



**PRODUCT MANUAL FOR
UTILITY LIGHTERS – GENERAL CONSUMER -SAFETY REQUIREMENTS
ACCORDING to IS/ISO 22702:2003**

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/ISO 22702:2003
	Title	:	UTILITY LIGHTERS – GENERAL CONSUMER - SAFETY REQUIREMENTS
	No. of Amendments	:	1
2.	Sampling Guidelines:		
a)	Raw material	:	-
b)	Grouping guidelines	:	Please refer ANNEX – A
c)	Sample Size	:	10 Lighters
3.	List of Test Equipment	:	Please refer ANNEX – B
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – C
5.	Possible Test in a day	:	Flame generation as per Clause 3.1
6.	Scope of the Licence :		
	Licence is granted to use Standard Mark as per 22702:2003 with the following scope:		
	Name of the product	Utility Lighters – General Consumer	
	Type	Postmixing burner / Premixing burner, Refillable / Disposable , Adjustable/ non-adjustable / automatically adjusting, Self-extinguishing/ non- self-extinguishing	

BUREAU OF INDIAN STANDARDS
Manak Bhawan, 9, Bahadur Shah Zafar Marg,
New Delhi – 110002

ANNEX A

Grouping Guidelines

1. As per IS /ISO 22702:2003 , Lighters are classified into different types as given below:
 - (a) Postmixing burner lighter /Premixing burner lighter
 - (b) Adjustable lighter /non-adjustable lighter
 - (c) Self-extinguishing lighter / non -self-extinguishing lighter
 - (d) Refillable lighter /Disposable lighter
2. For considering GoL/CSoL, each type of Lighter of any reservoir capacity shall be tested for all the requirements to cover lighters of all reservoir capacities of that particular type.
3. The Firm shall declare the varieties of Lighters intended to be covered in the Licence. The Scope of Licence may be restricted based on the Manufacturing and testing capabilities of the Manufacturer.
4. 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 - BList of Test Equipments**Major test equipment required to test as per the Indian Standard**

Sl.No	Tests used in with clause reference	Test Equipments
1.	Flame Generation (Clause 3.1)	(a) Rotary Actuator/ Push-button Actuator
2.	Flame heights (Clause 3.2)	(a) Vertically Supported non-flammable Board (b) Draught Free Chamber
3.	Flame extinction (Clause 3.5)	(c) Digital Thermometer (d) Stop watch (e) Measuring Scale OR (f) Flame Height measurement apparatus
4.	Resistance to spitting or sputtering and flaring (Clause 3.4)	(a) Digital Thermometer (b) Stop Watch (c) Measuring Scale (d) Protector or other arrangement for measurement of 45°.
5.	Volumetric Displacement (Clause 3.6)	(a) Weighing Balance (b) Drilling machine and drill bit (c) Syringe (d) Digital Thermometer (e) Stop Watch
6.	Resistance to Dropping (Clause 4.2)	(a) Concrete Surface (b) Freezer (c) Hot Air Oven (d) Weighing Balance (e) Height Gauge
7.	Resistance to Elevated Temperature (Clause 4.3)	(a) Hot Air Oven (b) Weighing Balance (c) Enclosures (d) Digital Thermometer
8.	Burning Behaviour (Clause 4.4)	(a) Stop Watch (b) Measuring Scale (c) Protector or other arrangement for measurement of 45°. (d) Flame Height measurement apparatus
9.	Resistance to Continuous Burn (Clause 4.5)	(a) Draught Free Chamber (b) Digital Thermometer (c) Stop Watch (d) Measuring Scale

10.	Resistance to Cyclic Burn (Clause 4.6)	(a) Digital Thermometer (b) Stop Watch
11.	Compatibility with fuel (Clause 4.8)	(a) Container (b) Enclosures (c) Digital Thermometer (d) Weighing Balance (e) Hot Air Oven (f) Stop Watch
12.	Resistance to internal pressure (Clause 4.9)	(a) Pressure generating device (b) Pressure Gauge (c) Pressure regulating device
13.	Refilling of utility lighters (Clause 5)	(a) Stop Watch (b) Weighing Balance
14.	To maintain the ambient condition in Laboratory	(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 equipments.

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 given in Clause 6 and Clause 7 of IS/ISO 22702:2005.

4.0 CONTROL UNIT – For the purpose of this scheme, all lighters of same type manufactured in one day shall constitute one control unit.

5. LEVELS OF CONTROL The Tests as indicated in column 1 of Table 1 and the levels of control in column 2 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 Standards 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 R: required (or) S: Sub- contracting permitted	LEVELS OF CONTROL		
CI.	Requirement	Test Methods			No. of samples	Frequency	Remarks
		Clause	Reference				
3	FUNCTIONAL REQUIREMENTS						
3.1	Flame generation	3.1	IS/ISO 22702	R	10 lighters	Each control unit	
3.2	Flame heights	7.1	IS/ISO 22702	R	5 lighters	Every 5 Control Units	
3.3	Flame- height adjustment	3.3	IS/ISO 22702	R			
3.4	Resistance to Spitting or Sputtering and flaring	7.2	IS/ISO 22702	R			
3.5	Flame extinction	7.3	IS/ISO 22702	R			
3.6	Volumetric Displacement	7.11	IS/ISO 22702	R			
4	STRUCTURAL – INTEGRITY REQUIREMENTS						
4.2	Resistance to dropping	7.4	IS/ISO 22702	R	5 lighters	Every 5 Control Units	
4.3	Resistance to elevated temperature	7.5	IS/ISO 22702	R	5 lighters	Every 5 Control Units	
4.4	Burning behaviour	4.4	IS/ISO 22702	R	5 lighters	Every 5 Control Units	

4.5	Resistance to continuous burn	7.6	IS/ISO 22702	R	5 lighters	Every 5 Control Units	
4.6	Resistance to cyclic burn	7.7	IS/ISO 22702	R	5 lighters		
4.7	External Finish	4.7	IS/ISO 22702	R	Each lighter		
4.8	Compatibility with fuel	7.8	IS/ISO 22702	R	5 lighters	Once in three months	
4.9	Resistance to internal pressure	7.9	IS/ISO 22702	R	5 lighters	Every 5 Control Units	
5	Refilling Test	7.10	IS/ISO 22702	R	5 lighters	Every 5 Control Units	

Note-1: Whether Test equipment is required or sub-contracting is permitted in column 2 shall be decided by the Bureau and shall be mandatory. 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.