



**PRODUCT MANUAL FOR
PORTABLE LIQUEFIED PETROLEUM GAS APPLIANCES
OPERATING AT VAPOUR PRESSURE
ACCORDING TO IS 11241: 2024**

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 11241: 2024
	Title	:	Portable Liquefied Petroleum Gas Appliances operating at vapor pressure
	No. of Amendments	:	One
2.	Sampling Guidelines:		
a)	Raw material	:	As per Cl. 5 of IS 11241: 2024
b)	Grouping guidelines	:	Each type of Portable LPG Appliances such as Cooking appliances, Lighting appliance, Heating appliance (Space heaters, Gas Iron), Blow torches, Laboratory Burners and Radiant elements etc. shall be tested for Grant of licence/Change in scope of licence (GoL/CSoL). Each category of appliance (based on the gas used), shall be tested separately for GoL/CSoL.
c)	Sample Size	:	Two
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 :		All tests
6.	Scope of the Licence :		
	“Licence is granted to use Standard Mark as per IS 11241:2024 with the following scope:		
	Name of the product		Portable Liquefied Petroleum Gas appliances operating at vapour pressure

	Type	Cooking appliances, Lighting appliance, Heating appliance (Space heaters, Gas Iron), Blow torches, Laboratory Burners and Radiant elements etc.
	Category of appliance	Category direct pressure- Butane Category direct pressure- Butane-Propane Mixture Category direct pressure- Propane Mixture

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.	Strength and stability, Cl. 5.5	Test load, stop watch, scale
2.	Gas soundness test , Cl.5.6	Compressor, Special fixture to hold the valve assembly, Leak test Equipment, Pressure gauge
3.	Transport, Fixing and Mobility Devices- Cl. 5.8	Test fixture for different appliances
4.	Variation of heat input, Cl. 5.19	Test bench as per Cl. 6.19 of IS 11241
5.	Resistance to overheating, Cl. 5.20	Test bench as per Cl. 6.20 of IS 11241
6.	Temperature of panels (floors, walls or ceilings), Cl. 5.22	Installation and test bench as per Cl. 6.22 of IS 11241, Temperature sensors
7.	Ignition and Flame stability test Cl. 5.23	Test bench as per Cl. 6.23
8.	Resistance to draughts test Cl. 5.24	LPG cylinder fixed with adjustable pressure regulator, Pressure gauge, Anemometer, Fan as per Cl. 6.24
9.	Resistance to liquid spillage, Cl. 5.25	Vessel as per Cl. 6.1.4, 6.1.5 AND Test set up as per Cl. 6.25 of IS 11241
10.	Combustion Test as per clause 5.26	Gas collection hood, Orsat apparatus, Chemicals, Gas regulator, Stop watch
11.	Page 15, Cl. 5.28- Safety at high temperature	Steel disc of required thickness, pressure recording device as per Cl. 6.28
12.	Rational use of energy, Cl. 5.30	Vessel as per Table 3, test bench as per Cl. 6.30
13.	Durability of Marking, Cl. 5.31	Water soaked rag, Water gasoline/petrol soaked rag

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 different tests 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 Control Unit- For the purpose of this scheme, recommended control unit is Quantity of appliance of one type and category (depending on gas used as per Cl. 4.2 of IS 11241) from same consignment of raw material/components under similar conditions manufactured in one day.

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 requirements of 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. PACKING, LABELLING AND MARKING – As per the requirement of IS 11241:2024. The Standard Mark, as given in the Schedule of the licence, shall be marked on each appliance, 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”.

4. No change in design of any type of gas appliance shall be made in respect of critical factors namely design of burner in respect of number of holes and their diameter, injector jets, primary air opening, type of gas appliance body and its finish, material and design of burner etc. In case any change is made, BIS shall be informed and samples made available for testing. The modified gas appliance shall be marked only after the sample has been found conforming to the Standard and permitted to do so by the BIS

5. REJECTION - 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 (Recommended levels of control- For guidance only)

(1)				(2)		
Test Details				Levels of Control		
Cl.	Requirement	Test Method		No. of Sample	Frequency	Remarks
		Clause	Reference			
5.3	Materials	5.3	IS 11241	One	Each consignment	No further testing is required, if accompanied with the Test Certificate or ISI Marked
5.1	General Safety requirements	5.1	IS 11241	Manufacturer shall exercise adequate levels of control to ensure that entire production should conform to the Standard. Appropriate records of testing indicating conformity shall be maintained		
5.2	Adjustment of Burner	5.2	IS 11241			
5.4	Assembly, Cleaning, and Maintenance	5.4	IS 11241			
5.5	Strength and Stability	5.5	IS 11241	One	Each Control unit	—
5.6	Soundness of gas circuit assembly	5.6, 6.6	IS 11241	One	Each Control unit	—
5.7	Connections	5.7	IS 11241	One	Each Control unit	
5.8	Transport, Fixing and Mobility Devices	5.8	IS 11241	One	Each Control unit	
5.9	Taps and Needle Valves	5.9, 5.9.2	IS 11241	One	Each Control unit	
5.10	Control Handles	5.10	IS 11241	One	Each Control unit	
5.11	Injector jets	11, 11.1	IS 11241	One	Each Control unit	—
5.12	Ignition devices, where used	5.12	IS 11241	One	Each Control unit	
5.13	Flame supervision devices, where used	5.13, 6.13	IS 11241	One	Each Control unit	
5.14	Burner and Radiant elements	5.14, 6.6.3	IS 11241	One	Each Control unit	

(1)				(2)		
Test Details				Levels of Control		
Cl.	Requirement	Test Method		No. of Sample	Frequency	Remarks
		Clause	Reference			
5.15	Grids	5.15, 6.15	IS 11241	One	Each Control unit	
5.16	Turnspit	5.16, 6.16	IS 11241	One	Each Control unit	
5.17	Fireguards for Heating appliances	5.17, 6.17	IS 11241	One	Once in a week	
5.18	Locations and Compartments for cartridge or gas cylinder	5.18	IS 11241	One	Each Control unit	
5.19	Verification of Heat inputs	5.19, 6.19	IS 11241	One	Once in a month	Testing shall be done in such a way that each type and category of appliance manufactured during the month shall be tested at least once in the month
5.20	Resistance to overheating	5.20, 6.20	IS 11241	One	Once in a month	
5.21	Temperature of various parts of the appliance	5.21, 6.21	IS 11241	One	Once in a month	
5.22	Temperature of Panels	5.22, 6.22	IS 11241	One	Once in a month	
5.23	Ignition, Cross Lighting and Flame stability	5.23, 6.23	IS 11241	One	Once in a month	
5.24	Resistance to draught	5.24, 6.24	IS 11241	One	Once in a month	
5.25	Resistance to Liquid spillage	5.25, 6.25	IS 11241	One	Once in a month	
5.26	Combustion	5.26, 6.26	IS 11241	One	Once in a month	Testing shall be done in such a way that each type and category of appliance manufactured during the month shall be tested at least once in the month
5.27	Accumulation of Un-burnt gas	5.27, 6.27	IS 11241	One	Once in a month	

(1)				(2)		
Test Details				Levels of Control		
Cl.	Requirement	Test Method		No. of Sample	Frequency	Remarks
		Clause	Reference			
5.28	Safety at High temperature	5.28, 6.28	IS 11241	One	Once in a month	Testing shall be done in such a way that each type and category of appliance manufactured during the month shall be tested at least once in the month
5.29	Shooting-condensation	5.29, 6.29	IS 11241	One	Once in a month	
5.30	Rational use of energy	5.30, 6.30	IS 11241	One	Once in a month	
5.31	Durability of Markings	5.31, 6.31	IS 11241	One	Once in a month	