



**PRODUCT MANUAL FOR
THIRAM WS
ACCORDING TO IS 4766:1982**

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 4766:1982
	Title	:	Thiram WS
	No. of Amendments	:	03
2.	Sampling Guidelines:		
a)	Raw material	:	Thiram, Technical employed in the manufacture of Thiram WS shall conform to IS 4320.
b)	Grouping guidelines	:	NA (No varieties mentioned for th product in IS)
c)	Sample Size	:	500 gram
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. Thiram content iii. Sieve requirement iv. Wettability 		
6.	Scope of the Licence :		
	“Licence is granted to use Standard Mark as per IS 4766:1982 with the following scope:		
	Name of the product	:	Thiram WS

ANNEX-A
TO PRODUCT MANUAL
FOR THIRAM WS ACCORDING TO IS 4766:1982

LIST OF TEST EQUIPMENT

Major test equipment required to test as per the Indian Standard

Sl. No.	Tests used in with Clause Reference	Test Equipment
1	Thiram content, Clause 2.3 and Sl. No. 1 of Table 1 Appendix A-1 Appendix A-2	<p>I. Carbondisulphide evolution method:</p> <p>Acetic acid/Zinc Oxide solution, Cadmium Sulphate Solution - 18.5 percent, Potassium Hydroxide - 2 N, Dilute Acetic Acid- 8 percent solution, Standard Iodine Solution - 0.1 N, Starch Indicator Solution - freshly prepared, Phenolphthalein Indicator Solution - 1 percent. Apparatus as per Figure 1 of Appendix A of IS 4320. Water Bath, Beaker with melting ice, Burettes, Pipettes, Weighing balance, stirring rod.</p> <p>II. Amine method:</p> <p>Apparatus as per Figure 1 and Figure 2 of Appendix A of IS 4320.</p> <p>Standard Sulphuric Acid Solution - 0.1 N, Boric Acid - Saturated solution, Sodium Hydroxide Solution - 40 percent, Bromocresol Green - Methyl Red Mixed Indicator Solution.</p> <p>Water bath, Weighing balance, Volumetric flasks, Measuring cylinders, pH meter, Beakers</p>
2	Sieving requirement, Clause 2.3 and Sl. No. 2 of Table 1	Test sieve as per IS 460 (Part 1), <i>Beaker</i> of 6.0 to 6.5 cm and 250 ml capacity, Pressure assembly, Rubber hose, wide mouth bottle with cork or rubber stopper, 4 to 6 mm diameter glass rod, Gooch crucible, Beakers, Weighing balance, Oven, Brush, Weighing Dish.
3	Wettability, Clause 2.3 and Sl. No. 3 of Table 1	Standard hard water, stop watch, Beakers, Distilled Water, Volumetric flasks, Weighing Balance.

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

ANNEX-B
SCHEME OF INSPECTION AND TESTING
FOR THIRAM WS ACCORDING TO IS 4766:1982

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.
 - 1.2 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 Thiram WS 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, for Batch Process, the entire quantity of material processed in a blender (not exceeding 1 tonne) shall constitute a control unit. For continuous process, 100 bags of the material (each of 50 kg) or part thereof, manufactured continuously at a time 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.
6. **RAW MATERIAL**- Thiram technical employed in manufacture of Thiram WS shall conform to IS 4320. A sample from each consignment of the material received, shall be

tested for its conformity to IS 4320 and records maintained. Alternately, each consignment shall be covered by test certificate from the supplier guaranteeing its conformity to IS 4320.

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		
Clause No.	Requirement	Test Method			No. of Samples	Frequency	Remarks
		Cl. Ref.	IS				
2.1	Description	2.1	IS 4766	R	One	Each Control Unit	Continuous / Batch process
2.3 and Table 1	Thiram content	Appendix A	IS 4320	R	-do-	Each Control Unit	Continuous / Batch process
2.3 and Table 1	Sieving Requirement	11.1	IS 6940	R	-do-	Each Control Unit	Continuous / Batch process
2.3 and Table 1	Wettability	11.4	IS 6940	R	-do-	Each Control Unit	Continuous / Batch process

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: 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.