PRODUCT MANUAL
FOR CYFLUTHRIN – WP ACCORDING TO IS 14158 : 1994

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 14158 : 1994
a)	**Title**	**:**	Cyfluthrin – WP
b)	**No. of amendments**	**:**	01
2.	**Sampling Guidelines**		
a)	**Raw material**	**:**	Cyfluthrin technical employed in the formulation of Cyfluthrin WP shall conform to IS 14156.
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
5.	**Possible tests in a day :**		
	i. Description ii. Suspensibility iii. Cyfluthrin content iv. Acidity or Alkalinity v. Wettability		
6.	**Scope of the Licence :**		
	Licence is granted to use Standard Mark as per IS 14158 : 1994 with the following scope:		
	Name of the product	Cyfluthrin (10%) WP	

ANNEX – A

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LIST OF TEST EQUIPMENT

Major test equipment required to test as per the Indian Standard

Sr. No.	Test used in with clause reference	Test Equipment
1.	Cyfluthrin content Clause 3.3, Table 1 (Annex A of 14158)	Analytical balance (0-200 gm, LC-0.01 mg), 100 ml beaker, Vacuum pump, G-4 crucible containing a bed of a filter aid, Volumetric flask-50 ml, Acetone Filtration assembly with vacuum pump, Gas Chromatograph, Syringe -10 µl capacity, Gas Chromatograph, Dioctyl adipate, AR Grade (Internal Standard), Cyfluthrin reference standard-of known purity.
2.	Sieving requirement Clause 3.3, Table 1 (Cl 11.1 of IS 6940)	Beaker of 6·0 to 6.5 cm and 250 ml capacity, Pressure assembly, Rubber hose-of about 10 mm internal diameter, Wide mouth bottle with cork or rubber stopper, 4 to 6 mm diameter glass rod, Gooch crucible, Beakers, Camel hair brush or a feather, Weighing Dish, Analytical Weighing Balance (LC- 0.001g), Hot Air Oven capable of maintaining 54+1^{o}C, LC 1^{o}C, tap water, Test sieve (75 micron IS sieve).
3.	Suspensibility Clause 3.3, Table 1 (Cl 7. 2 & Annex B of IS 14158)	Standard Hard Water, Separating funnel, G-4 crucible, Ether, Water bath, Acetone, Anhydrous Sodium Sulphate, Beaker, Analytical balance (0-200 gm, LC-0.01 mg), Glass rod – 4-6 mm in diameter, Graduated cylinder with stopper, Water bath capable of operating at 30 $\pm$ 1^{o}C, Vacuum pump, Pressure Assembly.
4.	Acidity (as H_2SO_4) or Alkalinity (as NaOH) Clause 3.3, Table 1 (Cl 11. 3 of IS 6940)	**Quantitative test:** Analytical Balance (Least count 0.1g) Heating mental / hot plate Test tube, Conical flask, Litmus paper, Sodium hydroxide- 0.05 N, Hydrochloric Acid – 0.05 N Methyl red indicator solution, Bromocresol purple indicator. **Electrometric procedure:** Methyl alcohol-distilled, Sodium hydroxide- 0.05 N, Hydrochloric Acid – 0.05 N, Acetone, Buffer solution, pH meter, Analytical balance ((LC 0.1g),

		Stirring rod, Buchner funnel, filter flask/Conical flask.
5.	Wettability Clause 3.3, Table 1 (Cl 11.4 of IS 6940)	Analytical Balance, Stopwatch, Beaker - of 6.0 to 6.5 cm and 250 ml capacity, Standard hard water.

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

ANNEX - B

SCHEME OF INSPECTION AND TESTING

FOR CYFLUTHRIN – WP ACCORDING TO IS 14158 : 1994

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 equipment.

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 Schedule of the licence shall be stenciled/printed on each container of Cyfluthrin WP or printed on the labels applied to the container, as the case may be, provided always that the material in each container to which this mark is thus applied conforms to every requirement of the specification.

3.1 Packing and Marking shall be done as per the provision 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 mixed in a blender in one operation in case of a batch process (BP) 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 (CP) 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.

5.2 On the basis of tests and analysis results, the decision regarding conformity or otherwise of a control unit shall be taken as follows:

5.2.1 A sample shall be taken from each control unit and tested for all requirements of the specification. If the sample fails in description and/or acid/alkalinity, the control unit represented by the sample shall be considered unfit for the purpose of marking.

5.2.2 In case the sample fails in any of the requirements except for description and/or acid/alkalinity requirement, the control unit may be suitably reprocessed, and defect(s) rectified. Such reprocessed material when tested again shall satisfy all the requirements of the specification before it is marked.

6. RAW MATERIAL – Cyfluthrin technical employed in the formulation of Cyfluthrin WP shall conform to IS 14156. A test certificate to that effect shall be obtained from the supplier for each consignment of Cyfluthrin technical received. Alternatively, a sample from each consignment shall be tested for its conformity to the Indian Standard mentioned above and a record maintained. However, no testing or test certificate may be required if the material is ISI marked.

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: Subcontracting permitted	Levels of control		
Cl.	Requirements	Test Methods Cl. Ref.	Test Method IS		No. of sample	Frequency	Remarks
3.2	Description	3.2	IS 14158	R	One	Each control unit	See clause 5 of SIT
3.4 & Table 1	Cyfluthrin content	Annex A	IS 14158 & IS 14156	R	Five for CP One for BP	-do-	
3.3 & Table 1	Sieving (material passing through 75 micron IS sieve)	11.1	IS 6940	R	-do-	-do-	
-do-	Suspensibility	7.2 & Annex B	IS 14158	R	One	-do-	
-do-	Acidity (as H_2SO_4) or Alkalinity (as NaOH)	11.3.2 & 11.3.3	IS 6940	R	One composite sample*	-do-	
-do-	Wettability	11.4	-do-	R	Five for CP One for BP	-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 empaneled 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.

Note-3: * A composite sample shall be prepared by mixing together the samples drawn from the control unit at regular intervals.