उत्पाद मैन्युअल
आई एस 15633: 2022 के अनुसार
स्वचलन वाहन - सवारी कारों के लिए वातिल टायर -आड़ी और रेडियल प्लाई के लिए

दस्तावेज़ संख्या – पी एम/आई एस 15633/7/मार्च 2026

भारतीय मानक ब्यूरो की स्कीम–I (अनुरूपता मूलयाांकन) विनियम, 2018 के तहत यह उत्पाद मैन्युअल प्रमाणीकरण के प्रचालन में रीति और पारिर्शिता की सुसंगतता सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों और लाइसेंसी द्वारा संदर्भ सामग्री के रूप में उपयोग किया जाएगा। बीआईएस प्रमाणीकरण लाइसेंस/ प्रमाणपत्र प्राप्त करने के इच्छुक भावी आवेदकों द्वारा भी इस दस्तावेज़ का उपयोग किया जा सकता है ।

PRODUCT MANUAL FOR
PNEUMATIC TYRES FOR PASSENGER CAR VEHICLES- DIAGONAL AND RADIAL PLY
ACCORDING to IS 15633:2022

Document No.- PM/ IS 15633/ 7/ March 2026

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.

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1.	**Product**	:	IS 15633: 2022
	Title	:	PNEUMATIC TYRES FOR PASSENGER CAR VEHICLES – DIAGONAL AND RADIAL PLY
	No. of Amendments	:	Two
2.	**Sampling Guidelines:**		
a)	**Raw material**	:	---
b)	**Grouping guidelines**	:	Each type of Tyre as per the approved Family of Tyre according to Clause 6.2.5.2 of IS 15633:2022 shall be tested for GoL/CSoL.If a Tubeless Tyre version is approved, Tube version for the same Tyre Designation may also be covered in the Scope of Licence based on the Manufacturing/Testing capabilities of the Manufacturer.
c)	**Sample Size**	:	4 Tyres (5 tyres in case of compliance to clause 4.2.2 is required, 6 tyres in case of Run flat or Extended mobility tyre)
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**	:	Please refer ANNEX – C
6.	**Scope of the Licence**	:	Please refer ANNEX – D

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ANNEX A

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	i. Pressure Gauge ii. Steel Tape iii. Pie Tape iv. Vernier Caliper v. Thermo Hygrometer vi. Measuring Rim	Dimensions (Cl. 4.1)
2	i. Tyre Drum Testing Machine ii. Load iii. Test Drum iv. Pressure Gauge v. Test Rim	Load/Speed Performance Test (Cl. 4.2)
3	i. Tyre Drum Testing Machine ii. Load iii. Test Drum iv. Pressure Gauge	Endurance Test (Cl. 4.3)
4	i. Testing Device (Bead Unseating Block) ii. Pressure Gauge iii. Test Rim iv. Load	Bead Unseating Resisting Test (For Tubeless Tyres) (Cl. 4.4)
5	i. Pressure Gauge ii. Depth Gauge	Tread Wear Indicators (Cl. 4.5)
6	i. Tyre Strength Test Machine ii. Pressure Gauge iii. Cylindrical Steel Plunger iv. Linear Scale v. Test Rim	Tyre Strength Test (Plunger Test) (Cl. 4.6)

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

ANNEX B
Scheme of Inspection And Testing

1. QUALITY ASSURANCE PLAN

1.1 It is expected that during operation of BIS licence, manufacturers will implement a Quality Assurance Plan (QAP) i.e. a plan of regular testing and in-process controls, designed to ensure that the product bearing the Standard Mark conforms to all requirements of the Indian Standard.

1.2 The manufacturers shall define a Quality Assurance Plan (QAP) defining the control unit (i.e. lot/batch etc.), the levels of control (i.e. the frequency and number of samples for conducting the differenttests as per the Indian Standard) and declare the arrangement for testing i.e. whether in-house or subcontracting/sharing for each applicable test and submit the same to BIS Branch Office for information. The manufacturer shall comply with the QAP and maintain test records in accordance with para 2.1.

1.3 **RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT**:

1.3.1 For the guidance of manufacturers, the recommended definition of control unit is quantity of Tyres manufactured under the same Family (up to 30000 Tyres). For definition of Family, clause 6.2.5.2 of IS 15633: 2022 shall apply.

1.3.2 For the guidance of manufacturers in preparing the Quality Assurance Plan, recommended levels of control are given in Table 1.

1.3.3 The manufacturer shall ensure inspection and testing as per the Quality Assurance Plan submitted by them on the whole production of the factory which is covered by this plan. Alternatively, the manufacturer has the option of adherence to the quality plan as per levels of control recommended in column 3 of Table 1.

1.3.4 However, all manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard.

2. ENSURING COMPLIANCE THROUGH TESTING- Manufacturers shall ensure compliance of their products to all the requirementsof the Indian Standard for which they may have in-house test facilities. However, there is no obligation to maintain in-house laboratory. Licensee may use alternative arrangements for tests of the production as per the declared QAP. Various alternatives are available for operation of BIS certification as given below and the relevant guidelines for availing such relaxations by the manufacturers, as amended from time to time, are to be referred:

i) Shared testing resources like common facility,

ii) Cluster based testing facility,

iii) Sub-contracting to outside laboratories which may either be:

a) BIS recognised/empanelled laboratories, or

b) Any accredited laboratory as per ISO/IEC 17025

2.1 **TEST RECORDS**- The manufacturers shall maintain test records for the tests carried out (either in-house or at a sub-contracted or at shared test facility) to establish conformity of the product to the Standard for operation of licence. For the tests being subcontracted or conducted at a shared test facility, test results issued by the laboratories or test facilities,

shall be made available for inspection by BIS.

3. **LABELLING AND MARKING** – As per the requirement of IS 15633:2022. The Standard Mark, as given in the Schedule of the licence, shall be marked on each Tyre provided always that the product thus marked conforms to all the requirement of the specification.

In addition, the licence no. CM/L-_____ and details of BIS website shall be marked at an appropriate place on product or package as follows: "For details of BIS certification please visit www.bis.gov.in". Alternatively, a sticker or bead spacer or the like may be affixed on the tyre to provide details of BIS website as above.

4. **RAW MATERIAL CONTROL** – All the incoming raw materials shall be tested and proper records maintained before releasing material for production. Alternatively, the raw material shall be accompanied by the test certificate of the supplier. Recommended list of various raw materials is given in Annex I for guidance only.

5. **PROCESS CONTROL** – The frequency of inspection and parameters shall be according to the approved plant quality audit programme. The recommendatory areas of manufacturing as given in Annex II (given as guidance only) may be covered in this programme. During each stage, the given parameters and equipment set up shall be controlled, audited and recorded.

6. **REJECTION - T**he production which conforms to the Indian Standard and covered under the scope of this licence shall be marked with the Standard Mark. 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 (*Recommended levels of control- for guidance only*)

(1)				(2)		
Test Details				**Levels of Control**		
Cl.	Requirement	Test Methods Clause	Reference	No. of Sample	Frequency	Remarks
4.1	Tyre Dimensions	Annex B&C Table 7 to 12	IS 15633	One	From every Two Control Units of a Family	In case of failure in any requirement, marking shall be suspended, reasons for failure investigated and corrective actions taken. Double the number of samples indicated shall then be tested and marking and original frequency may be restored only if both the samples pass. The families which are not able to meet the frequency specified for tests under clause 4.1 to 4.6, it is to be ensured that complete testing is done at least once in a year for such families.
4.2	Load/Speed Performance Test	Annex D Table 13	IS 15633	One/Two as applicable (See 4.2.1 and 4.2.2 of IS 15633)	From every Ten Control Units of a Family	
4.3	Endurance Test	Annex E Table 14	IS 15633	One	From every Ten Control Units of a Family	
4.4	Bead Unseating Resistance Test for Tubeless Tyres	Annex F Table 15 & 16	IS 15633	One	From every Ten Control Units of a Family	
4.5	Tread Wear Indicators	4.5.1 to 4.5.3	IS 15633	One	From every Two Control Units of a Family	
4.6	Tyre Strength (Plunger Test)	Annex G Table 17,18, 18A	IS 15633	One	From every Ten Control Units of a Family	
5	Marking	5 , Annex H & J	IS 15633	Each Tyre		

ANNEX I

RAW MATERIAL CONTROL (*Recommended- For guidance only)*

(Clause 5.1 of SIT)

Sl No	Item	Tests
1	Natural Rubber	a) Visual inspection b) Moisture content c) Ash content d) Dirt content e) Viscosity
2	Synthetic Rubber	a) Moisture content b) Ash content c) Viscosity d) Compound testing
3	Lattices	a) Contents b) Viscosity c) TSC
4	Carbon Black	a) Moisture content b) Ash content c) DBP value d) Iodine number e) Sieve residue
5	Activators	a) Moisture content b) Sieve residue c) ASSAY d) Ash content e) HCL insoluble f) Acid number
6	Vulcanising Agents	a) Melting point b) Acetone insoluble c) Specific gravity d) Softening point e) Solubility
7	Process Oil	a) Aniline point b) Viscosity c) Specific gravity
8	Tyre Cord	a) Warp sheets i) Breaking strength ii) Percentage elongation iii) Twist iv) Moisture content b) Nylon square woven fabric i) Strip and grab ii) Adhesion strength iii) EPI
9	Bead Wire	a) Breaking strength b) Percentage elongation c) Torsion d) Bend test e) Adhesion f) Copper coating
10	Solvent	a) Specific gravity b) Distillation range

ANNEX II

PROCESS CONTROL (**R*ecommended- For guidance only***)

(Clause 5.2 of SIT)

Area	Parameters to be controlled
Compounding	Ingredient weights
Mixing	Time/Temperature or Energy, Sequence
Dip Preparation	Ingredient weights, time, temperature sequence
Dipping	Temperature, stretch/tension, speed/time, width
Extrusion	Stock identification, temperature, width, dimensions
Calendering	Stock/fabric identification, temperature, width, gauge
Bead making	Stock/wire identification, diameter, No. of strands, No. of turns
Stock preparation	Stock identification, width, angle
Tyre building	Component identification, sequence
Tyre curing	Time, temperature/pressure, sequence
Final Inspection	Every tyre shall be visually examined for defects and appearance
In process Testing	
COMPOUND Final Batch	 Specific Gravity Rapid Modulus Rheometer Test Physical Properties
DIP SOLUTION Final	 Total solids pH value
DIPPED FABRIC Tyre Cord warp sheet Sq. woven nylon fabric	 Breaking strength Percentage Elongation Adhesion & Dip pick up E.P.I. Strength Adhesion and dip pick up
CALENDERED FABRIC Tyre cord warp sheet Sq. woven fabric	 E.P.I. Gauge Sq. metre weight Gauge Sq. metre weight

ANNEX C

Possible Tests in a Day

1. Marking,
2. Bead Unseating Resistance Test (for Tubeless Tyres),
3. Tyre Strength Test (Plunger Test),
4. Tread Wear Indicators

ANNEX D

Scope of the Licence

Licence is granted to use Standard Mark as per IS 15633:2022 with the following scope:

Name of the Product	**Pneumatic Tyres for Passenger Car Vehicles**
Tyre Size Designation	
Application category (road or off road or snow)	
Construction Type (Standard/ Reinforced)	
Structure (Diagonal or Radial or Bias belted or Run flat)	
Speed Category	
Use of Tube (With Tube or Tubeless)	
Load Index (or Load Capacity)	
Ply Rating	
Fabric Material- Nylon (Plyamide)/Polyster/rayon etc.	