



**PRODUCT MANUAL FOR
DOMESTIC PRESSURE COOKER
AS PER IS 2347:2017**

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 license/certificate.

1.	Product	:	IS 2347:2017
	Title	:	Domestic Pressure Cooker
	No. of Amendments	:	Three
2.	Sampling Guidelines:		
a)	Raw material	:	Please refer <u>ANNEX-A</u>
b)	Grouping guidelines	:	Please refer <u>ANNEX-B</u>
c)	Sample Size	:	One Pressure Cooker
3.	List of Test Equipment	:	Please refer <u>ANNEX – C</u>
4.	Scheme of Inspection and Testing	:	Please refer <u>ANNEX – D</u>
5.	Possible tests in a day	:	All tests except for coating tests
6.	Scope of the Licence :		
	Licence is granted to use Standard Mark as per IS 2347 :2017 with the following scope:		
	Name of the product	Domestic Pressure Cooker	
	Capacities		
	Type of coating (if applicable)	Hard Anodized /Non-stick/Powder coated/Ceramic coated/ High temperature resistant liquid coated	
	Lid	Inner Lid/Outer Lid	
	Material	Aluminium Alloy/Stainless Steel	
	Nature of bottom/base (if applicable)	Induction friendly/Composite bottom	
	Shape		
	Safety Pressure Relief Device	Resettable/Destructible	
	External/Integral electrical heat source		

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ANNEX- A**Raw Material**

Components	Raw Material
Body, Lid, Containers and Grid	Clause 5.1 of IS 2347
Safety Relief Device (Fusible Plug)	Clause 5.2 of IS 2347
Gasket	Clause 5.3 of IS 2347
Handles and Knobs	Clause 5.4 of IS 2347
Pressure Regulating Device	Clause 5.5 of IS 2347
Vent Seal Pin for Pressure Regulating Device	Clause 5.6 of IS 2347
Vent Pipe	Clause 5.7 of IS 2347
Vent Pipe Nut	Clause 5.8 of IS 2347
Spring	Clause 5.9 of IS 2347

ANNEX - B**Grouping Guidelines**

1. The parameters given below shall be considered for grouping of Domestic Pressure Cooker as per IS 2347: 2017 for GoL/CSoL:

(a) Nominal Capacity

Group	Nominal Capacity (litres)
Group I	1 to 6.5
Group II	7 to 15.5
Group III	16 to 24

(b) Type of coating (if applicable): Hard Anodized/Non-stick/Powder coated/ Ceramic coated/ High temperature resistant liquid coated

(c) Lid: Inner Lid/Outer Lid

(d) Material: Aluminium Alloy/Stainless Steel

(e) Nature of Bottom/Base (if applicable): Induction friendly/Composite bottom

(f) Shape: As declared (*Drawing or Suitable document to be collected*)

(g) Safety Pressure Relief Device: (Resettable/Destructible)

(h) External/Integral electrical heat source

2. Pressure Cooker (preferably the highest nominal capacity) of same Type (Type of coating, Lid, Material, Nature of Bottom/Base, Shape, Safety Pressure Relief Device and heat source) from each group shall be tested to cover the entire nominal capacities from the particular group.
3. However, if Pressure Cooker with any type of coating i.e. Hard Anodized/ Non-stick/ Powder coated/ Ceramic coated/ High temperature resistant liquid coated is tested, Pressure Cookers without coating from the same group may also be covered.
4. The Firm shall declare the varieties of Domestic Pressure Cookers intended to be covered 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.

ANNEX - C**List of Test Equipment****Major test equipment required to test as per the Indian Standard**

Sl. No.	Test	Clause	Apparatus
1	Capacity Test	4.1	Measuring Jar
2	Diameter of Vent Pipe	6.1.1	Vernier caliper
3	Test for temperature responsive pressure relief device	6.3	Pressure Gauge
			Measuring Jar
			LPG Gas Stove
			LPG Cylinder
4	Test for Hard Anodized Surface	7.4	Coat Thickness Meter
			Emery Paper
		Clause E 5	Gas Stove with LPG Cylinder
			Nitric Acid
			Aluminium Blue 2LW
			Methyl violet
			Methyl Alcohol/ Anthraquinone Violet R Dye Solution
			Thermometer
			Stop Watch
		Annex P	5% Sodium Hydroxide Solution
			Gas Stove with LPG Cylinder
			Thermometer
			Multimeter
5	Air Pressure Test	8.1	Air Compressor
			Pressure Gauge
6	Proof Pressure Test	8.2	Fabricated Hydraulic Set up
			Pressure Gauge
7	Operating Pressure Test Pressure Regulating Device	8.3	Pressure Gauge
			Measuring Jar
			LPG Gas Stove
			LPG Cylinder
8	Test for safety Pressure Relief Device	8.4	Pressure gauge
			Measuring Jar
9	Bursting Pressure Test	8.5	Fabricated Hydraulic set up
			Pressure Gauge
10	Test for Removal of Lid under pressure	8.6	Fabricated Set up
			Dead Weight
			Pressure Gauge
11	Test for Spring loaded Mechanism	8.7	Set up for Spring Loaded Test
			Vernier Calipers

12	Test For Composite Bottom	8.8	
	Thickness		Micrometer
	Dimension		Steel Rule
	Coating Thickness Test		Coat Thickness meter
	Adhesion test		Steel Ball of 500gms
	Thermal Shock Test		Oven
	Dry Heat Test		LPG Stove or any suitable arrangement
	Staining Test		99% Glacial Acetic acid Sodium Chloride Distilled Water
13	Test for Induction Bottom	8.9	Induction cook top
			Gas Stove with LPG Cylinder
			Thermometer
14	External coating	8.11	Equipments as mentioned in IS 2347, IS 9730 & IS 9806
15	Internal coating	8.12	Equipments as mentioned in IS 9730
16	Electrical requirements	8.13	Equipments as per IS 302-2-15

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

ANNEX - D

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 2347: 2017.

4. CONTROL UNIT – All Pressure Cookers of the same Nominal Capacity and Type manufactured continuously under similar conditions of manufacture 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		
Clause	Requirement	Test Methods Clause Reference		R: required (or) S: Sub-contracting permitted	No. of Sample	Frequency	Remarks
4	Capacity	4	IS 2347	R	Two	Each Control Unit	
5	MATERIALS						
5.1	Body, Lid, Containers and Grid	5.1	IS 2347	S	One	Each consignment	#
5.2	Safety Relief Device	5.2	IS 2347	S	One	Each consignment	
5.3	Gasket	5.3	IS 2347	S	Three	Each consignment	
5.4	Handles and Knobs	5.4	IS 2347	S	One each	Each consignment	
5.5	Pressure Regulating Device	5.5	IS 2347	S	One	Each consignment	
5.6	Vent Seal Pin for Pressure Regulating Device	5.6	IS 2347	S	One	Each consignment	
5.7	Vent Pipe	5.7	IS 2347	S	One	Each consignment	
5.8	Vent Pipe Nut	5.8	IS 2347	S	One	Each consignment	
5.9	Spring	5.9	IS 2347	S	One	Each consignment	
6	CONSTRUCTION						
6.1, 6.2	Pressure Regulating Device, Safety Relief Device	6.1, 6.2	IS 2347	R	Each Cooker	---	---

6.3	Temperature Responsive Pressure Relief Device	6.3.1, Annex C	IS 2347	R	One	Each Control Unit	---
		6.3.2, Annex D	IS 2347	R	One	Each Control Unit	---
6.4	Handles and Knobs	6.4	IS 2347	S	One from each Component	Each consignment	#
7.1 7.2	Workmanship and Finish	7.1,7.2	IS 2347	R	Each Cooker	---	---
7.3		7.3	IS 2347	R	One from each Component	Each consignment	#
7.4	<i>Test for Hard Anodized Surface Annex- E IS 2347</i>						
	Finish and Appearance	5.1, 5.2	IS 6057	R	Each Cooker	---	---
	Thickness		IS 5523 IS 6012	R	One	Each Control Unit	---
	Abrasion Resistance	7	IS 6057	R	One	Each Control Unit	---
	Hardness Test (Type Test)	E-4.1	IS 2347	S	One	Once in Six months or Two Lakh cookers whichever is earlier	---
	Hardness Test (Routine Test)	E 4.2 10.1	IS 2347 IS 6057	R	One	Each Control Unit	---
	Resistance to Staining of Anodized Coating	E 5, Annex N	IS 2347	R	One	Once in a week	---
	Alkali Resistance	E 6, Annex P	IS 2347	R	One	Once in a week	---
8	TESTS						
8.1	Air pressure test	8.1	IS 2347	R	One from each capacity and Type	Daily	---

8.2	Proof Pressure Test	8.2, Annex F	IS 2347	R	One from each capacity and Type	Once in a month	---
8.3	Operating Test for Pressure Regulating Device	8.3, Annex G	IS 2347	R	One from each capacity and Type	Once in a month	---
8.4	Test for Safety Pressure Relief Device	8.4, Annex H Annex G	IS 2347	R	One from each capacity and Type	Once in a month	---
8.5	Bursting Pressure Test	8.5, Annex J	IS 2347	R	One from each capacity and Type	Once in a month	---
8.6	<i>Tests for Removal of Lid under Pressure</i>						
	For Outer Lid Cooker	8.6.1, Annex K	IS 2347	R	One from each capacity and Type	Once in a month	---
	For Inner Lid Cooker	8.6.2, Annex L	IS 2347	R			
8.7	Test for Spring Loaded Mechanism	8.7	IS 2347	R	One from each capacity and Type	Once in a month	---
8.8	Test for Composite base/ bottom	8.8	IS 2347 IS 15960	R	One	Once in a week	---
8.9	Test for Induction compatible base	8.9, Annex M	IS 2347	R	One	Once in a week	---
8.10	Test for Handles	8.10	IS 2347 IS 13395	R	One from smallest and one from largest	Once in a year	#
8.11	External Coating (Powder Coating/Ceramic coating/ High temperature resistant liquid coating) -wherever applicable						
	Thickness	7.2	IS 9730	S	One		

	Salt water corrosion	7.4	IS 9730	S	One	Once in a month	Additional sample shall be tested whenever there is change in composition of coating material/ process of coating.
	Adhesion	7.5	IS 9730	S	One		
	Thermal shock	8.11.1	IS 2347	S	One		
	Coating	5	IS 9806	S	One	Once in six months	
8.12	Internal Coating (Non-Stick Coating) as per IS 9730 (wherever applicable)						
	Visual Defects	4.2	IS 9730	R	All	Once in a week	Additional sample shall be tested whenever there is change in composition of coating material/ process of coating.
	Thickness	4.3		R	5% of total production or five cookers <i>Min.</i>		
	Non- Stick Quality	4.4		R	Two		
	Salt Water Corrosion Resistance	4.5		R	One		
	Adhesion	4.6		R	One		
8.13	Electrical Requirements for pressure cooker with integral electrical heating device, as applicable as per IS 302-2-15						
	Type Tests						
	Protection against access to live parts	8	IS 302-2-15	R	Each cooker		
	Power input and current	10	IS 302-2-15	R	One	Once in a month	

	Heating	11	IS 302-2-15	R	One	Once in a month	
	Leakage Current and electric strength at operating temperature	13	IS 302-2-15	R	One	Once in a month	
	Transient overvoltages	14	IS 302-2-15	R	One	Once in a month	
	Moisture resistance	15	IS 302-2-15	S	One	Once in a month	
	Leakage current and electric strength	16	IS 302-2-15	R	One	Once in a month	
	Overload protection of transformers and associated circuits	17	IS 302-2-15	R	One	Once in a month	
	Abnormal operation	19	IS 302-2-15	R	One	Once in a month	
	Stability and mechanical hazards	20	IS 302-2-15	S	One	Once in a month	
	Mechanical strength	21	IS 302-2-15	S	One	Once in a month	
	Construction	22	IS 302-2-15	R	One	Once in a month	
	Internal wiring	23	IS 302-2-15	R	One	Once in a month	
	Components	24	IS 302-2-15	R	One	Once in a month	
	Supply connection and external flexible cords	25	IS 302-2-15	R	One	Once in a month	
	Terminals for external conductors	26	IS 302-2-15	R	One	Once in a month	

Provisions for earthing	27	IS 302-2-15	R	Each cooker	
Screws and connections	28	IS 302-2-15	R	One	Once in a month
Clearances, creepage distances and solid insulation	29	IS 302-2-15	R	One	Once in a month
Resistance to heat and fire	30	IS 302-2-15	R	One	Once in a month
Resistance to rusting	31	IS 302-2-15	R	One	Once in a month
Radiation, toxicity and similar hazards	32	IS 302-2-15	R	One	Once in a month
Routine Tests					
Protection against access to live parts	8	IS 302-2-15	R	Each cooker	
High voltage	13.3	IS 302-2-15	R	Each cooker	
Provisions for earthing	27	IS 302-2-15	R	Each cooker	

No further testing is required if accompanied with Test Certificate or ISI marked.

NOTE-1: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

NOTE-2: Levels of control given in column 3 are obligatory in nature.