSPECTION AND TESTING)

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 stencilled with indelible ink or printed on the labels applied to the containers of Mancozeb Technical thus provided always that the product so marked conform to every requirement of the specification.

3.1 Packing and marking shall be done as per the provision of IS 8707:2013. In addition, the following details shall be mentioned on each container/package:-

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 Mancozeb Technical processed at a time through the blender after the rotary vacuum drier shall constitute a Control Unit.

4.1 On the basis of test results and analysis reports, the decision regarding conformity or otherwise of a control unit of Mancozeb Technical for a given requirement shall be made as follows:

4.2 A sample from each control unit shall be tested which shall satisfy all the requirement of the specification. In case the sample fails in any one or more requirements, the entire quantity of the material of the control unit shall be considered as unfit for the purpose of marking. The material may be reprocessed suitably and the defects rectified. Such reprocessed material when tested again shall satisfy all the requirements of the specification.

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 shall 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 (Cl. 5 of SIT, Levels of Control)
MANCOZEB, TECHNICAL
According to IS: 8707:2013
(Scheme of Inspection and Testing)

(1)				(2)	(3)		
Test Details				**Test equipment requirement R: required (or)S: Sub-contracting permitted**	**Levels of Control**		
Clause	**Requirement**	**Test Methods**			**No. of Sample**	**Frequency**	**Remarks**
		Reference	**Clause**				
3.2.1	Description	3.2.1	IS 8707:2013	R	One	Each Control Unit	
3.3 and Table 1	i) Mancozeb content	Annex-A	IS 8707:2013	R	One	Each Control Unit	
	ii) Zinc content of Mancozeb content	Annex-B	IS 8707:2013	R	One	Each Control Unit	
	iii) Manganese content of Mancozeb content	Annex-C	IS 8707:2013	R	One	Each Control Unit	
	iv) Ethylene thiourea content	Annex-D	IS 8707:2013	R	One	Each Control Unit	

Note-1: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control and submit his own levels of control in column 3 with proper justification for approval by BO Head.
Note 2: The standard is subject to restrictions imposed under provisions of Insecticide Act 1968. In case of any anomaly between this standard and the above Act, the pesticide Act 1968 shall prevail.