# PRODUCT MANUAL FOR
# CYMOXANIL + MANCOZEB WETTABLE POWDER
# According to IS: 15601:2005

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 15601:2005 |
| | Title | : | CYMOXANIL+MANCOZEB WETTABLE POWDER |
| | No. of Amendments | : | NIL |
| 2. | **Sampling Guidelines:** | | |
| a) | Raw material | : | Cymoxanil technical shall confirm to IS 15600 Mancozeb technical shall confirm to IS 8707 Each lot shall be accompanied with test certificate from manufacturer, or a sample shall be tested in house/independent lab |
| b) | Grouping guidelines | : | NA |
| c) | Sample Size | : | 500 gm. |
| 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 :** | | |
| | i) Physical tests (Description Cl. 3.2.1)<br>ii) Sieving requirement (Cl. 3.2.2)<br>iii) Wettability (Clause 3.2.4)<br>iv) Acidity (Cl. 3.2.2)<br>v) Alkalinity (Cl. 3.3.3) | | |
| 6. | **Scope of the Licence :** | | |
| | Licence is granted to use Standard Mark as per IS 15601:2005 with the following scope:- | | |
| | Name of the product | | CYMOXANIL……%+MANCOZEB…..% WETTABLE POWDER |

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**Annex –A**

**TO PRODUCT MANUAL FOR**
**CYMOXANIL + MANCOZEB WETTABLE POWDER**
**According to IS: 15601:2005**
**List of Test Equipment**

| Sr. No. | Test Equipment | Tests used in with Clause Reference |
|---|---|---|
| 1 | Visual | Description as per Cl 3.2.1 |
| 2 | Test Sieve (as per IS 460 (Part 1)<br>Pressure Assembly<br>Beaker, Rubber Hose<br>Weighing balance | Sieving requirement (3.2.2) |
| 3 | Beaker<br>Pressure Assembly<br>Graduated Cylinder<br>Glass tube,<br>Calcium Chloride anhydrous<br>Magnesium Chloride Hexahydrate<br>Balance<br>Waterbath | Suspensibility (3.2.3) |
| 4 | Beaker<br>Weighing balance<br>Calcium Chloride anhydrous<br>Magnesium Chloride Hexahydrate | Wettability (3.2.4) |
| 5 | a)High Performance Liquid Chramatograph, equipped with a constant flow pump, -constant temperature column compartment, sample injector capable of injecting 25 pl aliquots, a 254 m wavelength Ultraviolet detector. And a recorder (digital integrator or other data handling device) is used for this determination.<br><br>b)Analytical balance<br>c) Microliter syringe 25 microliter<br>D) Filtering apparatus for sample and standard solution.<br>e) Ultrasonic bath.<br>f) Standard glassware.<br>g) Acetonitrile, HPLC grade.<br>h) HPLC Grade Water<br>i)Acetanilide of known purity.<br>j) Cymoxanil of known purity.<br>k) Ortho Phosphoric Acid, HPLC grade,<br>85 percent. | Determination of Cymoxanil content., (Cl. 3.3.1) |

| | | |
|---|---|---|
| 6 | a) Balance (analytical) 0.1mg<br>b) Carbon disulphide assembly.(Figures 1,2,3 and 4 of IS).<br>c) Glass vial (Dia 8-12 mm, height 20-25 mm)<br>d) Ware sirculation system (as per A-2.2.3 of IS)<br>e) Vacuum pump.pump.<br>f) Acetic acid , 30 % solution.<br>g) Iodine, 0.1 N solution.<br>h) Lead acetate, 10 percent solution.<br>i) Phenolphthalein indicator – 0.5 percent ethanolic solution.<br>j) Potassium hydroxide, 2 N methanolic solution<br>k) Starch indicator<br>l) Sulphuric acid, 1.1 N solution | Determination of Mancozeb content.,(Cl. 3.3.1) |
| 7 | a) Methyl red indicatorsolution-aqueous - one percent ( mlu ).<br>b) Bromocresol purple indicator solution - one percent (m/v) in ethyl alcohol.<br>c) Standard sodium hydruxide solution - 0·05 N<br>d) Standard hydrochloric acid - 0·05 N. | Test for acidity.,(Cl. 3.3.2) |
| 8 | a) Methyl red indicater solution - aqueous, one percent ( mlo ).<br>b) Bromocresol purple indicator solution - one percent (mlv) in ethyl alcohol.<br>c) Standard hydrochloric acid - 0·05 N.<br>d) Standard sodium hydroxide solution - 0·05 N. | Test for alkalinity.,(Cl. 3.3.3) |

**ANNEX - B**
**TO PRODUCT MANUAL FOR**
**CYMOXANIL + MANCOZEB WETTABLE POWDER**
**According to IS: 15601:2005**
**(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 printed/stencilled on each container of Cymoxanil +Mancozeb Wettable Powder, 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 15601:2005. 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 Cymoxanil+Mancozeb Wettable Powder taken from the same consignment of raw materials, finally blended in a blender at a time in one operation shall constitute one 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 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 (Levels of Control)**
**CYMOXANIL + MANCOZEB WETTABLE POWDER**
**According to IS: 15601:2005**
**(Scheme of Inspection and Testing)**

| (1) | | | | (2) | (3) | | |
|---|---|---|---|---|---|---|---|
| Test Details | | | | Test equipment requirement R: required (or)S: Sub-contracting permitted | Recommended Levels of Control | | |
| Cl. | Requirement | Test Methods | | | No. of Sample | Frequency | Remarks |
| | | Reference | Clause | | | | |
| 3.2.1 | Description | 3.2.1 | IS 15601 | R | One | Each Control Unit | |
| 3.2.2 | Seiving Requirement | 11.1 | IS 6940 | R | One | Each Control Unit | |
| 3.2.3 | Suspensibility | 11.2 | IS 6940 | R | One | Each Control Unit | |
| 3.2.4 | Wettability | 11.4 | IS 6940 | R | One | Each Control Unit | |
| 3.3.1 | Cymoxanil content | Annex A | IS 15600 | R | Two | Each Control Unit | |
| | Mancozeb content | Annex A | IS 8707 | R | Two | Each Control Unit | |
| 3.3.2 | Acidity | 11.3.2 | IS 6940 | R | One | Each Control Unit | |
| 3.3.3 | Alakalinity | 11.3.3 | IS 6940 | R | One | Each Control Unit | |

**Note-1:** Sub- contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau

**Note-2:** The control Unit and levels of control as decided by the Bureau are obligatory, to which the licensee shall comply with.

OR

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.