



**PRODUCT MANUAL FOR  
CYCLE- RUBBER TUBES (MOULDED/JOINTED)  
ACCORDING TO IS 2415:2015**

*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.	<b>Product</b>	:	IS 2415:2015
	<b>Title</b>	:	CYCLE- RUBBER TUBES (MOULDED/ JOINTED)
	<b>No. of Amendments</b>	:	Nil
2.	<b>Sampling Guidelines:</b>		
a)	<b>Raw material</b>	:	-
b)	<b>Grouping guidelines</b>	:	Please refer <a href="#">ANNEX – A.</a>
c)	<b>Sample Size</b>	:	Two pieces of cycle rubber tube alongwith valve
3.	<b>List of Test Equipment</b>	:	Please refer <a href="#">ANNEX – B.</a>
4.	<b>Scheme of Inspection and Testing</b>	:	Please refer <a href="#">ANNEX – C.</a>
5.	<b>Requirements which can be tested in a day :</b>		
	i) Dimensions ( <i>Clause 5</i> ) ii) Tensile Strength and Elongation at Break ( <i>Clause 6.1</i> ) iii) Tension Set ( <i>Clause 6.2</i> ) iv) Joint Adhesion Strength ( <i>Clause 6.4</i> ) v) Leak Test ( <i>Clause 6.5</i> )		
6.	<b>Scope of the Licence :</b>		
	“Licence is granted to use Standard Mark as per IS 2415:2015 with the following scope:		
	Name of the product	Cycle Rubber Tube	
	Type	Class A , Class B, Class C , Class D	

ANNEX A

**Grouping Guidelines**

1. The parameters as given below shall be considered for grouping of Cycle Rubber Tubes as per IS 2415:2015 for GOL/Inclusion:

Class of Tubes- *Class A* or *Class B* or *Class C* or *Class D*

2. The Firm shall declare the Class of various tubes they intend to cover in the Licence.
3. Tubes with different sizes shall be considered as one group, provided the Class remains the same. Any one Size from each Class shall be tested for covering all the sizes of tubes in that group.
4. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.
5. During the operation of the Licence, BO shall ensure that all the types and sizes covered in the Licence are tested in rotation, to the extent possible.

ANNEX - BList of Test Equipments**Major test equipment required to test as per the Indian Standard**

<b>Sl. No.</b>	<b>Tests used in with Clause Reference</b>	<b>Test Equipment</b>
1.	Dimensions as per <i>clause 5</i>	a) Vernier Caliper b) Measuring Scale and Tape c) Dial Thickness Gauge
2.	Tensile Strength and Elongation at Break as per <i>Clause 6.1</i>  Tension Set as per <i>Clause 6.2</i> Ageing Test as per <i>Clause 6.3</i> Joint Adhesion Strength as per <i>Clause 6.4</i>	a) Dumb-bell cutter b) Tensile testing machine c) Vernier caliper d) Extensometer e) Micrometer f) Hot air oven (thermostatically controlled) with Digital temperature indicator g) Stop watch
3.	Leak Test as per <i>clause 6.5</i>	a) Air Compressor or vacuum pump with pressure indicator  b) Water tank of suitable size to accommodate inflated tube
4.	Valve Test as per <i>clause 6.6</i>	a) Ring Gauges b) Vernier Caliper
5.	Laboratory conditions for Tensile Test	a) Air conditioner

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

ANNEX - C

**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 equipment.

**2. TEST RECORDS** – The manufacturer shall maintain test records for the tests carried out to establish conformity.

**3. LABELLING AND MARKING** – As per the requirements of IS 2415: 2015.

**4. CONTROL UNIT** – All cycle rubber tubes of the same type and manufactured from the material of the same consignment/ batch of rubber compound in a day, 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 Standard and covered by the licence should 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

(1)			(2)	(3)			
Test Details			Test equipment requirement	Levels of Control			
Cl.	Requirement	Test Methods		R: required (or) S: Sub-contracting permitted	No. of Sample	Frequency	Remarks
		Clause	Reference				
5	Dimensions	5 , Table 2	IS 2415	R	10	Every Control unit	
6.1	Tensile Strength and Elongation at Break	6.1 Table 3	IS 2415  IS 3400 (Part 1)	R	Two tubes	Every Control unit	In case of failure in any of the characteristics, two more tubes shall be tested for that characteristic. In case of any further failure, control unit shall be rejected.
6.2	Tension Set	6.2	IS 2415  IS 3400 (Part 13)	R	Two tubes	Once in a month	
6.3	Ageing Test	6.3	IS 2415  IS 3400 (Part 4)	R	Two tubes	Once in a month	In case of failure in any of the characteristics, two more tubes shall be tested for that characteristic. In case of any further failure, control unit shall be rejected.

6.4	Joint Adhesion Strength	6.4.1 6.4.1 6.4.3	IS 2415  IS 3400 (Part 1)	R	Two tubes	Once in a month	In case of failure in any of the characteristics, two more tubes shall be tested for that characteristic. In case of any further failure, control unit shall be rejected.
6.5	Leak Test	6.5	IS 2415	R		Each tube	
6.6	Valve Test		IS 532	S	—	Each Consignment	No further testing is required, if accompanied with test certificate or ISI marked
6.7	Manufacture and Workmanship	6.7.1 6.7.2 6.7.4	IS 2415	R		Each Tube	
		6.7.3	IS 2415	10		Every 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.