



**PRODUCT MANUAL FOR
HEXACONAZOLE SUSPENSION CONCENTRATE (SC)
ACCORDING TO IS 15692 : 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 15692 : 2006
	Title	:	Hexaconazole, Suspension Concentrate (SC)
	No. of Amendments	:	Nil
2.	Sampling Guidelines:		
a)	Raw material	:	Hexaconazole technical employed in the manufacture of the Hexaconazole, SC shall comply with IS 14549.
b)	Grouping guidelines	:	NA (No variety for the product mentioned in IS)
c)	Sample Size	:	500 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 :		
	<ul style="list-style-type: none"> i. Description ii. Spontaneity of Dispersion iii. Suspensibility iv. Wet Sieve Test v. Persistent Foam vi. Hexaconazole Content vii. Acidity / Alkalinity 		
6.	Scope of the Licence :		
	“Licence is granted to use Standard Mark as per IS 15692 : 2006 with the following scope:		
	Name of the product	:	Hexaconazole ... % Suspension Concentrate (SC)

ANNEX – A
TO PRODUCT MANUAL
FOR HEXACONAZOLE, SUSPENSION CONCENTRATE
ACCORDING TO IS 15692 : 2006

LIST OF TEST EQUIPMENT

Major test equipment required to test as per the Indian Standard

Sl. No.	Test Equipment	Tests used in with Clause Reference
1.	<p>500 ml stoppered measuring cylinder as per following requirements: Volume equivalent to 1 subdivision = 5 ml of the scale Capacity corresponding to lowest = 50 ml graduation mark Capacity corresponding to highest = 500 ml graduation mark Length of scale = 250 mm Overall height = 39 cm Diameter of base = 10 cm Stopper = B 34 NOTE — High density polyethylene bottles, 1 000 ml volume and Kilner jars, 700 ml volume, can be used but this must be recorded with the result. Weighing scale Distilled water Thermometer</p>	<p>Pourability (Rinsed Residue) Cl 3.2.2</p>
2.	<p>Standard Hard Water Graduated Cylinders — Glass stoppered, 250 ml capacity. Glass Suction Tubes — About 40 cm long, 5 mm internal diameter, drawn out at one end to 2-3 mm internal diameter. Standard Glassware, Stop watch, Weighing balance Vacuum pump, Water bath</p>	<p>Spontaneity of Dispersion Cl 3.2.3</p>
3.	<p>Standard Hard Water Graduated Cylinders — Glass stoppered, 250 ml capacity. Glass Suction Tubes — About 40 cm long, 5 mm internal diameter, drawn out at one end to 2-3 mm internal diameter. Standard Glassware, Stop watch, Weighing balance Vacuum pump, Evaporation dish, Water bath</p>	<p>Suspensibility Cl 3.2.4</p>
4.	<p>Beaker of 6.0 to 6.5 cm and 250 ml capacity Pressure assembly - a piston or disc, loosely fitting in the beaker and so formed or weighed as to exert an even pressure of 2.5 g/cm² 45 micron IS Sieve prepared for the test by removing any film, grease or other water repellent material and then by</p>	<p>Wet Sieve Test Cl 3.2.5</p>

	drying. Rubber hose - of about 10 mm internal diameter.	
5.	<p>Reagent : Standard Hard Water</p> <p>Apparatus : Graduated Cylinder— Glass stoppered, 250 ml capacity with 2 ml graduations. The distance between the 0 mark and the 250 ml mark should be 20 cm to 21.5 cm. The distance between the 250 ml mark and the bottom of the stopper should be 6 cm to 8 cm.</p> <p>NOTE — The cylinder should be clean and free from grease.</p> <p>Stopwatch top pan balance</p>	Persistent Foam CI 3.2.6
6.	<p>Gas Liquid Chromatograph (GLC) Equipped with a FID and a printer-plotter-cum-integrator.</p> <p>The suggested operating parameters are given below which may be varied provided standardization is done:</p> <p>Column - SS, 100 cm length x 2 mm ID packed with 5 percent OV- 101 on chromosorb WHP (80- 100 mesh).</p> <p>Temperature - Column oven 200°C Injection port 250°C Detector 300°C</p> <p>Gas Flow-Carrier gas (Nitrogen) 30 ml/minute. Hydrogen 30 ml/minute; air 300 ml/minute.</p> <p>Micro Syringe — 2 µl Glassware — Volumetric flask 50 ml; pipette 10 ml. Milipore filtration assembly</p> <p>REAGENTS Acetone-AR grade. Internal Standard — Dibutylphthalate, AR grade or equivalent. Reference Hexaconazole Standard of Known Purity</p>	Hexaconazole Content CI 3.3.1
7.	<p>Reagents</p> <p>a) Methyl red indicator solution - aqueous one percent (m/v).</p> <p>b) Bromocresol purple indicator solution- one percent (m/v) in ethyl alcohol.</p> <p>c) Standard sodium hydroxide solution - 0.05 N.</p> <p>d) Standard hydrochloric acid -0.05 N.</p>	Acidity / Alkalinity CI 3.3.2

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

ANNEX - B

**SCHEME OF INSPECTION AND TESTING
FOR HEXACONAZOLE, SUSPENSION CONCENTRATE
ACCORDING TO IS 15692 : 2006**

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 stenciled/printed on each container of Hexaconazole SC or printed on the label applied to it, as the case may be, provided always that the material in each container to which this mark is thus applied, conform 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 Hexaconazole suspension concentrate mixed in a mixer at a time 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 should be marked with Standard Mark.

5.2 A sample shall be drawn from each control unit and tested for all the requirements of the specification. In case the sample fails in any one or more of the requirements, the entire quantity of the material of the control unit shall be considered as unfit for the purpose of marking. However, the material may be reprocessed suitably and the defects rectified in case the material fails in technical content requirement only. Such reprocessed material when tested again shall satisfy all the requirements of the specification before it is used for marking.

6. RAW MATERIAL - Hexaconazole technical, used in the manufactured of Hexaconazole SC shall conform to IS 14549. A test certificate to that effect shall be obtained from the supplier for each consignment of Hexaconazole technical received. Alternatively, a sample from each consignment of material received shall be tested for its conformity to IS 14549, before use and appropriate 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
LEVEL 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	Raw Material				1	Each Consignment	See clause 6 of SIT
3.2.1	Description	3.2.1	IS 15692	R	1	Each Control Unit	See clause 5.2 of SIT
3.2.2	Pourability (Rinsed Residue)	Annex A	IS 15692	R	1	-do-	-do-
3.2.3	Spontaneity of Dispersion	Annex B	IS 15692	R	1	-do-	-do-
3.2.4	Suspensibility	Annex C	IS 15692	R	1	-do-	-do-
3.2.5	Wet Sieve Test	11.1	IS 6940	R	1	-do-	-do-
3.2.6	Persistent Foam	Annex D	IS 15692	R	1	-do-	-do-
3.3.1	Hexaconazole Content	Annex E & Annex A	IS 15692 IS 14549	R	1	-do-	-do-
3.3.2	Acidity / Alkalinity	13.5	IS 6940	R	1	-do-	-do-

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