



उत्पाद मैनुअल
मोटरसाइकिल चेन – विशेषताओं और परीक्षण विधियों
आई एस 11740:2014 के अनुसार

PRODUCT MANUAL FOR
MOTORCYCLE CHAINS – CHARACTERISTICS AND TEST METHODS
ACCORDING TO IS 11740: 2014

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो) अनुरूपता मूल्यांकन (विनियम, 2018 की योजना -I के तहत प्रमाणन के संचालन में एकरूपता और पारदर्शिता के लिए इस उत्पाद मैनुअल का उपयोग सभी क्षेत्रीय / शाखा कार्यालयों और लाइसेंसधारियों द्वारा संदर्भ सामग्री के रूप में किया जाएगा। दस्तावेज़ का उपयोग बीआईएस प्रमाणन प्राप्त करने के इच्छुक संभावित आवेदकों द्वारा भी किया जा सकता है।

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure uniformity 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.

1.	मानक संख्या IS No.	:	IS 11740 : 2014 / ISO 10190 : 2008
	शीर्षक Title	:	Motorcycle Chains – Characteristics and Test Methods
	संशोधनों की संख्या No. of amendments	:	Nil
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	--
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	Please refer to <i>Annex-A</i>
c)	नमूने का परिमाण Sample Quantity	:	Five lubricated chain and one unlubricated chain alongwith associated chain sprockets
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	Please refer to <i>Annex-B</i>

4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	:	Please refer to <i>Annex-C</i>
5.	एक दिन में संभावित परीक्षण Possible tests in a day	:	All tests except dynamic testing as per Cl 3.4.5
6.	लाइसेंस का दायरा /Scope of the Licence:		
	“Licence is granted to use Standard Mark as per IS 11740: 2014 / ISO 10190: 2008 with the following scope:		
	Name of the product	Motorcycle Chains – Characteristics and Test Methods	
	Type	Bush chains / Roller chains	
	Designation		
	Chain Sprockets	With / without associated Chain Sprockets	

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ANNEX-A**GROUPING GUIDELINES**

1. Motorcycle chains are of two types (Bush chains / Roller Chains) and are designated by their ISO Chain Number.
2. The Motorcycle chains are thus classified as follows:

Type	ISO Chain Number
Bush Chains	25H 219 219H 05T 270H
Roller chains (400 series)	415M 415 415MH 420 420MH 428 428MH
Roller chains (500 series)	520 520MH 525 525MH 530 530MH
Roller chains (600 series)	630

3. For considering GoL / CSoL, Motorcycle chain of maximum dynamic strength of each type shall be tested to cover all other ISO Chains Number of that group.
4. The Firm shall declare the varieties of Motorcycle chain they intend to cover in the Licence. 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 varieties covered in the Licence are tested in rotation, to the extent possible.

Note: Manufacturer shall declare the associated chain sprockets applicable for each type of motorcycle chains (see Cl. 4 of IS 11740), if the chain is supplied with the sprockets.

ANNEX – B

**LIST OF TEST EQUIPMENTS
(INDICATIVE LIST, FOR GUIDANCE ONLY)**

Sl. No.	Tests Used In With Clause Reference	Test Equipment/Chemical
1	Dimensions	Micrometer Vernier Caliper OTO Gauge & Plug Gauge any suitable mechanism to measure pitch
2	Tensile Testing (Cl .3.4.2)	Universal Testing Machine
3	Preloading (3.4.3) & Length validation (3.4.4)	Chain Preloading Machine OLM Scale
4	Dynamic Testing	High Frequency Fatigue Testing Machine

ANNEX CSCHEME OF INSPECTION AND TESTING**1. QUALITY ASSURANCE PLAN**

1.1 It is expected that manufacturers (licensees/applicants) will implement a Quality Assurance Plan 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 defining the control unit (i.e. lot/batch etc.) and the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and submit the same to BIS Branch Office for information. The manufacturer shall comply with the same and maintain test records in accordance with para 2.4.

1.3 RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT:

1.3.1 For the guidance of manufacturers, the recommended definition of control unit is: *Motorcycle chains of each Chain designation manufactured in a day under similar manufacturing conditions* shall constitute a control unit.

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.

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

2. ENSURING COMPLIANCE THROUGH TESTING- It is expected that manufacturers (licensees/applicants) will establish a suitably equipped and staffed in house laboratory (In house testing facility) for testing at least those parameters of the Indian Standard which require routine testing for ensuring quality of the product. This includes in-process controls as may be defined and put in place by the manufacturer and testing parameters/requirements which can only be performed in the factory.

2.1 For the guidance of manufacturers, Table 1 giving the recommended levels of control is given below. Column 2 of Table 1 indicates routine tests where test equipment is required in house as “R” or other tests which can be subcontracted as “S”. Subcontracting is permitted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.2 For MSME manufacturers, the requirement of maintaining a laboratory/in-house testing facility for routine tests (indicated as “R” in Column 2 of Table 1) is also optional.

2.2.1 MSME manufacturers may utilize common cluster based facilities as per guidelines for the utilization of cluster based test facilities by MSMEs or the provisions of Sharing of testing facilities or get testing done from BIS recognized/empaneled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.3 Large Scale manufacturers shall maintain an in-house laboratory equipped at least with test facilities for routine tests (indicated as “R” in Column 2 of Table 1), where different tests given in the specification shall be carried out in accordance with the method given in the specification. They shall also implement a calibration plan for the in-house test equipment.

2.3.1 Alternatively, in lieu of an in-house laboratory, large scale manufacturers can also utilize the provisions of Sharing of testing facilities as per the Guidelines for Grant of Licence available on BIS website www.bis.gov.in. (Under Conformity Assessment>Product Certification Process). Even for subcontracted tests, provisions for sharing of testing facilities can be utilized.

2.4 TEST RECORDS- The manufacturers maintaining an in-house laboratory or utilizing common cluster based facilities or shared test facilities shall maintain test records for the tests carried out to establish conformity. For the tests being subcontracted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025, test reports issued by the laboratories shall be available for inspection by BIS.

3. PACKING AND MARKING - The Standard Mark as given in the Schedule of the licence shall be incorporated legibly and indelibly on product provided always that the material so marked conforms to each requirement of the specification.

3.1 Marking shall be done as per Cl. 3.5 of IS 11740: 2014.

3.2 **Additional Marking requirements:** The material shall also be marked with the following additional requirement on the individual product packaging.

- a) “For BIS certification details please visit www.bis.gov.in”
- b) *Batch Number and Date of Manufacture*

4. HYGIENIC CONDITIONS (if applicable) – No Specific requirements mentioned in the standard and hence not applicable for this product.

5. REJECTION - All the 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
(ONLY FOR GUIDANCE PURPOSE)

(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				
3.3	Dimensions	3.3 Table 1	IS 11740	R	Firm to have adequate in process controls to check compliance to this parameter as per the requirements in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity.		
3.4	Performance requirements and tests						
3.4.2	Tensile Testing	3.4.2.2 Table 1	IS 11740	R	One	Each Control Unit	
3.4.3	Preloading	3.4.3, Table 1	IS 11740	R	All Chains		
3.4.4	Length Validation	3.4.4	IS 11740	R	Firm to have adequate in process controls to check compliance to this parameter as per the requirements in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity.		
3.4.5	Dynamic Testing	3.4.5	IS 11740	S	One	Once in a year for each type of designation manufactured during the period	
4	Chain sprockets	Annex A Cl 5	IS 11740 ISO 606	R	Firm to have adequate in process controls to check compliance to this parameter as per the requirements in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity.		