



REGULATED ELECTRICAL EQUIPMENT IN MALAYSIA

by

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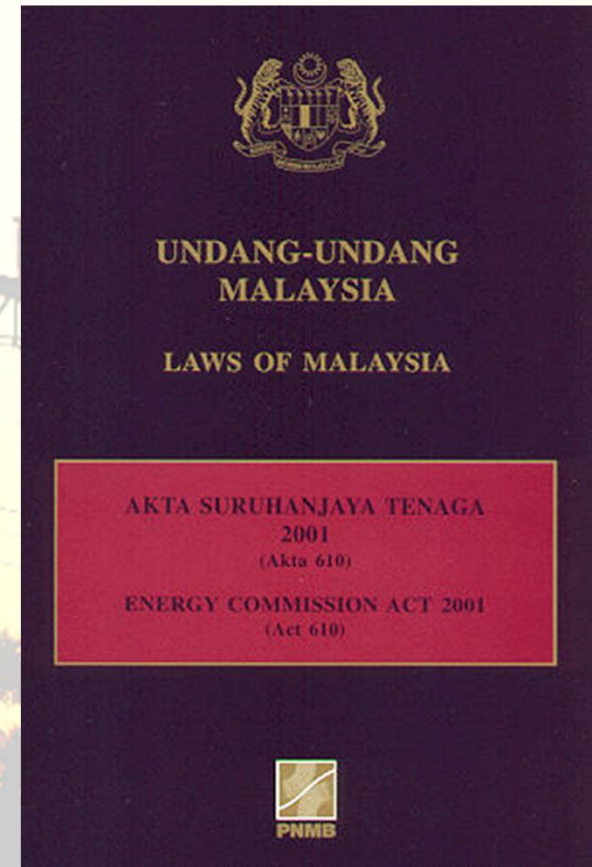
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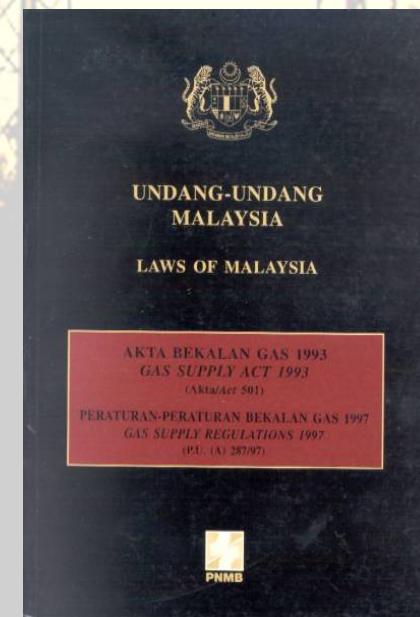
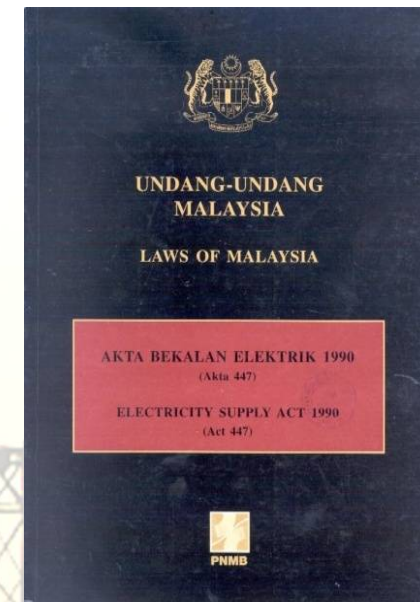
ENERGY COMMISSION

- Energy Commission / Suruhanjaya Tenaga (ST), a statutory body established under the Energy Commission Act 2001, is responsible for regulating the energy sector, specifically the electricity supply and piped gas supply industries in Peninsular Malaysia and Sabah
- Fully operational on January 1, 2002, the EC took over the role of the Department of Electricity and Gas Supply, which was dissolved on the same date



ENERGY SUPPLY LAWS

- Electricity Supply Act 1990 [Act 447]
 - **Electricity Regulations 1994**
 - Licensee Supply Regulations 1990
 - Electricity Supply (Compounding of Offences) Regulations 2001
 - Efficient Management of Electrical Energy Regulations 2008
- Gas Supply Act 1993
 - Gas Supply Regulations 1997
 - Gas Supply (Compoundable Offences) Order 2006





COMPLIANCE OF LEGISLATION

1

Electricity Supply Act 1990

Sec 4(I) - to prescribe the minimum standards & specifications & appraise & approve, where necessary, any electrical installation or equipment

2

Electricity Regulations 1994

(Reg. 97 – Reg. 109)

Reg 97 (1) - Certificate of Approval (CoA) is required to manufacture, import, display, sell or advertise of electrical equipment

Reg 97 (C) - Certificate of Registration (CoR) is required to manufacture & import of electrical equipment

Reg 98 - Marking or labelling of approved equipment

Reg 101A - Efficient use of electricity equipment

3

Customs (Prohibition of Imports) Order 2012

Schedule IV, Part II - List of electrical goods that required EC permit

Roles of Energy Commission (EC) - as a Regulator of EEE

Safety Regulation

To protect the public from dangers arising from the generation, transmission, distribution and supply and use of electricity and the supply and use of piped gas.


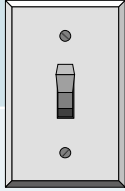
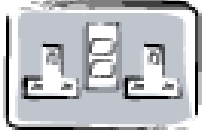



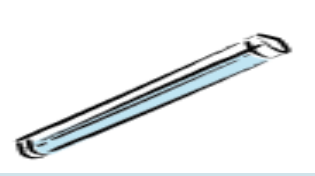

LIST OF REGULATED EQUIPMENT



34 categories item
199 sub categories

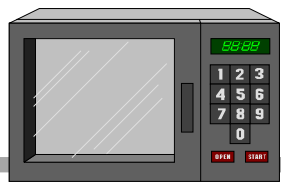
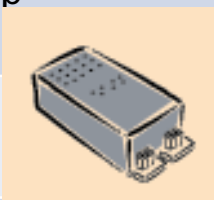


List of 34 Categories of Electrical Appliances Requiring CoA & Labeling










No	Category Equipment	National Standard
1.	Plug Top /Plug 	MS 589-1, 1577, 1578 MS IEC 60320-1,-2-2 MS 589-3, 1144 MS IEC 60998-1,-2-1,-2-2,-2-3,-2-4, MS 1873, -22
2.	Switch & Dimmer 	MS IEC 60669-1,-2-1,-2-2,-2-3 MS IEC 61558-1,-2-8
3.	Socket Outlet 	MS 589-2, 1577, 1579, 1141 MS IEC 61558-1, -2-5
4.	Lampholder / StarterHolder 	MS IEC 60400
5.	Ceiling Rose 	MS 770, MS IEC 60238
6.	Bayonet Cap & Multiways Adaptor 	MS 769, IEC 61184
7.	Lamp fitting  	MS IEC 60598-1,-2-1,-2-2 MS IEC 60155, 60968, 60969 MS IEC 61347-1,-2-13 MS IEC 60838-1,-2-2 MS IEC 62031,62776,62560

List of 34 Categories of Electrical Appliances Requiring CoA & Labeling







No	Category Equipment	National Standard
8.	Capacitors for fluorescent lamp	MS IEC 61048, 61049
9.	Ballasts / Control Gear	MS IEC 61347-1, -2-3, -2-8, MS141-2, MS IEC 60929, 61000
10	Circuit breaker:- RCD, MCB, Fuse	MS IEC 61008-1,-2-1, -2-2 MS IEC 61009-1,-2-1, -2-2 MS IEC 60898-1,-2, MS IEC 60269-1,-2,-3 MS IEC 60947-1, -3
11	Portable Luminaire Lamp	MS IEC 60598-1, -2-4, -2-8, -2-12
12	Kettle including heating element	MS IEC 60335-2-9,-2-12,-2-13, -2-15,-2-36 MS 1597-2-21,24,35
13	Kitchen Machine -Food mixer/blenders	MS IEC 60335-1, -2-14
14	Toasters / Oven	MS IEC 60335-1, -2-6, -2-9, -2-25



List of 34 Categories of Electrical Appliances Requiring CoA & Labeling

No	Category Equipment	National Standard
15	Rice Cooker 	MS IEC 60335-1, -2-15
16	Refrigerator	MS IEC 60335-1, MS 1597-2-24 
17	Immersion Water Heater	MS IEC 60335-1, -2-73, -2-74
18	Water Heater – Storage / Instantaneous	MS IEC 60335-1 MS 1597-2-35, -2-21
19	Washing Machine 	MS IEC 60335-1, -2-4, -2-11, -2-43 MS 1597-2-7, -2-5 
20	Fan 	MS IEC 60335-1, -2-31, -2-65, -2-98 MS 1597-2-80, MS 1220
21	Hand Operated – Hairdryer/Skin Care	MS IEC 60335-1, -2-23
22	Iron 	MS IEC 60335-1, -2-3, -2-85 
23	Shaver	MS IEC 60335-1, -2-8
24	Vaporiser - Mosquito mat / Aroma	MS IEC 60335-1, -2-101
25	Vacuum Cleaner 	MS IEC 60335-1, -2-2 

List of 34 Categories of Electrical Appliances Requiring CoA & Labeling

No	Category Equipment	National Standard
26	Hi – Fidelity set 	MS IEC 60065
27	Video & Visual Display Unit - TV	MS IEC 60065
28	Audio & Video Player Unit – VCD, DVD	MS IEC 60065
29	Massager 	MS IEC 60335-1, -2-32
30	Air Conditioner <32,000 btu/hr 	MS IEC 60335-1, MS I597-2-40
31	Christmas Light	MS IEC 60598-1, -2-20
32	Domestic Power Tools 	MS IEC 60745-1, -2-1,-2-3,-2-4,-2-5,-2-7, -2-11, -2-14, -2-15, -2-17 MS IEC 60335-1, -2-79, -2-28, -2-45
33	Adapter / Charger 	MS IEC 60335-1, -2-29, -2-8 MS IEC 60950-1, 60065 MS IEC 61558-1, -2-6, -2-7, -2-17
34	Wires/Cables/Cords (0.5mm-35mm) 	MS 2112-2, -3, -4

❖ Approved electrical appliances or equipment are required to be affixed with safety labels before being sold to public



SIRIM
CERTIFIED TO YY : XXXX
CERTIFICATION NO:xxxxxxx
SIRIM-ST Label Licensing Programme

SIRIM Certification Mark

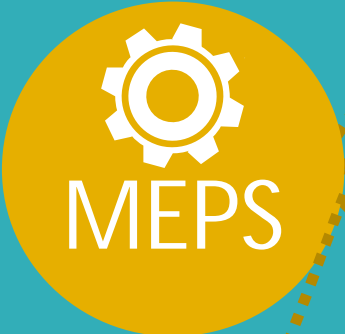
1



2



6



3



4



5



7




MEPS
(NEW)

8





Energy rating: 1 to 5-Star

Appliance type

QR Code (from COA)

Appliance energy rating
(Equals the number in the energy rating)

Information on the brand and model

Year of rating given/revise

Energy consumption (In kWh/year)

Energy savings compared to the lowest 2-Star rated product
(In percentage)

Testing standard used

COA approval number

i) After completing first 1,000 hours test

Efficacy Value: 55 lm/W



This product has been tested up to 1000 hours

ii) After completing 6,000 hours test

Efficacy Value: 55 lm/W



This product has been tested up to 6000 hours

REGULATORY REQUIREMENTS RELATED TO NATIONAL DIFFERENCES

shall be subjected to tests under tropical conditions as specified in the related standards

1

Nominal Voltages Low voltage supply

230/400V (+10%, -6%)
MS IEC 60038

2

Nominal Frequency

50Hz is allowed to fluctuate at $\pm 1\%$

3

Plug Top

3 Pole Power Plug
MS 589 / BS 1363

2 Pole Power Plug
MS 1578 / BS EN 50075

5

Class I and class II Equipment

Fig.1 for Class I and Fig.2 for Class II as symbol.



Fig.1



Fig.2

4

Power supply cord

MS2112-5 or BS EN 50525-2-11 or IEC 60227-5 (PVC insulated – flexible cords) ;

MS 2127-4 or BS EN 50525-2-11 or IEC 60245-1 & IEC 60245-4 (Rubber insulated - flexible cables/cords)

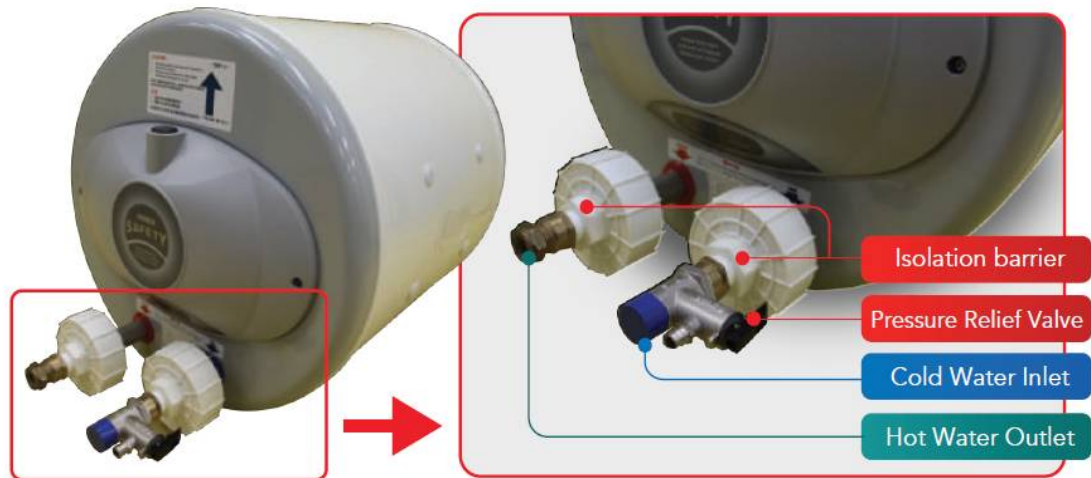


6

Isolation Barrier for Storage Water Heater

Storage water heater shall be prefitted with isolation barriers at both water inlet and outlet connections

MS 1597-2-21:2015 or IEC 60335-2-21:2012 with modification

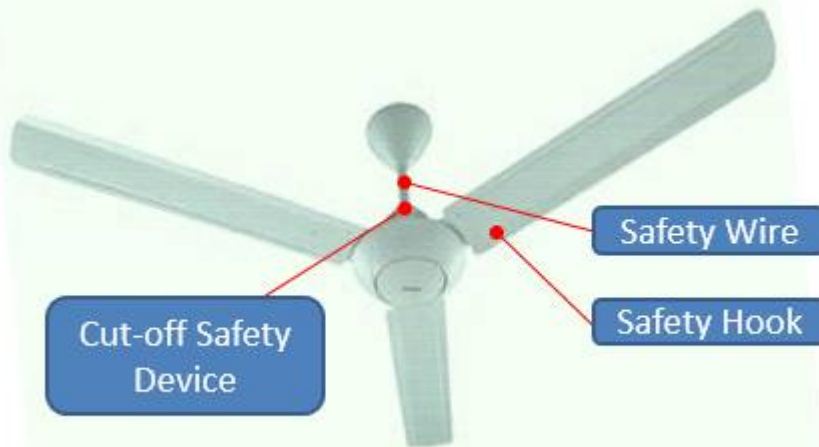


7

Suspension System for Ceiling Fan

Provided with special wire

MS 1597-2-80 or IEC 60335-2-80 with modification



HYBRID PRODUCT

- Household electrical products which are normally connected to power socket outlet have become hybrid products which can be remotely controlled or operated by itself. Such products may fall under **electrical products, electronics products** or **communication products**.
- Thus, the hybrid product need to get the approval from 2 (two) authorities.

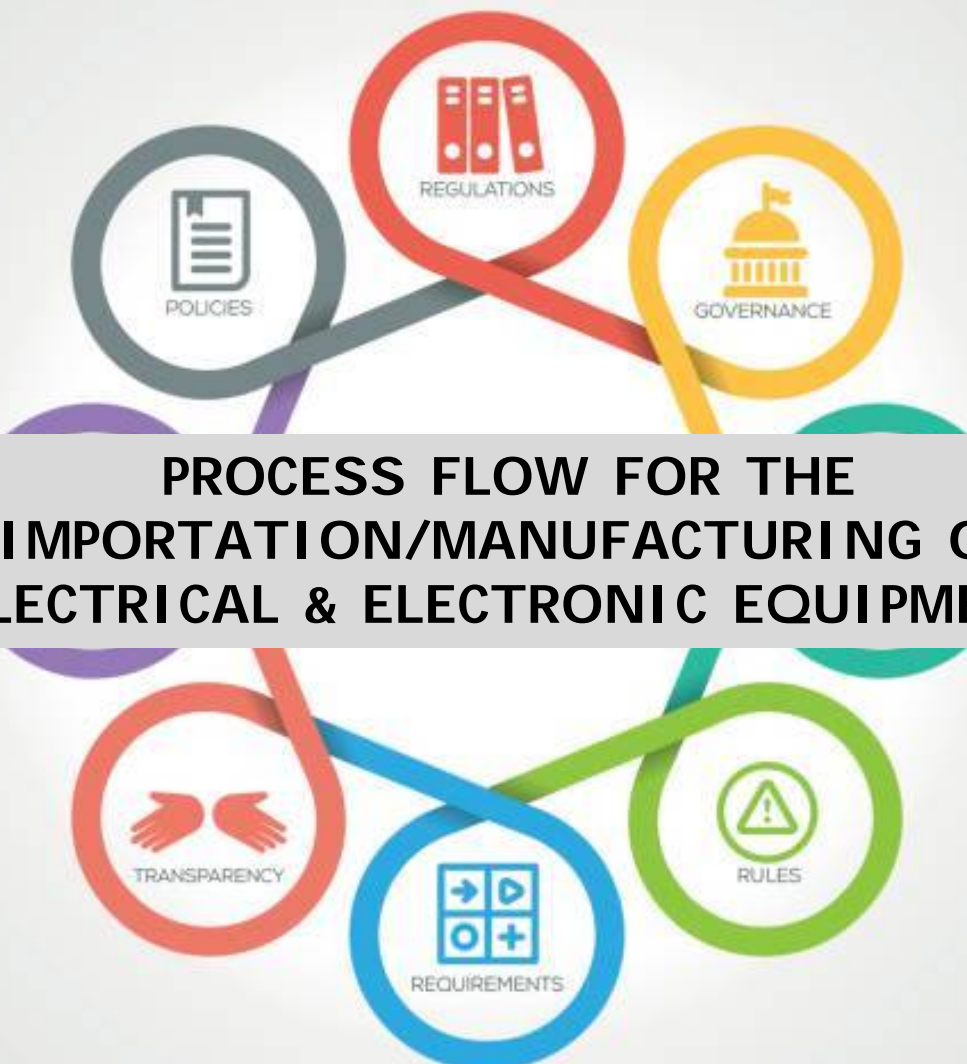


Vacuum cleaner

+



electronic devices = remote control machine



**PROCESS FLOW FOR THE
IMPORTATION/MANUFACTURING OF
ELECTRICAL & ELECTRONIC EQUIPMENT**



Registered applicant apply for CoR & CoA



- ☀ Evaluation & verification
- ☀ Certificate issued



IMPORT



- ☀ Cancelled CoA
- ☀ Return to origin / dispose equipment / Product recall



CONSIGNMENT / PCS



Equipment can be placed in the market



Tested and verified, safety & MEPS labels will be issued



i) After completing first 1,000 hours test

Efficacy Value: 55 lm/W

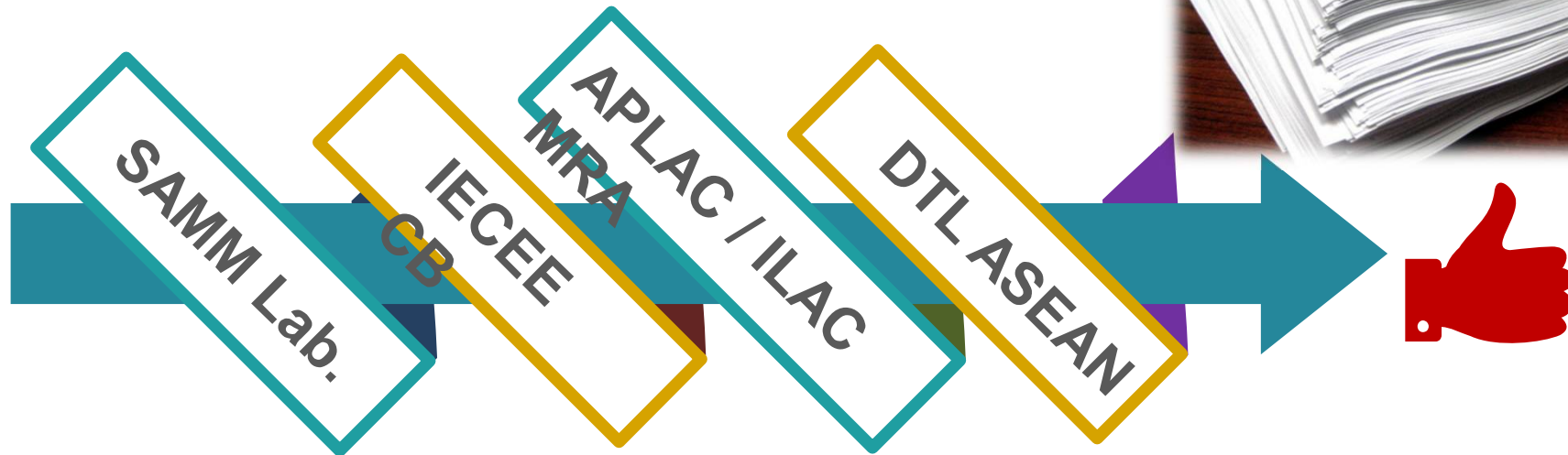
This product has been tested up to 1000 hours

ii) After completing 6,000 hours test

Efficacy Value: 55 lm/W

This product has been tested up to 6000 hours

RECOGNISED TEST REPORT



01 Sirim / QAV / Phychrometric (DAIKIN) / accredited lab under Laboratory Accreditation Scheme of Malaysia (SAMM) by DSM

02 Lab under IECEE CB Scheme which CB test report need to be accompanied by CB test certificate

03 Lab which are accredited by the accreditation body that have signed the APLAC MRA or ILAC MRA

04 Lab listed as Designated Testing Laboratory (DTL) under ASEAN EEE MRA

Guideline for Approval of Electrical Equipment

(ELECTRICITY REGULATIONS 1994)

INFORMATION BOOKLET
2018 EDITION

Guideline under
section 50C,
Electricity Supply
Act 1990 [Act 447]

01



100 units Cordless Water Kettle

**DISPOSAL
ACTIVITY**

CONSIGNMENT TEST FAILED

02



200 units Rice Cooker

CONSIGNMENT TEST FAILED

03



04



174 units of all type of equipment

**DISPOSAL
ACTIVITY**

10 units Build-in oven

STATISTIC



2018

Perakuan Kelulusan (CoA) dan Surat Pelepasan Untuk Kelengkapan Elektrik

*Total Certificate of Approval (CoA) and
Release Letter for Electrical Appliances*

Perakuan
Kelulusan Baru
New CoA **10,347**

Pembaharuan CoA
CoA Renewal **4,678**

Surat
Pelepasan
Release Letter **3,315**

2019

9,500

5,644

2,845



Pembatalan Perakuan Kelulusan (CoA) Untuk Kelengkapan Elektrik

Cancellation of Certificate of Approval (CoA) for Electrical Appliances

132

Perakuan Kelulusan
Dibatalkan
CoA Cancelled

63

Pengimpot
Yang Terlibat
Importers Involved

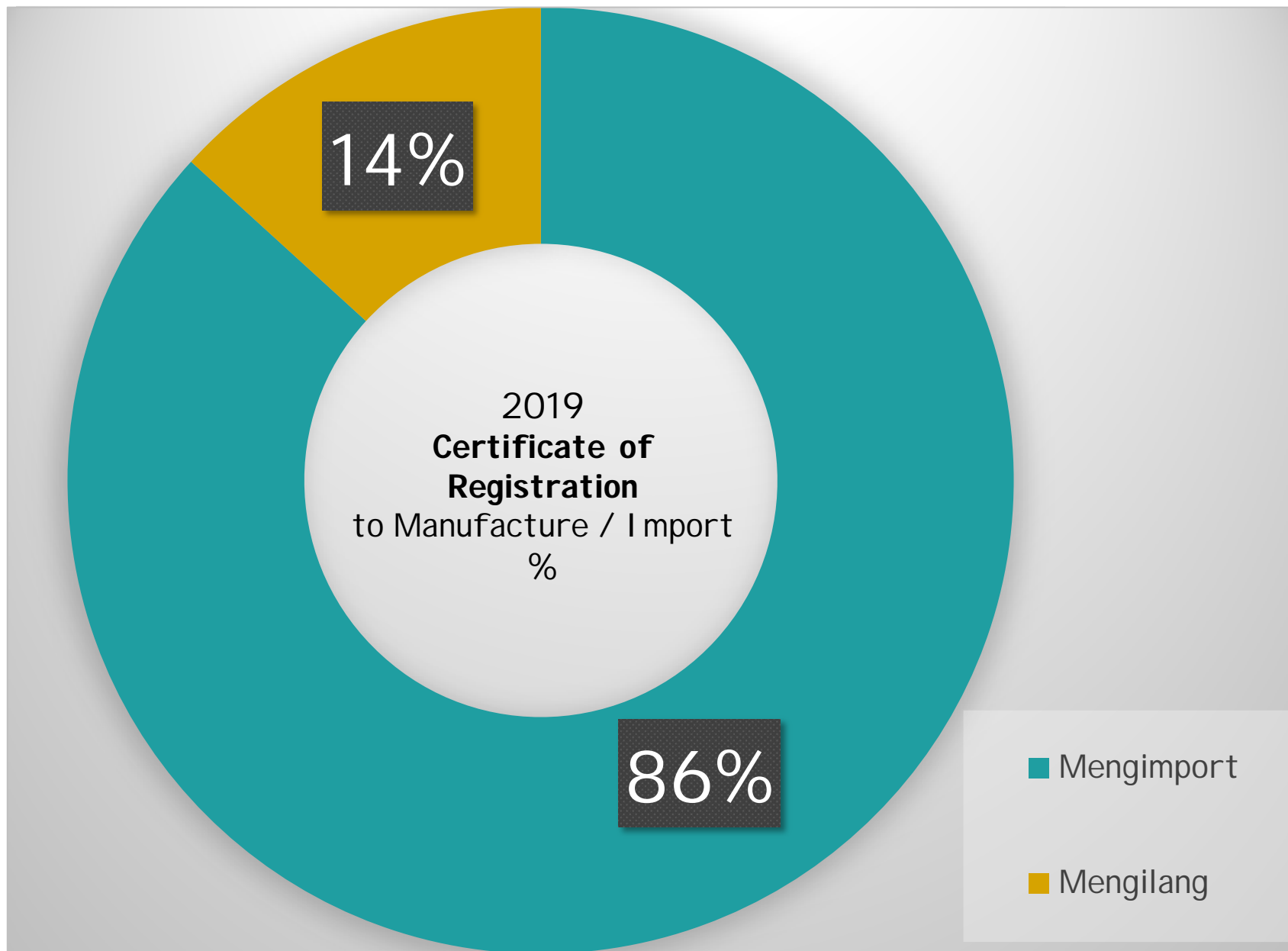
2018

2019

29*

22*

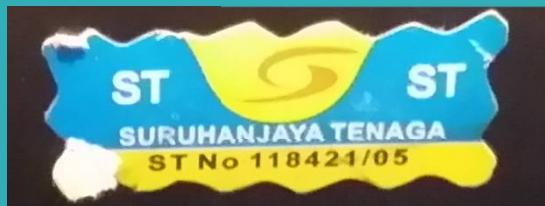
* Notis tunjuk sebab dikeluarkan



Sub-standard, counterfeit, unapproved electronic equipment or equipment with fake safety labels in the market may caused internal components overheated or harmful to users.



Approved label



Fake label





Enforcement Activities

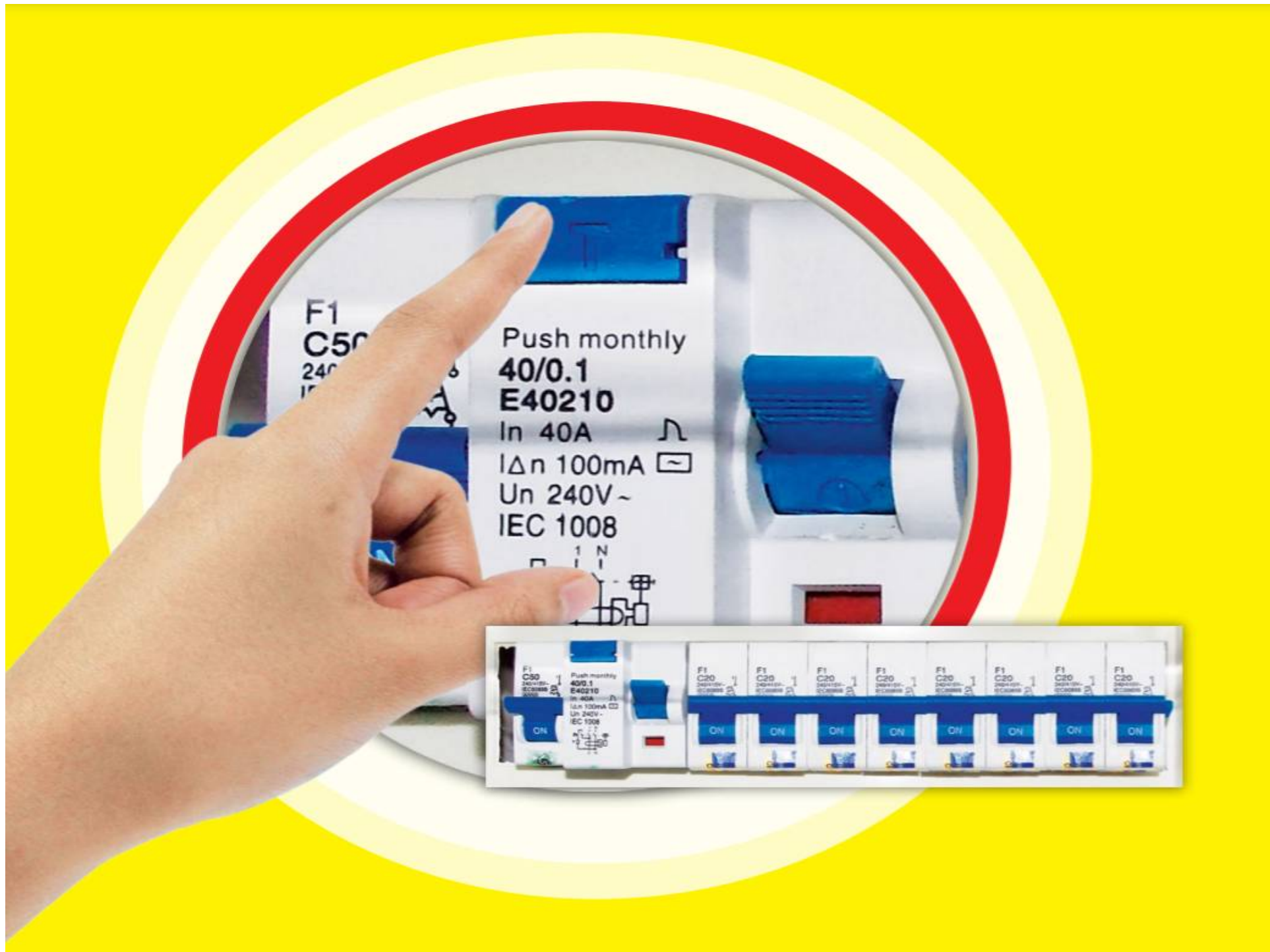


Engagement Session

ACCIDENT INVOLVES ELECTRICAL EQUIPMENT

Electrical Equipment	No of Cases
• Adapter/ Charger	6
• Plug Top	3
• Socket Outlet	8
• Fluorescent Lamp	2
• Residual Current Device	11
• Instantaneous Water Heater	3
• Storage Water Heater	7
• Fan	2
• Television	1
• Washing Machine	2
• Refrigerator	1
• Rice Cooker	2
• Portable Power Tools	5
• Air Conditioner	1

*Untuk rujukan PERBADANAN PRODUKTIVITI MALAYSIA sahaja. Bukan untuk diterbitkan.





A pair of metal handcuffs is shown in the foreground, resting on a document. The document features several fingerprints and some text, including the word "INDEX" and the number "2". The handcuffs are made of a dark metal and are partially open. The background is a light blue color with a grid pattern.

Regulation 122, electricity Regulations 1994

“Unless otherwise made an offence under the Act, a person who contravenes or fails to comply with any of the provisions of these Regulations shall be guilty of an offence and shall, on conviction, be liable to a fine not exceeding **RM5,000** or to imprisonment for a term not exceeding **1 year** or to both.”

Sec. 37(1), Electricity Supply Act 1990

"Any person who tempers with or adjusts any installation or part thereof or manufactures or importers or sells any equipment so as to cause or to be likely to cause danger to human life or limb or injury to any equipment or other property shall be guilty of an offence and for each such offence shall, on conviction, be liable to a fine not exceeding **RM1,000,000** or to imprisonment for a term not exceeding **10 years** or to both. "



CONCLUSION



Compatible to supply system

Comply to standard

*Tested by accredited
laboratory*

Labelled with SIRIM-ST's label

Labelled with MEPS's label



Thank You
Electricity Safety Begin with you!