

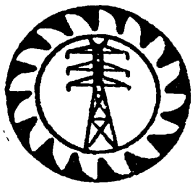
CEB  
STANDARD

107-1:2007

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**SPECIFICATION FOR SYNTHETIC METER  
SEAL FOR DOMESTIC INSTALLATION**



**CEYLON ELECTRICITY BOARD  
SRI LANKA**

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## **SPECIFICATION FOR SYNTHETIC METER SEAL.**

### **1.0 SCOPE**

This specification covers the manufacture and testing seals for sealing of household electricity meters for prevention of manipulation or tampering.

### **2.0 APPLICABLE STANDARDS**

The seals supplied shall be in accordance with the standards specified below or letter editions and or amendments thereof. However the CEB Specification shall supersede these standards in the event there is a discrepancy.

- a) ISO 4611 (1987) - Plastics- Determination of the effects of exposure to damp heat, water spray and salt mist.
- b) ISO 4582 (1998) - Plastics- Determination of changes in colour and variations in properties after exposure to daylight under class, natural weathering or laboratory light source.
- c) ISO 62 (1999) - Determination of water absorption

### **3.0 DESIGN**

The seal shall be consist of

1. Synthetic body
2. Synthetic insert
3. Wire searing

The material shall be able to withstand ultra violet radiation, heat and temperature for long periods.

The body and insert be so designed as to allow the sealing wire to be inserted through a locking aperture. The insert shall be turned using a suitable tab on the insert, wrapping the wire around the insert ultimately the tab is broken making it not possible to turn the insert any further and the wire is firmly tightened. No tool shall be required to install the seal.

The seal shall bear a unique number and the name of the utility as required by the purchaser.

Continuity over long periods with preservation of tamper proof character is specifically required in operation. Tests report to prove UV resistance, Impact resistance, chemical resistance weather resistance and tamper proof characteristics shall be submitted along with the offer.

Sealing wire shall be made out of stainless steel and the wire diameter should be not less than 0.2mm diameter. The attached wire should be at least 300mm long.

**4.0 TECHNICAL REQUIREMENT**

(a) Heat distortion Temperature	>85 °C	confirm to the requirement of ISO-75
(b) Water absorption	0.2% maximum	confirm to the requirement of ISO 62
(c) UV resistance	Change of appearance	confirm to the requirement of ISO 4582 (1980)

**5.0 TEST CERTIFICATE**

The following test certificates confirming to the relevant standards shall be furnished with the offer.

1. Tensile Test
2. Wrapping and bending test
3. Test reports to prove UV resistance, Impact resistance, chemical resistance weather resistance and tamper proof characteristics.

**6.0 MANUFACTURING EXPERIENCE**

The manufacturer shall have at least 10 years experience in the manufacture of synthetic meter seals and documentary proof shall be submitted

**LIST OF PURCHASES**

The list of utilities to which this seal has been sold, quantities and year of sales during last 05 years shall be provided. It is preferred to have a few performance certificates from users/utilities.

**7.0 SAMPLE**

10 samples shall be submitted along with the offer for the purpose of evaluation.

**8.0 PACKING**

Seals shall be packed in hardboard boxes and each box shall contain a maximum of 500 seals. The serial numbers of the seals shall be clearly indicated on the box.

**9.0 ANNEX**

A - Schedule of Guaranteed Technical Particulars

**SCHEDULE OF GUARANTEED TECHNICAL PARTICULARS  
(To be filled by the Bidder)**

a)	Name of the Manufacturer		-
b)	Country of Origin		-
c)	Material of Seal		
	i) Housing		-
	ii) Sealing wire		-
d)	Whether the each seal is marked with		
	i) Unique serial number	Yes/No	-
	ii) Letters "CEB"	Yes/No	-
e)	Whether the markings indicated in (d) are indelible	Yes/No	-
f)	Whether the seals could be supplied in different colours	Yes/No	-
g)	The minimum force required to occur the visual damage in the event of forced opening	N	-
h)	Manufacturing experience of the seal offered;		
	i) Manufacturing experience	No. of years	-
	ii) Quantity sold during last 05 years	Nos.	-
	iii) List of purchases provided	Yes/No	-
i)	Whether the seal is type tested for the minimum pulling force required for visible damage of the housing	Yes/No	-
j)	Whether the following type test reports are furnished (UV resistance, Impact resistance, Chemical resistance, Weather resistance Tamper proof characteristics, Tensile test, wrapping & bending test)	Yes/No	-

**I/we certify that the above data are true and correct**

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**Seal and the Signature of the Manufacturer/Date**