



**PRODUCT MANUAL
FOR BUTACHLOR EC ACCORDING TO IS 9356 : 1980**

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 9356 : 1980
	Title	:	Specification for Butachlor EC
	No. of Amendments	:	03
2.	Sampling Guidelines:		
a)	Raw material	:	Butachlor, technical used in the formulation of Butachlor EC shall conform to IS 9355.
b)	Grouping guidelines	:	NA (No varieties of the product mentioned in IS)
c)	Sample Size	:	500 ml
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) Cold Test (iii) Flash Point (iv) Emulsion Stability (v) Butachlor content (vi) Acidity or Alkalinity		
6.	Scope of the Licence:		
	“Licence is granted to use Standard Mark as per IS 9356 : 1980 with the following scope:		
	Name of the product	Butachlor (50%) EC.	

ANNEX – A

**TO PRODUCT MANUAL
FOR BUTACHLOR EC ACCORDING TO IS 9356 : 1980**

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.	Description Clause 2.2.1	Glass beaker, Tap water
2.	Cold Test Clause 2.2.2 (Clause 13.1 of IS 6940)	Glass Container (100 ml)/Beaker with Cork/stopper fitted thermometer, water bath, Ice-cold water Thermometer (0 - 110°C, L.C. - 0.1 °C), Stirring rod.
3.	Flash Point Clause 2.2.3 {IS 1448 (Part 20)}	Cleaning solvent, Coolant, Lubricant, Verification Liquids, Ignitor and pilot light gas, Flash point apparatus/Abel flash point apparatus consisting of test cup, cover assembly, heating vessel, heating device, flash detector, Stirrer, Thermometers 2 (one for the oil cup of range; - 35°C to +70°C, and another for the water bath of the range; -30°C to +80°C), Timing device, Barometer, External cooling bath, Test cup thermal insulating cap, Abel flash point apparatus provided with a stirrer & thermometer, Heating Vessel or bath, Ethylene Glycol.
4.	Emulsion Stability Clause 2.2.4 (Clause 13.3 of IS 6940)	Glass Beaker, Capacity 250ml with internal diameter of 6.0 to 6.5 cm and marked at 100 ml, Analytical Balance-Range 0 to 200gms, LC 0.1mg, Mohr-type pipette, 2ml/ 5 ml capacity/ Dropping funnel, Measuring Cylinder, graduated, Capacity 0 to 100ml , Least count 0.5ml, Stop watch 0 to 60minutes, least count 1sec, Glass Rod, Water Bath with thermometer or digital temp indicator to maintain at $30 \pm 1^{\circ}\text{C}$, Beaker (250 ml), Standard Hard Water, Air conditioner, Hot plate.
5.	Butachlor content Clause 2.3.1 (Appendix A of IS 9355)	Gas liquid chromatograph – equipped with a recorder and a disc integrator. Nitrogen gas cylinder, Analytical balance (0-200 gm, LC-0.01 mg), Standard glass ware.

		Micro syringe (2.0 µl capacity) Standard reference Butachlor-of known purity Acetone, Bis (2 ethyl-hexyl) adipate.
6.	Acidity (as H ₂ SO ₄) or Alkalinity (as NaOH) Clause 2.3.2 (Clause 13.5 of IS 6940)	Methyl red indicator solution-aqueous – 1 % (m/v), Bromocresol purple indicator solution, Standard Sodium Hydroxide Solution – 0.5 N, Standard Hydrochloric acid, Acetone, Distilled water, Analytical Balance Range 0 to 200gms LC 0.1mg, Hot plate, Range ambient to 100°C/ Heating mantle/Water bath, Whatman filter paper, Conical Flask, 250ml Capacity, Graduated Cylinder, Range 0 to 100ml LC 1ml, Test Tube, Litmus paper

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

ANNEX - B
SCHEME OF INSPECTION AND TESTING
FOR BUTACHLOR EC ACCORDING TO IS 9356 : 1980

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 the Schedule of the licence, shall be stenciled/printed on each container of Butachlor EC 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 the material formulated in mixer at a time in one operation shall be considered as 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 A sample shall be drawn from each control unit and tested for all the requirements of the specification. If the sample fails in any of the requirements tested other than Butachlor content and/or emulsion stability for entire control unit represented by the sample shall be considered unfit for the purpose of marking.

5.3 In case a sample taken from the control unfit fails in Butachlor content and/or emulsion stability but passes in other requirements the entire quantity of the material in the control unit may be suitably reprocessed and the defects rectified. Such reprocessed material when tested again shall confirm to all the requirements of the specification before it is allowed for marking.

6. RAW MATERIAL - Butachlor, technical used in the formulation of Butachlor EC shall conform to IS 9355. A sample from each consignment of Butachlor, technical shall be tested for its conformity to IS 9355. Alternatively, each consignment shall be covered by a test certificate from the supplier guaranteeing its conformity to IS 9355.

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: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Method Cl. Ref.	Test Method IS		No. of Sample	Frequency	Remarks
2.1	Constituents	2.1	IS 9356	S	One	Each consignment	See cl 6 of SIT.
2.2.1	Description	2.2.1	IS 9356	R	One	Each Control Unit	
2.2.2	Cold Test	13.1	IS 6940	R	One	-do-	
2.2.3	Flash Point	-	IS 1448 (Pt 20)	R	One	-do-	
2.2.4	Emulsion Stability	13.3	IS 6940	R	One	-do-	
2.3.1	Butachlor Content	Appendix A	IS 9355	R	One	-do-	
2.3.2	Acidity	13.5	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. Subcontracting 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.