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Guidelines for the Approval of Electrical Equipment

GP/ST/No.37/2024

IN exercise of the powers conferred by section 50c of the Electricity Supply Act 1990 [Act 447], the Commission issues the following Guidelines:

Citation and commencement

1. These Guidelines may be cited as the “Guideline for Approval of Electrical Equipment”.
2. These Guidelines shall come into operation from the date of its registration.

Interpretation

3. In these Guidelines, unless the context otherwise requires, the Act means the Electricity Supply Act 1990 [Act 447].

Purpose of these Guidelines

4. These Guidelines describes the following :-
 - (a) lists of regulated electrical equipments; and
 - (b) procedures and conditions that shall be complied with by the applicants in the submission of the application for the –
 - i. Certificate of Registration (CoR) to manufacture or import;
 - ii. CoR as a Conformity Assessment Body (CAB);
 - iii. Certificate of Approval (CoA) to import, manufacture, display, sell or advertise any electrical equipment;
 - iv. Renewal of CoA to import, manufacture, display, sell or advertise any electrical equipment;
 - (c) national deviation;
 - (d) energy efficiency; and
 - (e) labelling requirements.

Application of These Guidelines

5. These Guidelines shall be applicable to all manufacturers, importers, exhibitors, sellers and advertisers of any regulated electrical equipment and registered laboratories and certification body in ensuring compliance to the Act and Regulations.

Notice by the Commission

6. The Commission may issue written notices from time to time in relation to these Guidelines.

Amendment and Variation

7. The Commission may at any time amend, modify, vary or revoke these Guidelines.

Transitional

8. Any person who manufacture, import, display, sell or advertise any consumer electrical equipment before the date of coming into operation of these Guidelines shall comply with the provisions of these Guidelines within one year from the date of coming into operation of these Guidelines.

Revocation

9. The Guideline for Approval of Electrical Equipment (Electricity Regulations 1994) with registration number of GP/ST/ No.14/2017 is revoked.

Dated:

21 June 2024



Chief Executive Officer
for Energy Commission

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PREFACE

These Guidelines serves as a guide on the procedure in the application for any electrical equipment prescribed under regulation 97 of the Electricity Regulations 1994 (“Regulations”) and other related regulatory requirements therein. It can be downloaded from our website at www.st.gov.my.

The Energy Commission (the Commission) expressly disclaim all liability to any person in respect of any statement in or omission from these Guidelines to the extent permitted by the law and nothing contained in these Guidelines should be taken as constituting any amendment to the Act or the Regulations. In the event of any conflict, Act 447 or the Regulations shall at all times take precedence.

The Commission reserves the right to amend and introduce new requirements to the above mentioned procedures of obtaining a CoA.

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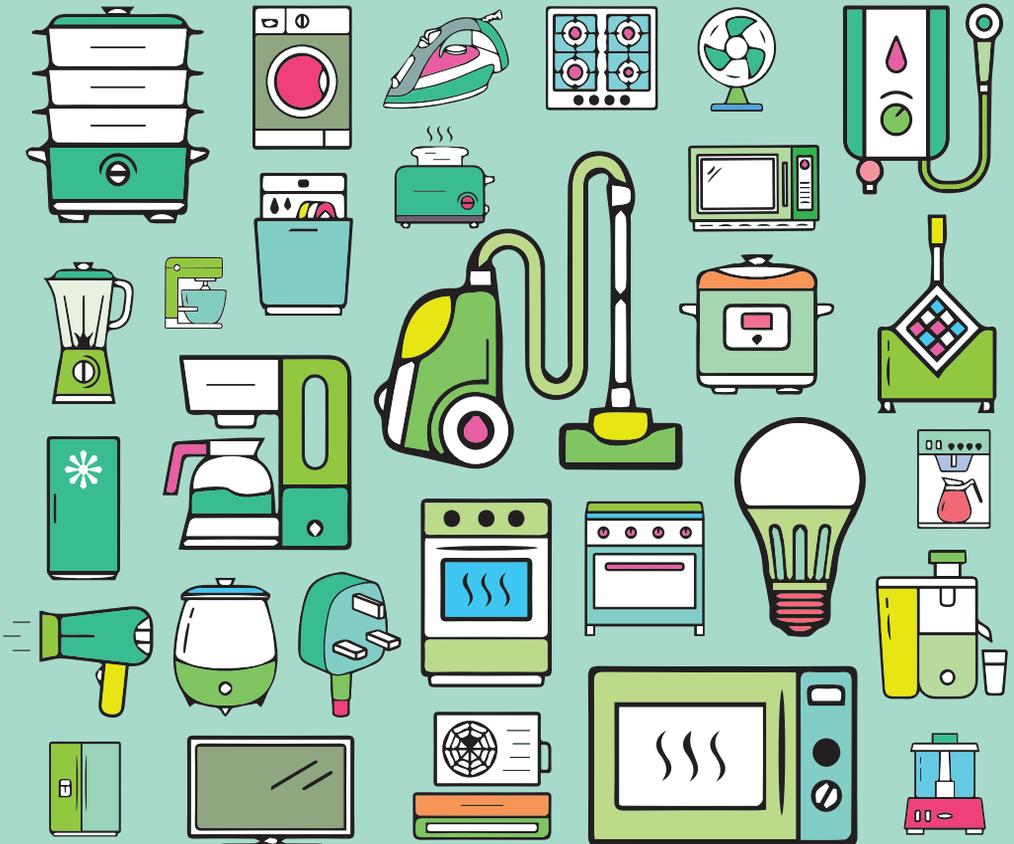
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CHAPTER ONE

INTRODUCTION



THINK **SAFETY**, THINK **ST**

INTRODUCTION

Why is CoA required?

The objective for the issuance of CoA under the Regulations is to ensure that all activities to manufacture, import, display, sale or advertise any consumer electrical equipment meets the specified safety and efficient use of electricity requirements.

Consumers' interests in the use of electrical equipment shall be protected through the determination of such equipment:

- (a) being compatible to Malaysian electricity supply system;
- (b) complying to standards;
- (c) tested by accredited laboratory; and
- (d) labelled with ST-SIRIM label and the Energy Efficiency label.

Therefore, by complying with the specified minimum requirements risk of accidents such as fire, electric shock, explosion, radiation and other hazards which could result in injuries or deaths to humans and or damages to properties can be minimized or avoided.

WHO SHOULD BE CONCERNED WITH THESE GUIDELINES

Consumers

In line with the safety requirements as well as to safeguard consumer's interests and to ensure the efficient use of electricity, consumers should only purchase an electrical equipment that is approved by the Commission and affixed with a label determined by the Commission.

Manufacturers, Importers, Exhibitors, Sellers and Advertisers

Manufacturers, importers, exhibitors, sellers and advertisers of any electrical equipment prescribed under regulation 97 of the Regulations must ensure that their obligations under the said Regulations are fulfilled.

These Guidelines is to assist manufacturers, importers, exhibitors, sellers and advertisers in understanding and fulfilling the requirements and procedures for obtaining the CoA and other related regulatory requirements determined by the Commission.

KEY REGULATIONS TO NOTE

COMPLIANCE WITH THE ACT 447, ELECTRICITY REGULATIONS 1994 AND OTHER SUBSIDIARY LEGISLATIONS MADE UNDER ACT 447

Any manufacturer, importer, exhibitor, seller and advertiser shall comply with the provisions under the Act, the Electricity Regulations 1994 and other subsidiary legislations made under the Act 447 specifically in relation to the electrical equipment.

LIST OF REGULATED ELECTRICAL EQUIPMENT

Note: Regulated Electrical Equipment are to be tested to the specified standards.

Equipment that are tested and certified to the same standards of later revisions are also acceptable.

| No | Category | Description of Regulated Equipment | Detail of Equipment | Standards | |
|----|---------------|--|---|--|--|
| | | | | National Standard | International Standard |
| 1 | PLUG TOP/PLUG | (a) Plug (i) makes a detachable connection between the contacts of a socket-outlet and the conductors of a flexible cord; (ii) has insulating sleeves on the line and neutral plug pins for insertion into a socket-outlet; and (iii) has a maximum rating of 15 A; | Flat Non-Rewirable Two Pole Plug with supply cord (max. 2.5A) | MS 1578:2003 | BS EN 50075:1991 |
| | | | 13 A Fused Plug | MS 589-1:2018 | BS 1363-1: 2016 +A1:2018 |
| | | | 15 A Plug | MS 1577:2003 | No corresponding international standard |
| | | (b) Coupler (i) for attachment to a flexible cord; and (ii) makes a detachable connection between the conductors of the cord and the pins or contacts of any low voltage appliance or equipment of a type intended or generally used for household applications. | Appliance Coupler | MS IEC 60320-1:2010 | IEC 60320-1:2018 |
| | | | Interconnection Coupler | MS IEC 60320-1:2010 MS IEC 60320-2-2:2003 (confirmed 2015) | IEC 60320-1:2018 |
| | | (c) Adaptor (i) extends supply from a socket-outlet; (ii) incorporates one or more integral socket-outlets; and (iii) has insulating sleeves on the line and neutral plug pins. | Adaptor (Multiways, T-Adaptor) | MS 589-3:2018 | BS 1363-3:2016 +A1:2018 |
| | | | Integrated Adaptor | MS 1144:2017 | BS 5733:2010+A1 2014 |
| | | | Travel/Universal Adaptor | No corresponding MS | IEC 60884-1:2013 IEC 60884-2-5:2017 |
| | | | Power Track System | MS 1144:2017 IEC 61534-1:2011 +A1:2014 IEC 61534-21:2014 | IEC 61534-1:2011 +A1:2014 IEC 61534-21:2014 MS 1144:2017 |
| | | | Power Track Module | No corresponding MS | IEC 61534-1:2011 +A1:2014 IEC 61534-21:2014 |
| | | (d) Connector Connecting devices for the connection of two or more electrical copper conductors. | Electrical Connector (connecting device) | MS IEC 60998-1:2005 | IEC 60998-1:2002 |
| | | | Connecting device with screw type clamping unit | MS IEC 60998-1:2005 MS IEC 60998-2-1:2005 | IEC 60998-1:2002 IEC 60998-2-1:2002 |

| No | Category | Description of Regulated Equipment | Detail of Equipment | Standards | |
|----|-------------------|---|---|--|---|
| | | | | National Standard | International Standard |
| | | | Connecting device with screw-less type clamping unit | MS IEC 60998-1:2005 MS IEC 60998-2-2:2005 | IEC 60998-1:2002 IEC 60998-2-2:2002 |
| | | | Connecting device with insulation-piercing clamping units | MS IEC 60998-1:2005 MS IEC 60998-2-3:2005 | IEC 60998-1:2002 IEC 60998-2-3:2002 |
| | | | Twist-on connecting device | MS IEC 60998-1:2005 MS IEC 60998-2-4:2005 | IEC 60998-1:2002 IEC 60998-2-4:2002 |
| | | | Connecting boxes | MS 1873:2005 MS 1873-22:2006 | IEC 60670-1:2002 with modification IEC 60670-22:2002 with modification |
| 2 | SWITCH AND DIMMER | (a) an air-break switch; (b) for connection to the wiring of an electric installation; (c) primarily for mounting on a vertical surface; (d) manually opened and manually closed; and (e) has a rating up to 63A. | General Purpose Switch | MS IEC 60669-1:2017 | IEC 60669-1:2017 |
| | | | Door Bell & Chime | MS IEC 61558-1:2005 MS IEC 61558-2-8:2007 | IEC 61558-1:2005 +A1:2009 IEC 61558-2-8:2010 or IEC 62080:2001 + A1:2015 or IEC 62368-1:2014 |
| | | | Electronic Switch | MS IEC 60669-1:2017 MS IEC 60669-2-1:2012 | IEC 60669-1:2017 IEC 60669-2-1:2009 |
| | | | Remote-control Switch | MS IEC 60669-1:2017 MS IEC 60669-2-2:2012 | IEC 60669-1:2017 IEC 60669-2-2:2006 |
| | | | Time Delay Switch | MS IEC 60669-1:2017 MS IEC 60669-2-3:2012 | IEC 60669-1:2017 IEC 60669-2-3:2006 |
| | | | Cooker Control Unit | No corresponding MS | BS 4177:1992 |
| | | | Isolator switch | MS IEC 60947-1:2010 MS IEC 60947-3:2010 | IEC 60947-1:2007 IEC 60947-3:2008 |

| No | Category | Description of Regulated Equipment | Detail of Equipment | Standards | |
|----|---|--|--|--|--|
| | | | | National Standard | International Standard |
| 3 | SOCKET OUTLET | (a) Socket Outlet (i) for fixing at a point at which fixed wiring terminates; (ii) provides a detachable connection with the pins of a plug; (iii) has two or more contacts; | Electric Shaver Socket Outlet | MS IEC 61558-1:2005 MS IEC 61558-2-5:2005 | IEC 61558-1:2005+A1:2009 IEC 61558-2-5:2010 |
| | | | 13A Switch & unswitch socket outlet | MS 589-2:2018 | BS 1363-2:2016+A1:2018 |
| | | | 15A socket outlet & Plug | MS 1577:2003 | No corresponding international standard |
| | | | Portable 2 pin socket outlet class II | MS 1579: 2003 | No corresponding international standard |
| | | | Universal socket outlet | MS 1144:2017 MS 589-2:2018 MS 1577:2003 MS 1579: 2003 | BS 5733:2010+A1:2014 BS 1363- 2:2016+A1:2008 |
| | | (b) Portable A device comprising of a flexible cable or cord attached to a reel so constructed that the flexible cable may be completely wound onto the reel and provided with a plug and one or more socket outlets. | Portable cable reel | MS 1141: 2006 | IEC 61242: 2008 with modification |
| 4 | FLUORESCENT LAMPHOLDER / STARTER HOLDER | (a) Lamp Holder Holds tubular fluorescent and LED lamp but does not include a lamp holder which by design is restricted to specific appliances. | Lamp holder for tubular fluorescent and LED lamp. | MS IEC 60400: 2006 | IEC 60400: 2004 |
| | | (b) Starter Holder Hold a glow starter but does not include a starter holder which by design is restricted to specific appliances. | Starter holder for tubular fluorescent and LED lamp. | MS IEC 60400: 2006 | IEC 60400: 2004 |

| No | Category | Description of Regulated Equipment | Detail of Equipment | Standards | |
|----|------------------------------------|---|---|---|--|
| | | | | National Standard | International Standard |
| 5 | CEILING ROSE | (a) Terminal for connection to a lamp holder via a cable. | Ceiling Rose | MS 770:1982 (confirmed 2006) | BS 67:1987 |
| | | (b) Lamp holder with Edison screw thread E14, E27 and E40, designed for holding and connecting to the supply of lamps. | Edison Screw Lamp holder | MS IEC 60238:2008 | IEC 60238:2004 |
| 6 | BAYONET CAP and MULTI-WAYS ADAPTOR | Hold a bayonet lamp cap or bayonet adaptor cap but does not include: | Bayonet Cap Lamp holder | MS IEC 61184:2014 | IEC 61184: 2008 + A1:2011 |
| | | (a) a lamp holder which by design is restricted to specific appliances; and (b) a lamp holder which is for incorporation in an industrial equipment. | Bayonet Lamp Adaptor | MS 769:1982 (confirmed 2013) with MS IEC 61184:2014 | IEC 61184:2008 with modification |
| 7 | LAMP FITTING | (a) Luminaires (i) provides illumination; and (ii) incorporate electric light sources for operation from supply voltage up to 1000V. | Fixed general purpose luminaires, Batten luminaires, Luminaires with self-ballasted lamp or light source. | MS IEC 60598-1:2021 MS IEC 60598-2-1:1997 (confirmed 2015) | IEC 60598-1:2014 +A1:2017 IEC 60598-2-1:1979 +A1:1987 |
| | | | Recessed Luminaires | MS IEC 60598-1:2021 MS IEC 60598-2-2:2019 | IEC 60598-1:2014 +A1:2017 IEC 60598-2-2:2011 |
| | | (b) Supply Track (i) track systems with two or more poles for the connection of luminaires / lamps to the electrical supply. (ii) is for mounting on, or flush with, or suspended from walls and ceilings | Electrical supply track system | No corresponding MS | IEC 60570:2003 + A1:2017 + A2:2019 |

| No | Category | Description of Regulated Equipment | Detail of Equipment | Standards | |
|----|----------|---|---|--|---|
| | | | | National Standard | International Standard |
| | | (c) Glow Starter (i) for starting preheat type fluorescent lamps; (ii) a glow-start type; and (iii) has an enclosure of insulating material. | Glow-starter for tubular fluorescent | MS IEC 60155: 1996 | IEC 60155:2006 |
| | | (d) Self-ballasted Compact Fluorescent Lamp (CFL) Lamp which cannot be dismantled with out being permanently damaged, provided with a lamp cap incorporating a light source and any elements necessary for starting and stable operation of the light source. Note: Lighting require MEPS. Refer to Chapter 4.1 for details. | With Edison screw or bayonet caps | MS IEC 60968:2006 (confirmed 2011) MS IEC 60969:2006 (confirmed 2015) | IEC 60968:1999 IEC 60969:2001 |
| | | (e) LED Lighting Note: Lighting require MEPS. Refer to Chapter 4.1 for details. | Lamp control gear: Particular requirement for dc or ac supply electronic control gear for LED modules | MS IEC 61347-1:2012 MS IEC 61347-2-13:2012 | IEC 61347-1:2007+A1:2010 IEC 61347-2-13:2006 |
| | | | Lamp holder (Connectors for LED-modules) | MS IEC 60838-1:2008 MS IEC 60838-2-2:2008 | IEC 60838-1:2004 IEC 60838-2-2:2006 |
| | | | Self-ballasted LED Modules for general Lighting services by voltage > 50V | MS IEC 62031:2011 with MS IEC 60061-1:2005 | IEC 62031:2018 with IEC 60061-1:2005 |
| | | | Self-ballasted double capped LED Lamps for general lighting services by voltage > 50V (to retrofit linear fluorescent lamp) | MS IEC 62776:2017 | IEC 62776:2014 |
| | | | Self-ballasted single capped LED-lamps for general lighting services by voltage > 50V | MS IEC 62560:2012 | IEC 62560:2011 +A1:2015 |

| No | Category | Description of Regulated Equipment | Detail of Equipment | Standards | |
|----|--|--|---|--|---|
| | | | | National Standard | International Standard |
| 8 | CAPACITOR for FLUORESCENT LAMP | Used together with a ballast in a lamp circuit. | Capacitors for use in tubular fluorescent lamps and other circuits. | MS IEC 61048: 2019 MS IEC 61049: 1999 (confirmed 2015) | IEC 61048:2006 + A1:2015 IEC 61049: 1991 |
| 9 | BALLAST / CONTROL GEAR / DRIVER FOR LAMP | (a) Ballast (i) for controlling the magnitude of current flow in through the discharge path of a fluorescent lamp; (ii) independent or built-in type intended for use with luminaires (portable or fixed); (iii) integral type such that it forms a non replaceable part of a fluorescent lamp/ballast combination; or (iv) adaptor type such that it allows the insertion of a fluorescent lamp into the ballast by the user; but does not include a ballast which is incorporated in luminaires certified for compliance with the requirements for electrical equipment with increased safety type protection (explosive) for use in hazardous locations. | Magnetic Ballast for tubular fluorescent lamp | MS IEC 61347-1: 2012 MS IEC 61347-2-8:2003 MS 141:2014 with MS IEC 60921:2013 | IEC 61347-1: 2010 IEC 61347-2-8: 2000 IEC 60921:2006 with modification |
| | | | Electronic Ballast for fluorescent lamp | MS IEC 61347-1:2012 MS IEC 61347-2-3:2014 MS IEC 60929: 2008 with MS IEC 61000-3-2: 2014 | IEC 61347-1:2010 IEC 61347-2-3:2006 IEC 60929:2006 with IEC 61000-3-2: 2009 |
| | | (b) Control Gear A lamp control gear for use on dc supply up to 250V and or ac supply up to 1000 V. | Control Gear | MS IEC 61347-1:2012 | IEC 61347-1:2010 |

| No | Category | Description of Regulated Equipment | Detail of Equipment | Standards | |
|----|---|---|---|--|--|
| | | | | National Standard | International Standard |
| 10 | CIRCUIT BREAKER including AC CURRENT OPERATED EARTH LEAKAGE CIRCUIT BREAKER and MINIATURE CIRCUIT BREAKER | (a) Residual Current Device (RCD) (i) isolates or initiates a tripping signal to isolate a low voltage supply to protected circuits, socket-outlets or equipment in the event of a current flow to earth which exceeds a pre-determined level; (ii) has a rated residual current less than 300mA for devices intended for connection to fixed wiring or 10mA for other devices; and (iii) has a rated load current not exceeding 125 A for devices intended for connection of fixed wiring or 20 A for other devices. but does not include: (A) a device intended to be used with a particular circuit-breaker other than a miniature overcurrent circuit breaker; or (B) a device intended to protect an electricity supply authority distribution system. | Residual Current Circuit Breaker (RCCB) | MS IEC 61008-1: 2012 MS IEC 61008-2-1: 2003 or MS IEC 61008-1: 2012 MS IEC 61008-2-2: 2003 | IEC 61008-1: 2010 IEC 61008-2-1: 1990 or IEC 61008-1: 2010 IEC 61008-2-2: 1990 |
| | | | Residual Current Breaker with Overcurrent Protection (RCBO) | MS IEC 61009-1: 2012 MS IEC 61009-2-1: 2003 or MS IEC 61009-1: 2012 MS IEC 61009-2-2: 2003 | IEC 61009-1: 2010 IEC 61009-2-1: 1991 or IEC 61009-1: 2010 IEC 61009-2-2: 1991 |
| | | (b) Fuse (i) an enclosed air break switch; (ii) opens a low voltage circuit automatically under pre-determined conditions of over-current; (iii) has a nominal rating not exceeding 125 A and has a current breaking capacity of up to 10kA. | Miniature Circuit Breaker (MCB) for ac supply | MS IEC 60898-1: 2007 | IEC 60898-1: 2003 |
| | | | Miniature Circuit Breaker (MCB) for ac & dc supply | MS IEC 60898-2: 2007 | IEC 60898-2: 2003 |

| No | Category | Description of Regulated Equipment | Detail of Equipment | Standards | | | |
|----|-------------------------|--|--|---|--|---|--|
| | | | | National Standard | International Standard | | |
| | | (iv) fusion of one or more of its specially designed and proportioned components, opens the circuit in which it is inserted and breaks the current when this exceeds a given value for a sufficient time. The fuse comprises all the parts that form the complete device. | Fuse Base & Carrier up to 32A | MS IEC 60269-1:2011 MS IEC 60296-2:2011 | IEC 60269-1:2006 IEC 60269-2:2006 | | |
| | | | Fuse/Fuse Link up to 63A | MS IEC 60269-2:2011 MS IEC 60269-3:2011 | IEC 60269-2:2006 IEC 60269-3:2010 or BS 1362:1973 | | |
| | | | Switch fuse up to 63A. | MS IEC 60947-1:2010 MS IEC 60947-3:2010 | IEC 60947-1:2007 IEC 60947-3:2008 | | |
| 11 | PORTABLE LUMINAIRE LAMP | (a) provides illumination or for decorative purposes, produces light; (b) fitted with a supply flexible cord, an appliance inlet socket or a power supply unit with integral pins for insertion into a socket outlet; (c) for standing on a table or floor or is fitted with a clamp or similar for attachment to vertical or horizontal surfaces; (d) for used with LED lamp, tungsten filament, tubular fluorescent or other discharge lamps; (e) constructed to represent a model, person or animal and is likely to be treated by a child as a toy; or (f) has metal parts which are required to be earthed or double insulated from live parts (excluding live parts of an all insulated lamp holder); | Standing Lamp with detachable or non-detachable mains supply flexible cord, Standing Lamp & adaptor, Table lamp with detachable or non-detachable mains supply flexible cord, Table Lamp & adaptor, Portable LED Lamp. | MS IEC 60598-1: 2021 MS IEC 60598-2-4: 2003 (confirmed 2015) | IEC 60598-1: 2014 +A1:2017 IEC 60598-2-4: 1997 | | |
| | | | Night Lamp integral with direct in plug. | | | MS IEC 60598-1:2021 MS IEC 60598-2-12:2010 | IEC 60598-1: 2014+A1:2017 IEC 60598-2-12:2013 |
| | | | Hand Lamp & adaptor, | | | MS IEC 60598-1: 2021 MS IEC 60598-2-8:2006 | IEC 60598-1: 2014+A1:2017 IEC 60598-2- 8:2013 |

| No | Category | Description of Regulated Equipment | Detail of Equipment | Standards | |
|----|--|---|--|---|---|
| | | | | National Standard | International Standard |
| | | (g) for inspection purposes using illumination; (h) holds a light source or bulb; or (i) hand held; but does not include a hand lamp with a magnification facility. | | | |
| 12 | KETTLE including HEATING ELEMENTS IF SUPPLIED SEPARATELY | (a) portable type; (b) has a capacity not exceeding 15L; and (c) heats liquid for: (i) humidifying room air; (ii) hot beverage; or (iii) cooking purpose | Warming Plate | MS IEC 60335-1:2015 MS IEC 60335-2-12:2014 | IEC 60335-1:2010 IEC 60335-2-12:2008 |
| | | | Deep Fryer | MS IEC 60335-1:2015 MS IEC 60335-2-13:2017 | IEC 60335-1: 2010 IEC 60335-2-13:2009 |
| | | | Heating liquids such as: (a) coffee/ tea maker; (b) food steamer; (c) egg boiler; (d) jug; (e) slow cooker; (f) pressure cooker; (g) steamboat; (h) kettle; (i) airpot; (j) bottle warmer; (k) milk heater; or (l) sterilizer. | MS IEC 60335-1: 2015 MS IEC 60335-2-15:2017 | IEC 60335-1: 2010 IEC 60335-2-15:2012 or IEC 60335-2-47:2021 |
| | | | Multi-purpose cooker | MS IEC 60335-1: 2015 MS IEC 60335-2-9:2014 MS IEC 60335-2-13:2017 MS IEC 60335-2-15:2017 | IEC 60335-1: 2010 IEC 60335-2-9:2008 IEC 60335-2-13:2009 IEC 60335-2-15:2012 |
| | | | Water Dispenser -Filter/Ionizer/ Hydrogen | MS IEC 60335-1: 2015 | IEC 60335-1: 2010 |
| | | | Water Dispenser - Hot | MS IEC 60335-1: 2015 MS IEC 60335-2-15:2017 | IEC 60335-1: 2010 IEC 60335-2-15:2012 |

| No | Category | Description of Regulated Equipment | Detail of Equipment | Standards | |
|----|-----------------|--|--|---|--|
| | | | | National Standard | International Standard |
| | | | Water Dispenser - Cold | MS IEC 60335-1:2015 MS 1597-2-24:2005 | IEC 60335-1:2010 IEC 60335-2-24:2010 with modification |
| | | | Water Dispenser – Hot and Cold (if the hot water boils) | MS IEC 60335-1:2015 MS IEC 60335-2-15:2017 MS 1597-2-24:2005 (confirmed 2013) | IEC 60335-1:2010 IEC 60335-2-15:2012 IEC 60335-2-24:2010 with modification |
| | | | Water Dispenser – Hot and Cold (if the hot water does not boil) | MS IEC 60335-1:2015 MS 1597-2-24:2005 (confirmed 2013) MS 1597-2-21:2019 | IEC 60335-1:2010 IEC 60335-2-24:2010 with modification IEC 60335-2-21:2012 with modification |
| | | | Water Dispenser – Hot and Cold (if the water heater is instantaneous and the water does not boil) | MS IEC 60335-1:2015 MS 1597-2-24:2005 (confirmed 2013) MS 1597-2-35:2019 | IEC 60335-1:2010 IEC 60335-2-24:2010 with modification IEC 60335-2-35:2016 with modification |
| 13 | KITCHEN MACHINE | (a) used for the preparation of food by mechanical means; (b) for opening cans; or (c) for sharpening of knives. | (a) blender; (b) chopper; (c) food processor; (d) juice extractor; (e) grinder; (f) mixer; or (g) ice cream maker. | MS IEC 60335-1:2015 MS IEC 60335-2-14:2014 | IEC 60335-1:2010 IEC 60335-2-14:2008 |

| No | Category | Description of Regulated Equipment | Detail of Equipment | Standards | |
|----|------------------------------------|--|--|---|---|
| | | | | National Standard | International Standard |
| 14 | TOASTER / OVEN (Cooking Appliance) | (a) used for toasting bread or similar food; (b) for cooking or warming food by electrical energy; (c) applies heat to food, liquid or other substances in a chamber by means of high-frequency electromagnetic radiation. | Stationary type such as the following: (a) electric oven; (b) induction hob; (c) induction; (d) induction cooker; (e) cooking range; (f) grill; or (g) air fryer. Note : Electric Oven with a size of 10L to 90L will require MEPS. Refer chapter 4.1 for details | MS IEC 60335-1:2015 MS IEC 60335-2-6:2014 | IEC 60335-1:2010 IEC 60335-2-6:2008 |
| | | | Portable type such as the following: (a) bread maker; (b) bread toaster; (c) portable oven; (d) induction cooker; (e) grill; (f) sandwich maker; (g) waffle maker; (h) roaster; (i) barbeque; (j) popcorn maker; or (k) air fryer. Note: Electric Oven with a size of 10L to 90L will require MEPS. Refer chapter 4.1 for details. | MS IEC 60335-1:2015 MS IEC 60335-2-9:2014 | IEC 60335-1:2010 IEC 60335-2-9:2008 |
| | | | Microwave Oven Note: Size up to or equal to 32L required MEPS. Refer chapter 4.1 for details. | MS IEC 60335-1:2015 MS IEC 60335-2-25:2014 | IEC 60335-1:2010 IEC 60335-2-25:2010 |
| 15 | RICE COOKER | Used for cooking rice or similar food. Note: Capacity 1.0L to 3.6L and rated power 400W to 1600W required MEPS. Refer Chapter 4.1 for details. | Rice Cooker | MS IEC 60335-1:2015 MS IEC 60335-2-15:2017 | IEC 60335-1:2010 IEC 60335-2-15:2012 |

| No | Category | Description of Regulated Equipment | Detail of Equipment | Standards | |
|----|--|---|---|---|---|
| | | | | National Standard | International Standard |
| 16 | REFRIGERATOR | Used for cooling, freezing, preserving or storing food. Note: Refrigerator types with one door and two door and Chest Freezers with solid door with size up to 320L will require MEPS. Refer to Chapter 4.1 for details. | (a) refrigerator; (b) freezer; (c) chest freezer; (d) upright freezer; (e) minibar; (f) chiller; (g) ice cream maker (with motor compressor); or (h) ice maker | MS IEC 60335-1:2015 MS 1597-2-24:2005 (confirm 2013) | IEC 60335-1:2010 IEC 60335-2-24:2010 with modification or IEC 60335-2-89:2010 |
| 17 | IMMERSION WATER HEATER | (a) used for heating liquid in which it may be immersed; and (b) aquarium type immersion heaters. | Fixed Immersion Heater | MS IEC 60335-1:2015 MS IEC 60335-2-73:2014 | EC 60335-1:2010 IEC 60335-2-73:2009 |
| | | | Portable Immersion Heater | MS IEC 60335-1:2015 MS IEC 60335-2-74:2010 | EC 60335-1:2010 IEC 60335-2-74:2006 |
| 18 | WATER HEATER including HEATING ELEMENTS IF SUPPLIED SEPARATELY | (a) Storage (i) used for heating and storage of water below boiling temperature for bathing, washing or similar purposes; (ii) incorporates a heating element with a storage capacity not more than 680 L. | Storage Water Heater | MS IEC 60335-1:2015 MS 1597-2-21:2019 | IEC 60335-1:2010 IEC 60335-2-21:2012 with modification |
| | | (b) Instantaneous (i) instantaneous type for heating water below boiling temperature; (ii) incorporates live parts in contact with water. | Instantaneous Water Heater | MS IEC 60335-1:2015 MS 1597-2-35:2019 | IEC 60335-1:2010 IEC 60335-2-35:2016 with modification |

| No | Category | Description of Regulated Equipment | Detail of Equipment | Standards | |
|----|-----------------|--|---|--|--|
| | | | | National Standard | International Standard |
| 19 | WASHING MACHINE | Used for washing or drying clothes, but does not include a type promoted exclusively to industry or commercial sector more than 18kg. Note: Top load and front load required MEPS. Refer Chapter 4.1 for details. | Washing Machine | MS IEC 60335-1:2015 MS 1597:Part 2-7:2017 | IEC 60335-1:2010 IEC 60335-2-7:2008 +A1:2011 with modification |
| | | | Washing Machine with dryer | MS IEC 60335-1:2015 MS 1597:Part 2-7:2017 MS IEC 60335-2-11:2014 | IEC 60335-1:2010 IEC 60335-2-7:2008 +A1:2011 with modification IEC 60335-2-11:2012 |
| | | | Washing Machine with separate spin container | MS IEC 60335-1:2015 MS IEC 60335-2-4:2017 MS 1597:Part 2-7:2017 | IEC 60335-1:2010 IEC 60335-2-4:2008 +A1:2012 IEC 60335-2-7:2008 +A1:2011 with modification |
| | | | Tumbler Dryers | MS IEC 60335-1:2015 MS IEC 60335-2-11:2014 | IEC 60335-1:2010 IEC 60335-2-11:2012 |
| | | | Cloth Dryers (on rack located) | MS IEC 60335-1:2015 MS IEC 60335-2-43:2014 | IEC 60335-1:2010 IEC 60335-2-43:2008 |
| | | Used for washing, rinsing and drying dishes or cutlery. | (a) dishwasher (b) dish dryer (c) other utensils | MS IEC 60335-1:2015 MS 1597- 2-5:2014 | IEC 60335-1:2010 IEC 60335-2-5:2002 +A2:2008 with modification |
| 20 | FAN | Used for circulating and moving air in its vicinity. | Auto/Oscillating fan, wall fan, Ceiling fan & applies to their separate regulators and with blade/ bladeless. Pedestal fan, Table fan, Moving-louver fan/box fan. Note: All types above required MEPS. Refer Chapter 4.1 for details. | MS IEC 60335-1:2015 MS 1597- 2-80:2010 | IEC 60335-1:2010 IEC 60335-2-80:2015 with modification for ceiling fan only |

| No | Category | Description of Regulated Equipment | Detail of Equipment | Standards | |
|----|--|--|--|---|--|
| | | | | National Standard | International Standard |
| | | | Range Hood | MS IEC 60335-1:2015 MS IEC 60335-2-31:2014 | IEC 60335-1:2010 IEC 60335-2-31:2008 |
| | | | Cleaning Appliances (eg. Air Purifier, Fruit & Vegetable Washer/ ozone) | MS IEC 60335-1:2015 MS IEC 60335-2-65:2014 | IEC 60335-1:2010 IEC 60335-2-65:2008 |
| | | | Humidifiers (eg. Air Cooler, Water Diffuser) | MS IEC 60335-1:2015 MS IEC 60335-2-98:2014 | IEC 60335-1:2010 IEC 60335-2-98:2008 |
| 21 | HAND OPERATED HAIR DRYER/ HAIRCARE/ SKIN CARE/ PERSONAL CARE | Used for drying, styling or caring of human skin or hair. | Hair Dryer, Hair Styling Set, Hand Dryer, Ionic Facial Steamer or similar to it. | MS IEC 60335-1:2015 MS IEC 60335-2-23:2017 | IEC 60335-1:2010 IEC 60335-2-23:2012 |
| | | A hand held for oral hygiene. | Tooth Brush | No Corresponding MS | IEC 60335-1:2010 IEC 60335-2-52:2017 |
| 22 | IRON | Used for smoothening or pressing fabric by the application of heat or steam. | Iron | MS IEC 60335-1:2015 MS 1597-2-3:2017 | IEC 60335-1:2010 IEC 60335-2-3:2012+A1:2015 with modification |
| | | A hand held except for any separate steam generator and includes any associated equipment. | Fabric Steamer, Garment Steamer | MS IEC 60335-1:2015 MS IEC 60335-2-85:2014 | IEC 60335-1:2010 IEC 60335-2-85:2002 +A1:2008 +A2:2017 |
| 23 | SHAVER | Used for shaving, cutting or trimming hair, manicure, pedicure and similar appliances. | Shaver, Hair Clippers, Epilators, Animal Shearers | MS IEC 60335-1:2015 MS IEC 60335-2-8:2002 (confirmed 2013) | IEC 60335-1:2010 IEC 60335-2-8:2012 +A1:2015 +A2:2018 |

| No | Category | Description of Regulated Equipment | Detail of Equipment | Standards | |
|----|-----------------|---|---|--|---|
| | | | | National Standard | International Standard |
| 24 | VAPORISER | Used for dispersing vapors into the air. | Mosquito Mat Vapour, Air Freshener, Insect Repeller. | MS IEC 60335-1:2015 MS IEC 60335-2-101:2014 | IEC 60335-1:2010 IEC 60335-2-101:2002 +A1:2008 |
| 25 | VACUUM CLEANER | (a) portable type; (b) removes dust, dirt or moisture and the like from floor coverings by suction; (c) removes garden refuse from lawns or paths and the like by suction; (d) surface cleaning using employing liquids or steam; | Vacuum Cleaner, Water Suction Cleaning. | MS IEC 60335-1:2015 MS IEC 60335-2-2:2017 | IEC 60335-1:2010 or IEC 60335-2-2:2019 or IEC 60335-2-69:2016 |
| | | | Steam Mop, Steam Cleaner. | No Corresponding MS | IEC 60335-1:2010 IEC 60335-2-54:2019 |
| 26 | HI-FIDELITY SET | (a) for reproduction of sound, with little distortion, connected to the supply mains as the only energy source, intended for general use; and (b) an electronic device intended for reception, generation, recording or reproduction, respectively of audio or video, connected to the supply mains, either directly or indirectly and intended for general use. | Sub-woofer, Amplifier, Cassette Player, Equalizer/Mixer, Hi-Fi System, Karaoke, PA System, Portable Hi-Fi System, Portable Radio Cassette, Player/Recorder, Radio, Radio Alarm, Tuner/Receiver, Turn tables/ Record Players, Compact Disc Player, Audio/Video Recorder, Soundbar, Speakers. | MS IEC 60065:2007 | IEC 60065:2014 Or IEC 62368-1:2014 |

| No | Category | Description of Regulated Equipment | Detail of Equipment | Standards | |
|----|---|---|---|---|---|
| | | | | National Standard | International Standard |
| 27 | VIDEO and VISUAL DISPLAY UNIT | (a) used for receiving and displaying information from a transmitting station or local source; or (b) for the display of public or subscription television broadcasts. Note: Size up to or equal to 70 inches required MEPS. Refer Chapter 4.1 for details. | Electronic appliances and equipments such as LCD, LED, Plasma, CRT, Display Monitor, Internal Antenna or Booster and similar to it. | MS IEC 60065:2007 | IEC 60065:2014 Or IEC 62368-1:2014 |
| 28 | AUDIO and VIDEO PLAYER UNIT | (a) used for video recording and playback or for playback only; and (b) connected to the supply mains either directly or indirectly. | VCD, Laser Disc, DVD, Video Game console and similar to it. | MS IEC 60065: 2007 | IEC 60065: 2014 Or IEC 62368-1:2014 |
| 29 | MASSAGER | (a) used for massaging; (b) contains motor for vibrations, percussions or kneading motions to simulate the effects of a human massage; and (c) connected to the supply mains either directly or indirectly; | Foot Massagers, Massage Bed, Massage Chair, Massage Pads, Handheld Massagers, Massage Belts, Water filled foot massager. | MS IEC 60335-1:2015 MS IEC 60335-2-32:2014 | IEC 60335-1:2010 IEC 60335-2-32:2002 +A1:2008 |
| 30 | AIR CONDITIONER (Cooling Capacity of 32,000 Btu/hr & below) | An electrical assembly to provide delivery of conditioned air to an enclosed space, room or zone, including an electrically operated refrigeration system for cooling and possibly dehumidifying the air. Note: Capacity up to 25,000 btu/hr required MEPS. Refer to Chapter 4.1 for details. | Split Air-conditioner, Portable Air Conditioner, Ceiling Air Conditioner. | MS IEC 60335-1:2015 MS 1597-2-40: 2017 | IEC 60335-1:2010 IEC 60335-2-40:2013 with modification |
| 31 | CHRISTMAS LIGHT | (a) for decorative; (b) display or illumination purposes; (c) consists of: (i) lamps or lamp holders interconnected by flexible cord of less than 2.5mm ² cross sectional area; or (ii) lamps within a flexible enclosure and includes any integral power supply or control devices. | Replaceable light sources such as: (a) lighting chain; (b) decorative or festive light. | MS IEC 60598-1:2021 MS IEC 60598-2-20:2013 | IEC 60598-1:2014 +A1:2017 IEC 60598-2-20:2014 |
| | | | Non-replaceable light sources such as: (a) chain rope lights; (b) sealed lighting chain. | No corresponding MS | IEC 60598-1:2014 +A1:2017 IEC 60598-2-21:2014 |

| No | Category | Description of Regulated Equipment | Detail of Equipment | Standards | |
|-----------------------|---|---|---|---|---|
| | | | | National Standard | International Standard |
| 32 | DOMESTIC POWER TOOLS (Portable Type) | (a) a tool and portable type; (b) for machining, drilling, sawing or surface preparation; and (c) may be entirely supported by hand during operation; | Drill/Impact Drill (Drill bit size up to 15 mm) | MS IEC 60745-1:2010 MS IEC 60745-2-1:2011 | IEC 60745-1:2006 IEC 60745-2-1:2003 +A1:2008 Or IEC 62841-1:2014 IEC 62841-2-1:2017 |
| | | | Hand held screwdrivers and impact wrenches | No corresponding MS | IEC 62841-1:2014 IEC 62841-2-2:2014 |
| | | | Grinder (up to 100 mm) | MS IEC 60745-1:2010 MS IEC 60745-2-3:2010 | IEC 60745-1:2006 IEC 60745-2-3:2006 +A1:2010 +A2:2012 Or IEC 62841-1:2014 IEC 62841-2-3:2020 |
| | | | Sander/Polisher (up to 300 W) | MS IEC 60745-1:2010 MS IEC 60745-2-4:2011 | IEC 60745-1:2006 IEC 60745-2-4:2002 +A1:2008 Or IEC 62841-1:2014 IEC 62841-2-4:2014 |
| | | | Circular Saw and circular knife (Cutting Blade up to 160 mm) | MS IEC 60745-1:2010 MS IEC 60745-2-5:2010 | IEC 60745-1:2006 IEC 60745-2-5:2010 Or IEC 62841-1:2014 IEC 62841-2-5:2014 |
| | | | Spray gun for non-flammable liquid (up to 100 bars) | MS IEC 60745-1:2010 MS IEC 60745-2-7:2005 | IEC 60745-1:2006 IEC 60745-2-7:1989 |
| | | | Jig and Sabre Saw / reciprocating saw (up to 60 mm) | MS IEC 60745-1:2010 MS IEC 60745-2-11:2011 | IEC 60745-1:2006 IEC 60745-2-11:2003 +A1:2008 or IEC 62841-1:2014 IEC 62841-2-11:2015 +A1:2008 |
| | | | Planer (up to 500 W) | MS IEC 60745-1:2011 MS IEC 60745-2-14:2011 | IEC 60745-1:2006 IEC 60745-2-14:2003 +A1:2009 +A2:2010 or IEC 62841-1:2014 IEC 62841-2-14:2015 |
| | | | Trimmer (up to 300 W) Hedge trimmer and Grass shears (up to 750 W) | MS IEC 60745-1:2010 MS IEC 60745-2-15:2011 | IEC 60745-1:2006 IEC 60745-2-15:2006 +A1:2009 |
| | | | Router and trimmer (up to 500 W) | MS IEC 60745-1:2010 MS IEC 60745-2-17:2012 | IEC 60745-1:2006 IEC 60745-2-17:2010 Or IEC 62841-1:2014 IEC 62841-2-17:2017 |
| High Pressure Cleaner | MS IEC 60335-1:2015 MS IEC 60335-2-79:2007 | IEC 60335-1:2010 IEC 60335-2-79:2016 | | | |

| No | Category | Description of Regulated Equipment | Detail of Equipment | Standards | |
|--|---------------------|---|---|---|---|
| | | | | National Standard | International Standard |
| | | Used for stitching fabric or others material. | Sewing Machine | MS IEC 60335-1:2015 MS IEC 60335-2-28:2017 | IEC 60335-1:2010 IEC 60335-2-28:2008 |
| | | A hand held and portable electric heating with similar purpose. | Portable heating tool such as: (a) soldering gun; (b) soldering iron; (c) heat gun; (d) hot air firelighters; (e) glue gun; or (f) vacuum sealer. | MS IEC 60335-1:2015 MS IEC 60335-2-45:2003 | IEC 60335-1:2010 IEC 60335-2-45:2002 +A1:2008 +A2:2011 |
| 33 | ADAPTER / CHARGER | (a) A.C - D.C Chargers (i) for charging batteries other than those of the automotive type; (ii) for charging one or more batteries for use in other equipment; (iii) for charging battery for use in mobile phone, PDA or similar equipment. (iv) imported or manufactured separately (detachable). | Portable Battery Charger (up to 24 V) | MS IEC 60335-1:2015 MS IEC 60335-2-29:2014 | IEC 60335-1:2010 IEC 60335-2-29:2016 |
| | | | Charger for IT Equipment (up to 20 V) | MS IEC 60950-1:2007 (confirmed 2013) | IEC 60950-1:2005 +A1:2009 +A2:2013 or IEC 62368-1:2014 |
| | | | Portable power station or similar equipment | No corresponding MS | IEC 62368-1:2014 |
| | | (b) A.C. - D.C. Adapters A device to supply ac or dc power supply from an ac or dc source, either by itself or as part of an accessory. | General electrical appliances Electronic Isolating Transformer | MS IEC 61558-1:2005 MS IEC 61558-2-6:2005 | IEC 61558-1: 2005 +A1:2009 IEC 61558-2-6:2009 |
| | | | Switching mode power supply | MS IEC 61558-1:2005 MS IEC 61558-2-17:2007 | IEC 61558-1:2005 +A1:2009 IEC 61558-2-16:2009 +A1:2013 |
| | | | Electric toys | MS IEC 61558-1:2005 MS IEC 61558-2-7:2007 | IEC 61558-1:2005 +A1:2009 IEC 61558-2-7: 2007 |
| | | | Audio video equipment | MS IEC 60065:2007 | IEC 60065:2014 Or IEC 62368-1:2014 |
| | | | IT & Office products | MS IEC 60950-1:2007 | IEC 60950-1:2005 +A1:2009 +A2:2013 Or IEC 62368-1:2014 |
| Baby Cradle, Breast Pump, Electric Heated Pillow/Blanket, Insect Trapper, Insect Swatter, Aroma Diffuser | MS IEC 60335-1:2015 | IEC 60335-1:2010 | | | |

| No | Category | Description of Regulated Equipment | Detail of Equipment | Standards | |
|----|--|--|--|---|--|
| | | | | National Standard | International Standard |
| | | (c) Electric Vehicle Charger (i) for charging electric vehicle system equipment (EVSE); (ii) portable AC charger with an In-cable control and protection device (ICCPD); (iii) AC charger permanently connected to AC supply with a control pilot function. | Portable AC charger (mode 2); AC chargers with an In-cable control and protection device (IC-CPD) | MS IEC 61851-1:2021 MS IEC 61851-2:2021 MS IEC 62196-1:2021 MS IEC 62196-2:2021 IEC 62752:2016 +A1:2018 | IEC 61851-1:2017 IEC 61851-2-1:2018 IEC 62196-1:2014 IEC 62196-2:2016 IEC 62752:2016+A1:2018 |
| | | | Fixed AC charger (mode 3); AC chargers wall mounted, floor-standing. | MS IEC 61851-1:2021 MS IEC 61851-2:2021 MS IEC 62196-1:2021 MS IEC 62196-2:2021 | IEC 61851-1:2017 IEC 61851-2-1:2018 IEC 62196-1:2014 IEC 62196-2:2016 |
| 34 | WIRE / CABLE / CORD (non-armoured) 0.5mm ² to 35mm ² | (a) unscreened and flexible type; (b) designed for use at low voltage; (c) consists of two or three elastomer; (d) PVC insulated cores of multistrand construction; and (e) has a cross sectional area of each conductor from 0.5mm ² not exceeding 35mm ² . | Polyvinyl chloride (PVC) Insulated flexible cord and cable | MS 2112-5:2009 + A1:2017 | BS EN 50525-2-11:2011 or IEC 60227-5:2011 |
| | | | Rubber insulated cord and flexible cables | MS 2127-4:2017 | BS EN 50525-2-11-2011 IEC 60245-1:2003 + A1:2007 |
| | | | PVC-insulated cable (non-armoured) for electric power and supply: - non-sheathed | MS 2112-3:2009, A1:2015 | IEC 60227-3:1993 + A1:1997 |
| | | | PVC-insulated cable (non-armoured) for electric power and supply: - sheathed | MS 2112-4:2009, A1:2015 | IEC 60227-4:1992 + A1:1997 |

Notes:

- i) Regulated Accessories incorporated with main products (eg. accessories such as lamp, usb adaptor/charger, etc) shall meet the requirement of related accessories standards.
- ii) List of regulated electrical equipment will be revised subject to the approval of the Commission.

4.1 LIST OF REGULATED ELECTRICAL EQUIPMENT THAT ARE TO BE TESTED TO THE SPECIFIED MINIMUM ENERGY PERFORMANCE STANDARDS (MEPS)

| No | Equipment | Type of Equipment | National Standard | International Standard | Efficiency Ratings | | | | | | | | | | | | |
|---|---------------------|---|---|--|--|------------------------------|---------------------|-------|---------------------|--------------------|------------------------------|--------------------|------------------------------|--------------------|------------------------------|--------|------------------------------|
| 1 | Refrigerator | (a) one-door (b) two-door | MS IEC 62552-1:2016 MS IEC 62552-2:2016 MS IEC 62552-3:2016 | IEC 62552-1:2015 IEC 62552-2:2015 IEC 62552-3:2015 | <table border="1"> <thead> <tr> <th>Star Rating</th> <th>Star Index Value</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>+ 25 % ≤ Star index</td> </tr> <tr> <td>4</td> <td>+ 10 % ≤ Star index < + 25 %</td> </tr> <tr> <td>3</td> <td>- 10 % ≤ Star index < + 10 %</td> </tr> <tr> <td>2</td> <td>- 25 % ≤ Star index < - 10 %</td> </tr> <tr> <td>1</td> <td>- 35 % ≤ Star index < - 25 %</td> </tr> </tbody> </table> | Star Rating | Star Index Value | 5 | + 25 % ≤ Star index | 4 | + 10 % ≤ Star index < + 25 % | 3 | - 10 % ≤ Star index < + 10 % | 2 | - 25 % ≤ Star index < - 10 % | 1 | - 35 % ≤ Star index < - 25 % |
| | | | | | Star Rating | Star Index Value | | | | | | | | | | | |
| | | | | | 5 | + 25 % ≤ Star index | | | | | | | | | | | |
| | | | | | 4 | + 10 % ≤ Star index < + 25 % | | | | | | | | | | | |
| | | | | | 3 | - 10 % ≤ Star index < + 10 % | | | | | | | | | | | |
| | | | | | 2 | - 25 % ≤ Star index < - 10 % | | | | | | | | | | | |
| | | | | | 1 | - 35 % ≤ Star index < - 25 % | | | | | | | | | | | |
| Minimum Star Rating Value is 2 | | | | | | | | | | | | | | | | | |
| 2 | Air Conditioner | Single split wall mounted air conditioner with capacity up to 25,000 btu/hr | MS ISO 5151:2012 ISO 16358-1:2013 (Calculation Method) | ISO 5151:2010 ISO 16358-1:2013 (Calculation Method) | <table border="1"> <thead> <tr> <th>Star Rating</th> <th>Tested CSPF (Wh/Wh)</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>≥5.30</td> </tr> <tr> <td>4</td> <td>4.60 ≤ CSPF < 5.30</td> </tr> <tr> <td>3</td> <td>3.30 ≤ CSPF < 4.60</td> </tr> <tr> <td>2</td> <td>3.10 ≤ CSPF < 3.30</td> </tr> <tr> <td>1</td> <td>< 3.10</td> </tr> </tbody> </table> | Star Rating | Tested CSPF (Wh/Wh) | 5 | ≥5.30 | 4 | 4.60 ≤ CSPF < 5.30 | 3 | 3.30 ≤ CSPF < 4.60 | 2 | 3.10 ≤ CSPF < 3.30 | 1 | < 3.10 |
| | | | | | Star Rating | Tested CSPF (Wh/Wh) | | | | | | | | | | | |
| | | | | | 5 | ≥5.30 | | | | | | | | | | | |
| | | | | | 4 | 4.60 ≤ CSPF < 5.30 | | | | | | | | | | | |
| | | | | | 3 | 3.30 ≤ CSPF < 4.60 | | | | | | | | | | | |
| | | | | | 2 | 3.10 ≤ CSPF < 3.30 | | | | | | | | | | | |
| | | | | | 1 | < 3.10 | | | | | | | | | | | |
| Rated Cooling Capacity < 4.5kW | | | | | | | | | | | | | | | | | |
| 4.5kW ≤ Rated Cooling Capacity ≤ 7.1kW | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Star Rating</th> <th>Tested CSPF (Wh/Wh)</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>≥5.10</td> </tr> <tr> <td>4</td> <td>4.00 ≤ CSPF < 5.10</td> </tr> <tr> <td>3</td> <td>3.10 ≤ CSPF < 4.00</td> </tr> <tr> <td>2</td> <td>2.90 ≤ CSPF < 3.10</td> </tr> <tr> <td>1</td> <td>< 2.90</td> </tr> </tbody> </table> | | | | | Star Rating | Tested CSPF (Wh/Wh) | 5 | ≥5.10 | 4 | 4.00 ≤ CSPF < 5.10 | 3 | 3.10 ≤ CSPF < 4.00 | 2 | 2.90 ≤ CSPF < 3.10 | 1 | < 2.90 | |
| Star Rating | Tested CSPF (Wh/Wh) | | | | | | | | | | | | | | | | |
| 5 | ≥5.10 | | | | | | | | | | | | | | | | |
| 4 | 4.00 ≤ CSPF < 5.10 | | | | | | | | | | | | | | | | |
| 3 | 3.10 ≤ CSPF < 4.00 | | | | | | | | | | | | | | | | |
| 2 | 2.90 ≤ CSPF < 3.10 | | | | | | | | | | | | | | | | |
| 1 | < 2.90 | | | | | | | | | | | | | | | | |
| Minimum Star Rating Value is 2 | | | | | | | | | | | | | | | | | |
| 3 | Television | Television size up to or equal to 70 inches and type of television are as following list: (a) Plasma (b) Liquid Crystal Display (LCD) (c) Light Emitting Diode (LED) (d) Cathode Ray Tube (CRT) | MS IEC 62301:2012 MS IEC 62087-3:2017 | IEC 62301:2011 IEC 62087-3:2015 | <table border="1"> <thead> <tr> <th>Star Rating</th> <th>Star Index Value</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>+70% ≤ Star index</td> </tr> <tr> <td>4</td> <td>+25 % ≤ Star index < +70%</td> </tr> <tr> <td>3</td> <td>-22 % ≤ Star index < +25%</td> </tr> <tr> <td>2</td> <td>-55 % ≤ Star index < -22%</td> </tr> <tr> <td>1</td> <td>Star index < -55%</td> </tr> </tbody> </table> | Star Rating | Star Index Value | 5 | +70% ≤ Star index | 4 | +25 % ≤ Star index < +70% | 3 | -22 % ≤ Star index < +25% | 2 | -55 % ≤ Star index < -22% | 1 | Star index < -55% |
| | | | | | Star Rating | Star Index Value | | | | | | | | | | | |
| | | | | | 5 | +70% ≤ Star index | | | | | | | | | | | |
| | | | | | 4 | +25 % ≤ Star index < +70% | | | | | | | | | | | |
| | | | | | 3 | -22 % ≤ Star index < +25% | | | | | | | | | | | |
| | | | | | 2 | -55 % ≤ Star index < -22% | | | | | | | | | | | |
| | | | | | 1 | Star index < -55% | | | | | | | | | | | |
| Minimum Star Rating Value is 2 | | | | | | | | | | | | | | | | | |

| No | Equipment | Type of Equipment | National Standard | International Standard | Efficiency Ratings | | | | | | | | | | | | | |
|--|--|---|--|-----------------------------------|---|--|--|-------------------------|-------|--------------|--------------|--------------|--------------|----|--------------|----|--------------|----|
| 4 | Domestic Fan | (a) Wall Fan (10inch - 16inch) (b) Table / Desk Fan (10inch - 16inch) (c) Pedestal Fan (10inch - 16inch) (d) Ceiling Fan (48inch - 60inch) | MS 1220: 2010 | IEC 60879: 1986 with modification | a) Wall fan, Desk fan and Pedestal fan <table border="1"> <thead> <tr> <th>Star Rating</th> <th>Coefficient of Performance. COP (m3/min/W)</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>≥1.20</td> </tr> <tr> <td>4</td> <td>1.12 to 1.19</td> </tr> <tr> <td>3</td> <td>1.08 to 1.11</td> </tr> <tr> <td>2</td> <td>1.01 to 1.07</td> </tr> <tr> <td>1</td> <td>0.93 to 1.00</td> </tr> </tbody> </table> | Star Rating | Coefficient of Performance. COP (m3/min/W) | 5 | ≥1.20 | 4 | 1.12 to 1.19 | 3 | 1.08 to 1.11 | 2 | 1.01 to 1.07 | 1 | 0.93 to 1.00 | |
| | | | | | Star Rating | Coefficient of Performance. COP (m3/min/W) | | | | | | | | | | | | |
| 5 | ≥1.20 | | | | | | | | | | | | | | | | | |
| 4 | 1.12 to 1.19 | | | | | | | | | | | | | | | | | |
| 3 | 1.08 to 1.11 | | | | | | | | | | | | | | | | | |
| 2 | 1.01 to 1.07 | | | | | | | | | | | | | | | | | |
| 1 | 0.93 to 1.00 | | | | | | | | | | | | | | | | | |
| b) Ceiling fan <table border="1"> <thead> <tr> <th>Star Rating</th> <th>Coefficient of Performance. COP (m3/min/W)</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>≥3.00</td> </tr> <tr> <td>4</td> <td>2.74 to 2.99</td> </tr> <tr> <td>3</td> <td>2.66 to 2.73</td> </tr> <tr> <td>2</td> <td>2.58 to 2.65</td> </tr> <tr> <td>1</td> <td>2.50 to 2.57</td> </tr> </tbody> </table> <p>Minimum Star Rating Value is 2.</p> | Star Rating | Coefficient of Performance. COP (m3/min/W) | 5 | ≥3.00 | 4 | 2.74 to 2.99 | 3 | 2.66 to 2.73 | 2 | 2.58 to 2.65 | 1 | 2.50 to 2.57 | | | | | | |
| Star Rating | Coefficient of Performance. COP (m3/min/W) | | | | | | | | | | | | | | | | | |
| 5 | ≥3.00 | | | | | | | | | | | | | | | | | |
| 4 | 2.74 to 2.99 | | | | | | | | | | | | | | | | | |
| 3 | 2.66 to 2.73 | | | | | | | | | | | | | | | | | |
| 2 | 2.58 to 2.65 | | | | | | | | | | | | | | | | | |
| 1 | 2.50 to 2.57 | | | | | | | | | | | | | | | | | |
| 5 | Lighting | (a) T5 and T8 Double Capped Fluorescent Lamp | MS IEC 60081:2003 | IEC 60081:2003 | <table border="1"> <thead> <tr> <th>Type</th> <th>Lamp Rating (W)</th> <th>Minimum Efficacy (lm/W)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">T8</td> <td>18 to 30</td> <td>70</td> </tr> <tr> <td>≥31</td> <td>80</td> </tr> <tr> <td rowspan="2">T5</td> <td>14</td> <td>75</td> </tr> <tr> <td>≥15</td> <td>80</td> </tr> </tbody> </table> | Type | Lamp Rating (W) | Minimum Efficacy (lm/W) | T8 | 18 to 30 | 70 | ≥31 | 80 | T5 | 14 | 75 | ≥15 | 80 |
| | | Type | Lamp Rating (W) | Minimum Efficacy (lm/W) | | | | | | | | | | | | | | |
| | | T8 | 18 to 30 | 70 | | | | | | | | | | | | | | |
| ≥31 | 80 | | | | | | | | | | | | | | | | | |
| T5 | 14 | 75 | | | | | | | | | | | | | | | | |
| | ≥15 | 80 | | | | | | | | | | | | | | | | |
| (b) Self ballasted single-capped lamps (Compact Fluorescent Lamps (CFL)) | MS IEC 60969:2006 | IEC 60969:2001 | <table border="1"> <thead> <tr> <th>Lamp Rating (W)</th> <th>Minimum Efficacy (lm/W)</th> </tr> </thead> <tbody> <tr> <td>< 9</td> <td>46</td> </tr> <tr> <td>9 to 14</td> <td>52</td> </tr> <tr> <td>15 to 24</td> <td>55</td> </tr> <tr> <td>≥25</td> <td>62</td> </tr> </tbody> </table> | Lamp Rating (W) | Minimum Efficacy (lm/W) | < 9 | 46 | 9 to 14 | 52 | 15 to 24 | 55 | ≥25 | 62 | | | | | |
| Lamp Rating (W) | Minimum Efficacy (lm/W) | | | | | | | | | | | | | | | | | |
| < 9 | 46 | | | | | | | | | | | | | | | | | |
| 9 to 14 | 52 | | | | | | | | | | | | | | | | | |
| 15 to 24 | 55 | | | | | | | | | | | | | | | | | |
| ≥25 | 62 | | | | | | | | | | | | | | | | | |
| (c) Single-capped fluorescent Lamps (Non-Integrated CFL) & circular fluorescent lamp | MS IEC 60901:2003 | IEC 60901:1996 | <table border="1"> <thead> <tr> <th>Lamp Rating (W)</th> <th>Minimum Efficacy (lm/W)</th> </tr> </thead> <tbody> <tr> <td>< 10</td> <td>46</td> </tr> <tr> <td>10 to 18</td> <td>55</td> </tr> <tr> <td>19 to 26</td> <td>59</td> </tr> <tr> <td>≥27</td> <td>70</td> </tr> </tbody> </table> | Lamp Rating (W) | Minimum Efficacy (lm/W) | < 10 | 46 | 10 to 18 | 55 | 19 to 26 | 59 | ≥27 | 70 | | | | | |
| Lamp Rating (W) | Minimum Efficacy (lm/W) | | | | | | | | | | | | | | | | | |
| < 10 | 46 | | | | | | | | | | | | | | | | | |
| 10 to 18 | 55 | | | | | | | | | | | | | | | | | |
| 19 to 26 | 59 | | | | | | | | | | | | | | | | | |
| ≥27 | 70 | | | | | | | | | | | | | | | | | |

| No | Equipment | Type of Equipment | National Standard | International Standard | Efficiency Ratings | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|--------------------------------------|--|--------------------|--------------------------------------|---|--------------------------------------|---------------------------------|-----|----------------|------|---------------------|-------------|---------------------|-----|---------------------|---|-------------|-------------|--------------------------------------|---|--------|---|-------------------|---|--------------------|---|---------------------|---|---------|
| | | (d) Self-ballasted Light Emitting Diode (LED) Lamps | MS IEC 62612:2015 | IEC 62612:2013 | <table border="1"> <thead> <tr> <th>Lamp Cap Type (As in MS IEC 60061-1)</th> <th>Minimum Efficacy (lm/W)</th> </tr> </thead> <tbody> <tr> <td>G13</td> <td>75</td> </tr> <tr> <td>GU10</td> <td>50</td> </tr> <tr> <td>E27 or B22d</td> <td>60</td> </tr> <tr> <td>E14</td> <td>60</td> </tr> </tbody> </table> | Lamp Cap Type (As in MS IEC 60061-1) | Minimum Efficacy (lm/W) | G13 | 75 | GU10 | 50 | E27 or B22d | 60 | E14 | 60 | | | | | | | | | | | | | | |
| Lamp Cap Type (As in MS IEC 60061-1) | Minimum Efficacy (lm/W) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G13 | 75 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GU10 | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E27 or B22d | 60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E14 | 60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | (e) **Incandescent Lamps | MS IEC 60064:2006 | IEC 60064:2006 | Minimum Efficacy =20lm/W | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Washing Machine | (a) Top loading washing Machine (b) Front Loading Washing Machine | MS IEC 60456: 2012 | IEC 60456: 2010 | <p>a) Top Loading Washing Machine ≤16kg</p> <table border="1"> <thead> <tr> <th>Star Rating</th> <th>Energy Efficiency Ratio (Wh/kg)</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>< 6.0</td> </tr> <tr> <td>4</td> <td>6.0 ≤ EER < 10.0</td> </tr> <tr> <td>3</td> <td>10.0 ≤ EER < 17.0</td> </tr> <tr> <td>2</td> <td>17.0 ≤ EER < 22.5</td> </tr> <tr> <td>1</td> <td>≥ 22.5</td> </tr> </tbody> </table> <p>b) Front Loading Washing Machine ≤ 16kg</p> <table border="1"> <thead> <tr> <th>Star Rating</th> <th>Energy Efficiency Ratio, EER (Wh/kg)</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>< 70.0</td> </tr> <tr> <td>4</td> <td>70.0 ≤ EER < 90.0</td> </tr> <tr> <td>3</td> <td>90.0 ≤ EER < 140.0</td> </tr> <tr> <td>2</td> <td>140.0 ≤ EER < 220.0</td> </tr> <tr> <td>1</td> <td>≥ 220.0</td> </tr> </tbody> </table> <p>Minimum Star Rating Value is 2</p> | Star Rating | Energy Efficiency Ratio (Wh/kg) | 5 | < 6.0 | 4 | 6.0 ≤ EER < 10.0 | 3 | 10.0 ≤ EER < 17.0 | 2 | 17.0 ≤ EER < 22.5 | 1 | ≥ 22.5 | Star Rating | Energy Efficiency Ratio, EER (Wh/kg) | 5 | < 70.0 | 4 | 70.0 ≤ EER < 90.0 | 3 | 90.0 ≤ EER < 140.0 | 2 | 140.0 ≤ EER < 220.0 | 1 | ≥ 220.0 |
| Star Rating | Energy Efficiency Ratio (Wh/kg) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | < 6.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 6.0 ≤ EER < 10.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 10.0 ≤ EER < 17.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 17.0 ≤ EER < 22.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | ≥ 22.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Star Rating | Energy Efficiency Ratio, EER (Wh/kg) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | < 70.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 70.0 ≤ EER < 90.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 90.0 ≤ EER < 140.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 140.0 ≤ EER < 220.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | ≥ 220.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Microwave Oven | Microwave Oven with size up to or equal to 32L | MS IEC 62301:2012 | IEC 62301:2011 and IEC 60705:2010 | <table border="1"> <thead> <tr> <th>Star Rating</th> <th>Efficiency, η (%)</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>$\eta \geq 65$</td> </tr> <tr> <td>4</td> <td>$58 \leq \eta < 65$</td> </tr> <tr> <td>3</td> <td>$53 \leq \eta < 58$</td> </tr> <tr> <td>2</td> <td>$45 \leq \eta < 53$</td> </tr> <tr> <td>1</td> <td>$\eta < 45$</td> </tr> </tbody> </table> <p>Minimum Star Rating Value is 2</p> | Star Rating | Efficiency, η (%) | 5 | $\eta \geq 65$ | 4 | $58 \leq \eta < 65$ | 3 | $53 \leq \eta < 58$ | 2 | $45 \leq \eta < 53$ | 1 | $\eta < 45$ | | | | | | | | | | | | |
| Star Rating | Efficiency, η (%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | $\eta \geq 65$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | $58 \leq \eta < 65$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | $53 \leq \eta < 58$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | $45 \leq \eta < 53$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | $\eta < 45$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| No | Equipment | Type of Equipment | National Standard | International Standard | Efficiency Ratings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|------------------------------|---|------------------------|---|--|--------------------|------------------|---|---------------------|---|------------------------------|---|------------------------------|---|------------------------------|---|---------------------|------|------|------|------|------|---------------|------|------|------|------|------|---------------|------|------|------|------|------|----------------|------|------|------|------|------|-----------------|------|------|------|------|------|
| 8 | Rice Cooker | (a) Capacity: 1.0L ≤ Capacity ≤ 3.6L; and (b) Rated Power: 400W ≤ P ≤ 1600W | MS 2024:2020 | N/A | <table border="1"> <thead> <tr> <th rowspan="2">Rated power, P (W)</th> <th colspan="5">Efficiency, (%)</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> </thead> <tbody> <tr> <td>P ≤ 400</td> <td>≥ 65</td> <td>≥ 70</td> <td>≥ 75</td> <td>≥ 80</td> <td>≥ 85</td> </tr> <tr> <td>400 < P ≤ 600</td> <td>≥ 66</td> <td>≥ 71</td> <td>≥ 76</td> <td>≥ 81</td> <td>≥ 87</td> </tr> <tr> <td>600 < P ≤ 800</td> <td>≥ 67</td> <td>≥ 72</td> <td>≥ 77</td> <td>≥ 82</td> <td>≥ 89</td> </tr> <tr> <td>800 < P ≤ 1000</td> <td>≥ 68</td> <td>≥ 73</td> <td>≥ 78</td> <td>≥ 83</td> <td>≥ 91</td> </tr> <tr> <td>1000 < P ≤ 2000</td> <td>≥ 69</td> <td>≥ 74</td> <td>≥ 79</td> <td>≥ 84</td> <td>≥ 93</td> </tr> </tbody> </table> <p>Minimum Star Rating Value is 2</p> | Rated power, P (W) | Efficiency, (%) | | | | | 1 | 2 | 3 | 4 | 5 | P ≤ 400 | ≥ 65 | ≥ 70 | ≥ 75 | ≥ 80 | ≥ 85 | 400 < P ≤ 600 | ≥ 66 | ≥ 71 | ≥ 76 | ≥ 81 | ≥ 87 | 600 < P ≤ 800 | ≥ 67 | ≥ 72 | ≥ 77 | ≥ 82 | ≥ 89 | 800 < P ≤ 1000 | ≥ 68 | ≥ 73 | ≥ 78 | ≥ 83 | ≥ 91 | 1000 < P ≤ 2000 | ≥ 69 | ≥ 74 | ≥ 79 | ≥ 84 | ≥ 93 |
| Rated power, P (W) | Efficiency, (%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P ≤ 400 | ≥ 65 | ≥ 70 | ≥ 75 | ≥ 80 | ≥ 85 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 400 < P ≤ 600 | ≥ 66 | ≥ 71 | ≥ 76 | ≥ 81 | ≥ 87 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 600 < P ≤ 800 | ≥ 67 | ≥ 72 | ≥ 77 | ≥ 82 | ≥ 89 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 800 < P ≤ 1000 | ≥ 68 | ≥ 73 | ≥ 78 | ≥ 83 | ≥ 91 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1000 < P ≤ 2000 | ≥ 69 | ≥ 74 | ≥ 79 | ≥ 84 | ≥ 93 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Freezer | Chest Freezers with solid door and size up to or equals to 320L (with size up to 320L and below). | No equivalent standard | IEC 62552-1: 2015/A1:2020 and IEC 62552-3: 2015/A1:2020 | <table border="1"> <thead> <tr> <th>Star Rating</th> <th>Star Index Value</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>+ 35 % ≤ Star index</td> </tr> <tr> <td>4</td> <td>+ 15 % ≤ Star index < + 35 %</td> </tr> <tr> <td>3</td> <td>- 20 % ≤ Star index < + 15 %</td> </tr> <tr> <td>2</td> <td>- 37 % ≤ Star index < - 20 %</td> </tr> <tr> <td>1</td> <td>Star index < - 37 %</td> </tr> </tbody> </table> <p>Minimum Star Rating Value is 2</p> | Star Rating | Star Index Value | 5 | + 35 % ≤ Star index | 4 | + 15 % ≤ Star index < + 35 % | 3 | - 20 % ≤ Star index < + 15 % | 2 | - 37 % ≤ Star index < - 20 % | 1 | Star index < - 37 % | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Star Rating | Star Index Value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | + 35 % ≤ Star index | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | + 15 % ≤ Star index < + 35 % | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | - 20 % ≤ Star index < + 15 % | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | - 37 % ≤ Star index < - 20 % | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Star index < - 37 % | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| No | Equipment | Type of Equipment | National Standard | International Standard | Efficiency Ratings | |
|--------------------------------|---------------|--------------------------------------|-------------------|------------------------|---------------------------|----------------------|
| 10 | Electric Oven | a) Built-in type b) Portable type | N/A | IEC 60350-1: 2016 | a) Built-in electric oven | |
| | | | | | Star Rating | EEI (%) |
| | | | | | 5 | $EEI < 82$ |
| | | | | | 4 | $82 \leq EEI < 92$ |
| | | | | | 3 | $92 \leq EEI < 115$ |
| | | | | | 2 | $115 \leq EEI < 140$ |
| | | | | | 1 | $140 \leq EEI$ |
| | | | | | b) Portable electric oven | |
| | | | | | Star Rating | EEI (%) |
| | | | | | 5 | $EEI < 85$ |
| | | | | | 4 | $85 \leq EEI < 95$ |
| | | | | | 3 | $95 \leq EEI < 110$ |
| | | | | | 2 | $110 \leq EEI < 120$ |
| | | | | | 1 | $120 \leq EEI$ |
| Minimum Star Rating Value is 2 | | | | | | |

**The Minimum Energy Performance Standards (MEPS) for incandescent lamp shall not apply for the usage as per the listed applications:

- (a) components in electrical appliances;
- (b) medical and lab equipment;
- (c) internal decoration, shows and exhibition;
- (d) safety and signaling;
- (e) conservation of animals and as repellent for insects;
- (f) heating and testing;
- (g) cleanliness and health;
- (h) beauty treatment;
- (i) lamps that cannot be directly replaced with other type of lamp; and
- (j) incandescent lamp for other purposes deemed suitable by the Commission to be excluded.

PARTIES THAT NEED TO APPLY FOR CERTIFICATE OF APPROVAL (CoA)

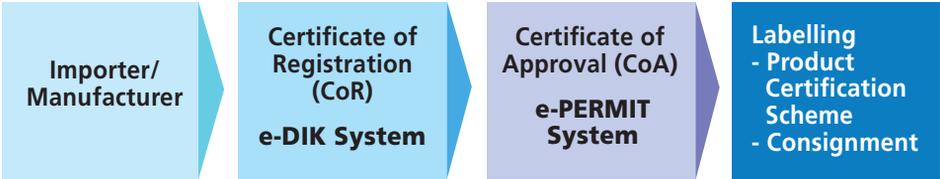
Importers

Importers of electrical equipment under regulation 97 of the Electricity Regulations 1994 are required to apply for the CoA from the Commission. An importer shall be a Malaysian company registered with the Companies Commission of Malaysia.

Manufacturers

Manufacturers who manufacture electrical equipment under regulation 97 of the Electricity Regulations 1994 are required to apply for the CoA.

Approval of Electrical Equipment Process Flow



ONLINE SYSTEM : e-DIK AND e-PERMIT

The Commission has developed an online system for application of Certificate of Registration (CoR) and Certificate of Approval (CoA) for the purposes of importation and manufacture of consumer electrical equipment.

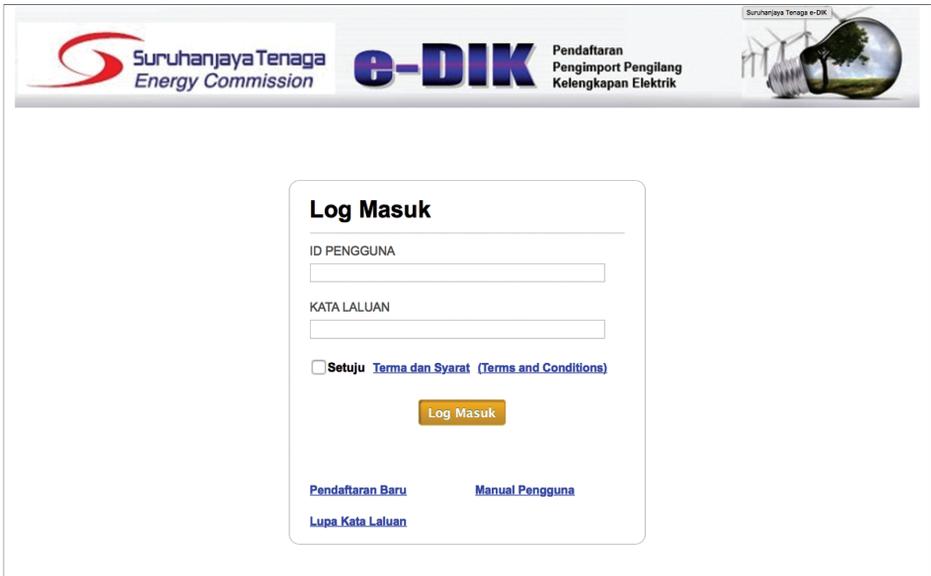
Effective from 1st October 2010, the application and payment are done online via e-Permit system operated by DagangNet Technologies Sdn. Bhd. (DagangNet).

e-DIK SYSTEM FOR CoR APPLICATION

To import and manufacture consumer electrical equipment, an applicant needs to register with the Commission by applying for a Certificate of Registration to manufacture or import through e-DIK system for the registration of the company.

Where the applicant has been registered, the applicant can proceed to apply for a Certificate of Approval (CoA) through e-Permit system for the equipment approval.

e-DIK is available at <https://edik.st.gov.my> as follows:-



Log Masuk

ID PENGGUNA

KATA LALUAN

Setuju [Terma dan Syarat \(Terms and Conditions\)](#)

Log Masuk

[Pendaftaran Baru](#) [Manual Pengguna](#)

[Lupa Kata Laluan](#)

e-DIK Screen

e-PERMIT SYSTEM FOR CoA APPLICATION

Users of e-Permit system are required to register with DagangNet prior to applying the CoA. ST will issue the CoA if applications are in order (test report and all required documents submitted and fees paid to ST).

e-Permit is available at <https://epermit.dagangnet.com.my/>

ePermit

[Home](#) | [PIA](#) | [Subscription](#) | [System Requirement](#) | [ePCO](#) | [STA](#) | [myTRADELINK](#)

About ePermit

ePermit is a web-based service provided by Dagang Net Technologies Sdn Bhd to facilitate the online application and approval of permits. It is one of the core services available under the National Single Window initiative accessible via mytradelink.

You can apply permit from multiple Other Government Agencies (OGA) or Permit Issuing Agencies (PIA).

Approved permits will be routed to Sistem Maklumat Kastam (where applicable) for validation and cross-reference purposes against Customs declaration.

User Name:

Password:

Remember Password

Announcement [More](#)

22-Jan-2021
DVS Sarawak: Extension for Compliance to Veterinary Health Mark Certification and Veterinary Health Certificate for Importation of Milk Chocolate Products into Sarawak
[\[More Info\]](#)

14-Jan-2021
SIRIM: COA Iron and Steel Application during Movement Control Order (MCO)
[\[More Info\]](#)

14-Jan-2021
DVS Sarawak: Temporary Application of Establishment Number and Halal Logo Sticker or Inserts to Meat Product for Exportation for Consignment to Sarawak from Australia and New Zealand
[\[More Info\]](#)

Quick links www.dagangnet.com www.mytradelink.gov.my www.customs.gov.my

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e-PERMIT screen

6.1 APPLICATION FOR CERTIFICATE OF REGISTRATION (CoR) TO MANUFACTURE / IMPORT

A. Application Procedure

- (1) The registration as a manufacturer or importer can be made through the e-DIK system at <https://edik.st.gov.my>. The successful applicant shall be issued with a CoR by the Commission.
- (2) The CoR shall be valid for not less than one year and not exceeding five years from the date of issuance or the date of renewal of the CoR.
- (3) Renewal of CoR is available to be made through the e-DIK system 2 months before the expiry date of the CoR.
- (4) The renewal of the CoR shall be made not less than 14 days before the expiry date of the CoR.
- (5) Any application for the renewal of the CoR received less than 14 days before the expiry date shall be automatically rejected. In this case the applicant needs to apply for a new CoR.
- (6) Any person applying for a CoA shall ensure that they are registered as a manufacturer or importer with the Commission and their CoR is valid prior to applying for a CoA.

B. Documents Required

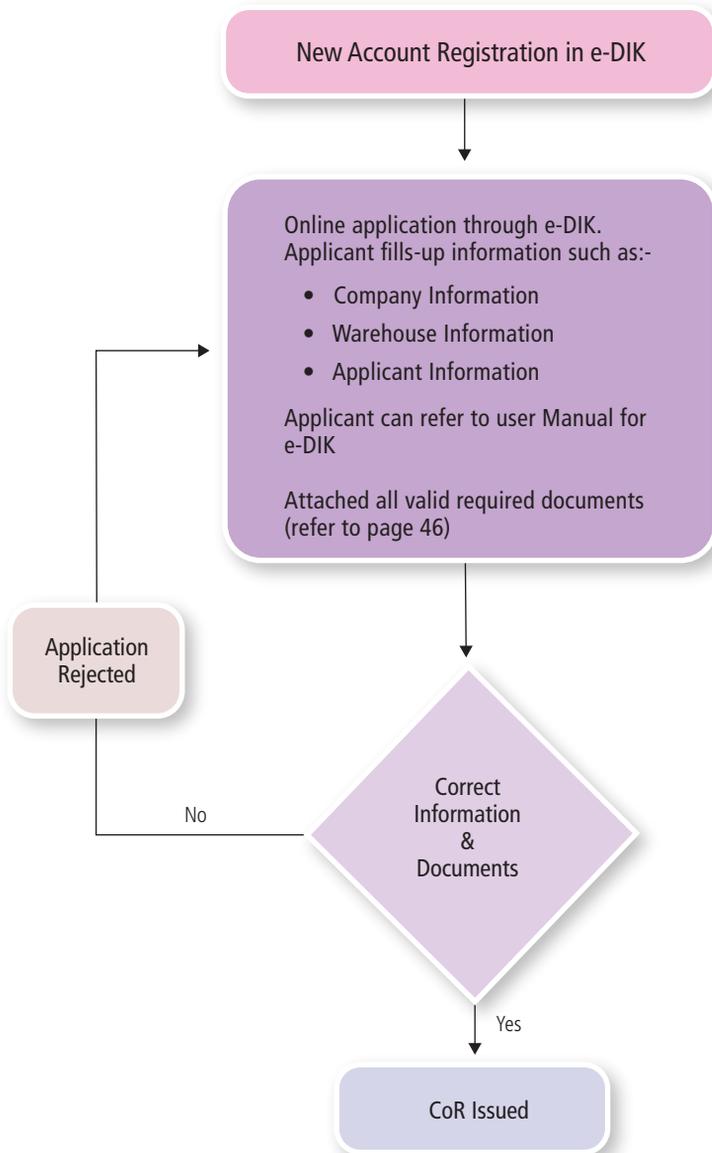
Documents required for Certificate of Registration to manufacture and Certificate of Registration to import are as follows:

- (a) SSM registration document
 - (i) SSM Business Profile for Business Registration with Companies Commission of Malaysia under the Registration of Businesses Act 1956 [Act 197];
 - (ii) SSM Corporate Profile for Company Incorporation with Companies Commission of Malaysia under the Companies Act 2016 [Act 777]; or
 - (iii) SSM PLT Profile for Limited Liability Partnership Incorporation with Companies Commission of Malaysia under the Limited Liability Partnerships Act 2012 [Act 743].
- (b) Warehouse Tenancy Agreement for rented premise.
- (c) Business License from Local Authority (i.e. Dewan Bandaraya Kuala Lumpur).
- (d) Photo of the premise showing the business signboard.
- (e) any other information/document as the Commission deems necessary.

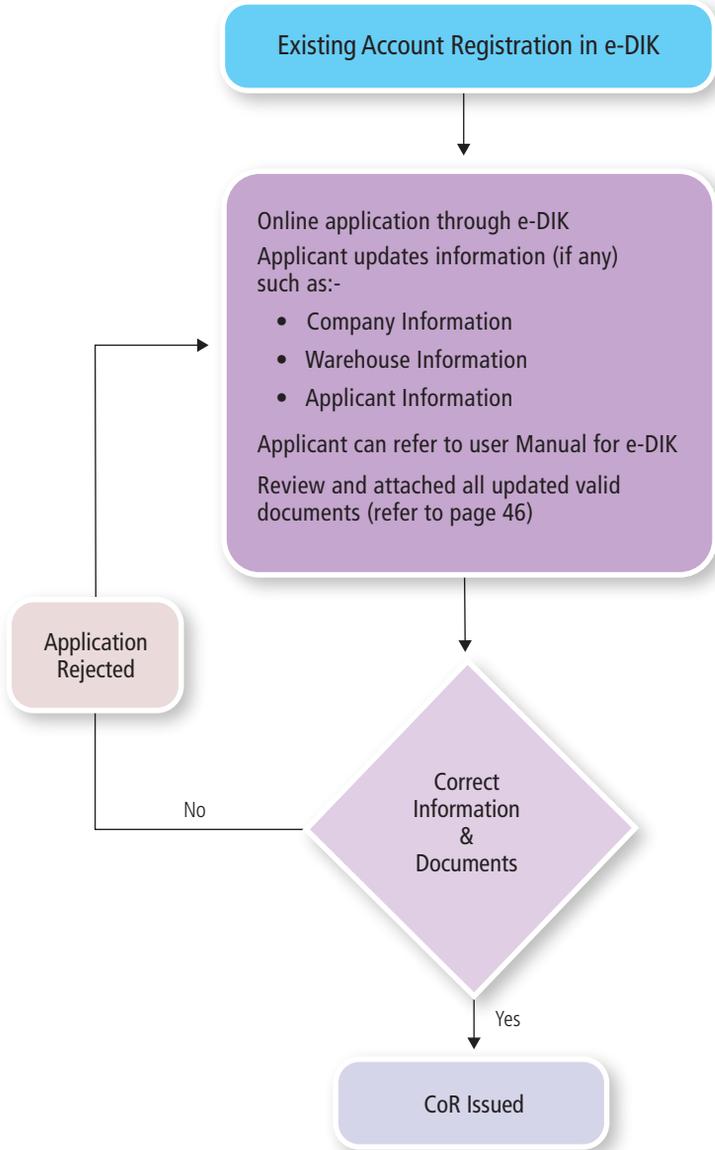
C. Annual Fee

No Fee Imposed.

6.1(a) Process Flow : New Application for CoR (Import/Manufacturer)



6.1(b) Process Flow : Renewal Application for CoR (Import/Manufacturer)



6.2 APPLICATION FOR CERTIFICATE OF APPROVAL (CoA) TO MANUFACTURE, IMPORT, DISPLAY, SELL OR ADVERTISE ELECTRICAL EQUIPMENT

A. Application Procedure

- (1) An applicant is required to apply for a Certificate of Approval (CoA) through the e-Permit website at <https://epermit.dagangnet.com.my>
- (2) The applicant shall refer to Dagang Net Technologies Sdn Bhd for details on online registrations at 1-300-133-133.
- (3) For manufacturer or importer, an applicant is required to apply for a Certificate of Registration (CoR) prior to applying for CoA.
- (4) Details for application to be a registered manufacturer or importer is in accordance with Chapter 6.1 of these Guidelines.
- (5) The applicant shall complete the application by providing all information correctly and attach all required documents.
- (6) Information such as name of electrical equipment, brand and model must be correct or else application will be rejected.
- (7) Detailed steps on application procedures are available at e-Permit website on Trader Module User Guide.
- (8) Technical documents required for CoA to manufacture and import are as follows:
 - (a) The Type Test Report validity period shall not exceed five years from the date of report and shall not be less than twelve months from the date of CoA application;
 - (b) List of components;
 - (c) Instruction manual;
 - (d) Technical specification and catalogue; and
 - (e) Sample of the product, if requested.
- (9) Applicant shall pay RM30.00 as processing fee.

B. Type Test Report

- (1) Type Test Reports that are recognised by the Commission shall be produced by any of the following laboratories:-
 - (a) SIRIM QAS International Sdn. Bhd. (SIRIM), Malaysia;
 - (b) Laboratories under Laboratory Accreditation Scheme of Malaysia (SAMM) by Department of Standards Malaysia (DSM) recognised by the Commission;
 - (c) Laboratories under the IECCE CB Scheme. The list of the laboratories is available from the website <https://www.iecee.org>. The CB Test Report needs to be accompanied with a CB Test Certificate;
 - (d) Laboratories (in the scope of its accreditation) which are accredited by the accreditation body* that have signed the Asia Pacific Accreditation Cooperation (APAC) MRA – <https://www.apac-accreditation.org>;
 - (e) Laboratories (in the scope of its accreditation) which are accredited by the

accreditation body* that have signed the International Laboratory Accreditation Cooperation (ILAC) MRA – <https://ilac.org> ;

- (f) Laboratories (in the scope of its accreditation) listed as Designated Testing Laboratory (DTL) under ASEAN Sectoral Mutual Recognition Agreement for Electrical and Electronic Equipment (ASEAN EEE MRA);
- (2) All testing shall include the national deviation in Malaysia. The requirements of national deviation are as stated in Chapter 8 of these Guidelines.
- (3) For the energy performance testing report, the test report issued by other bodies than SIRIM shall be accompanied with SIRIM's Assessment Letter.
- (4) The test report shall be prepared in either English or Bahasa Malaysia.
- (5) The model name shall be unique with unambiguous identification for each rating and specification.
- (6) Acceptance of amendment test report due to technical modification to the main test report shall be limited to maximum three, after which a full new test report shall be provided.

* Note: Department of Standard Malaysia (DSM) is one of the (APLAC/ILAC) MRA signatory.

C. Annual Fee for New Application

An annual fee of RM220.00 for single phase and RM330.00 for three phase shall be paid upon approval of the CoA in accordance with the Second Schedule in Part XIII of the Regulations.

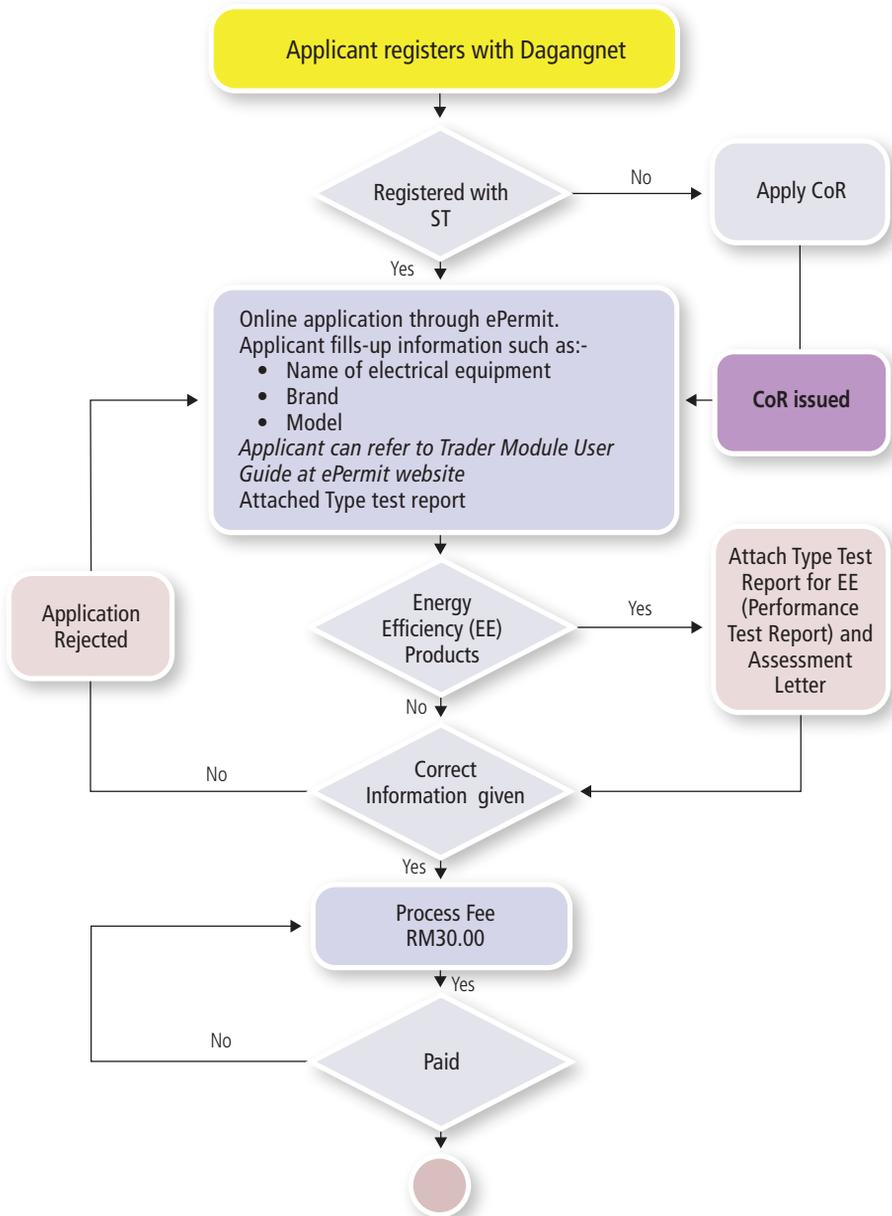
D. Requirement for Manufacture

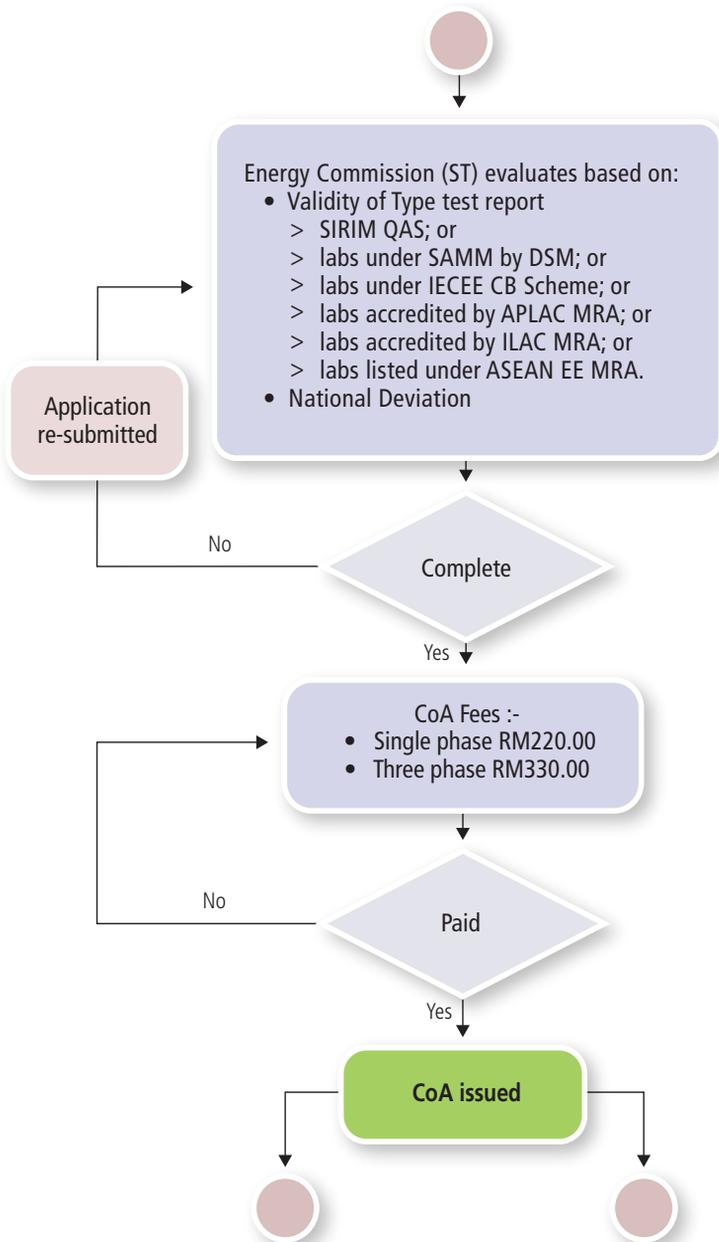
An electrical equipment that has been approved for manufacturing shall participate in SIRIM's Product Certification Scheme (PCS). The electrical equipment shall be affixed with a ST-SIRIM label issued by SIRIM or bear the SIRIM Certification Mark.

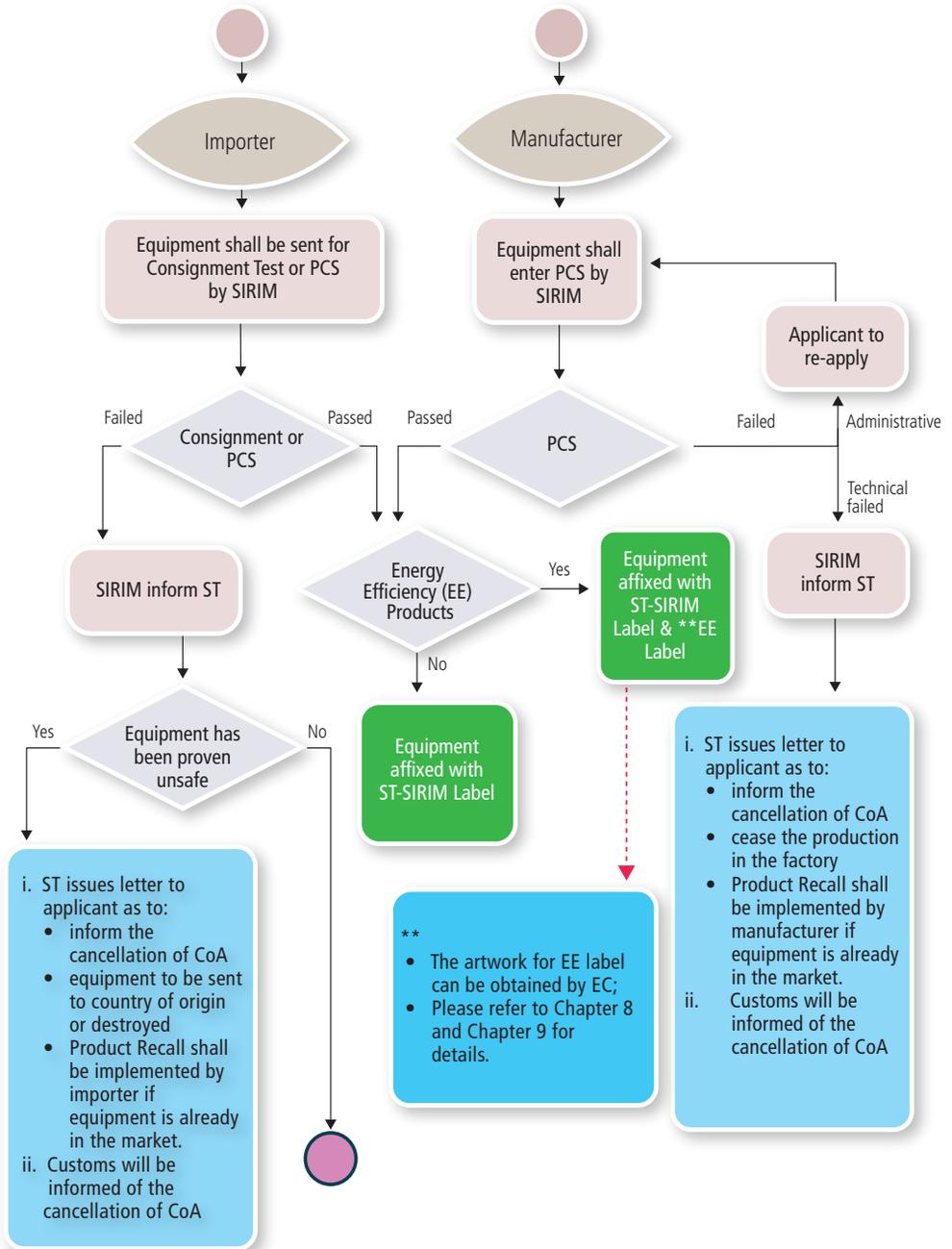
E. Requirement for Importer

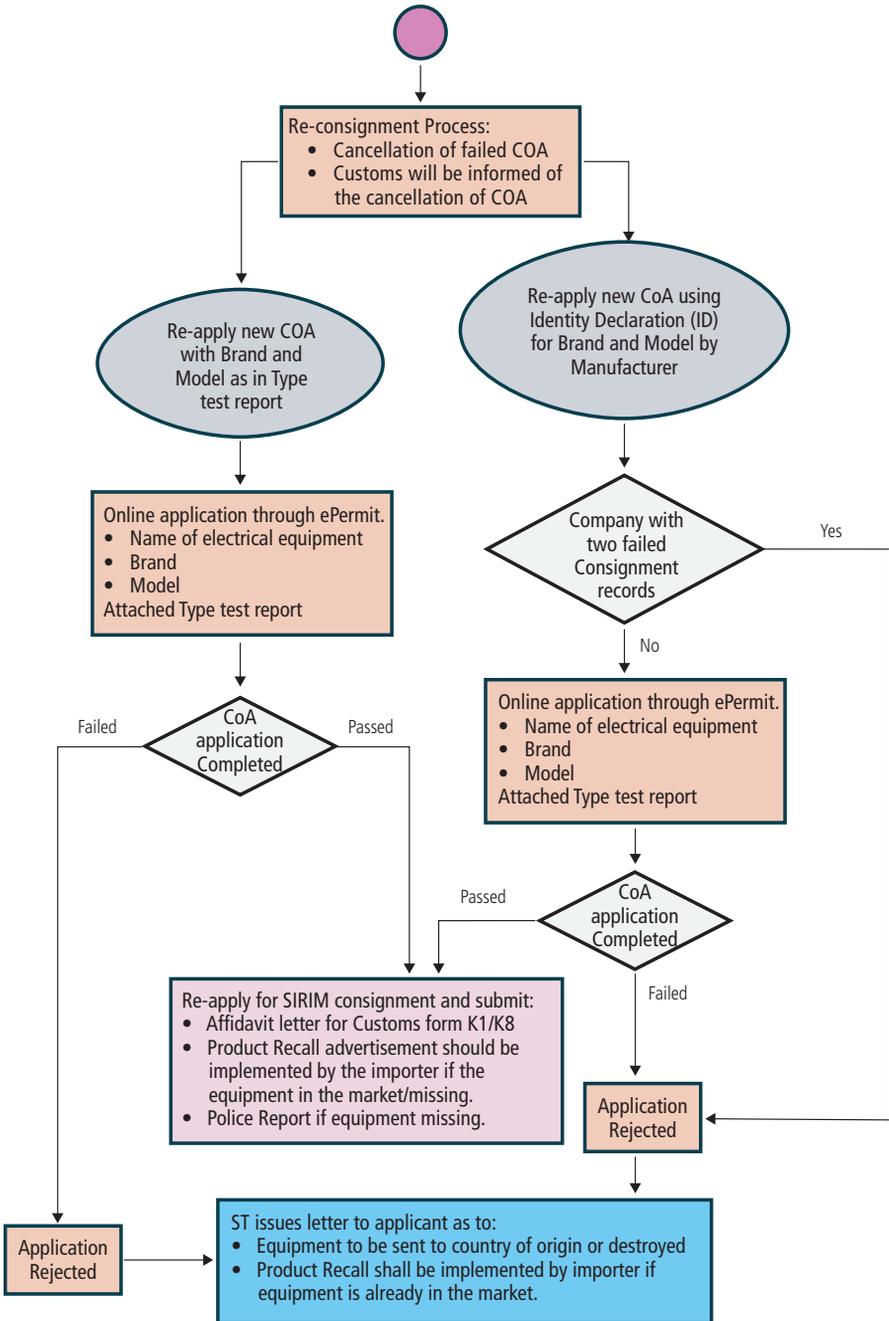
- (1) An electrical equipment that has been approved for import into Malaysia shall comply with the consignment test conducted by SIRIM for each batch or participate in SIRIM's PCS within the validity period of the CoA. The electrical equipment shall be affixed with ST-SIRIM label issued by SIRIM or bear the SIRIM Certification Mark.
- (2) An electrical equipment which failed the Consignment Test need to be sent back to the country of origin or the Commission may direct the importer to withdraw immediately and where necessary may seize or remove such electrical equipment.
- (3) An electrical equipment shall be constructed with power supply cord and power plug which comply with Malaysian requirements and standards.
- (4) The requirements and standards of Power Supply Cords and Power Plugs are as stated in Chapter 8, No.4 of these Guidelines.

6.2(a) Process Flow: New Application for Certificate Of Approval (CoA) to Manufacture, Import, Display, Sell or Advertise Electrical Equipment









6.3 RENEWAL OF CERTIFICATE OF APPROVAL (CoA) TO MANUFACTURE, IMPORT, DISPLAY, SELL OR ADVERTISE ELECTRICAL EQUIPMENT

Renewal of CoA shall be made not less than 14 days before its expiry date in accordance with regulation 106 of the Regulations.

A. Application Procedure

- (1) The applicant who is a registered manufacturer or importer shall apply for the renewal of the CoA through the e-PERMIT system which is accessible two months before the expiry date of the CoA to allow the applicant to submit their application for renewal.
- (2) An applicant whose CoR has expired shall apply for a new CoR in accordance with chapter 6.1 of these Guidelines.
- (3) All approved CoA will be displayed at e-Permit and applicants may renew the CoA by selecting the previous Job Number or Application ID.
- (4) The applicant shall complete their application by providing all information correctly and attaching all required documents.
- (5) Any unwanted models shall be deleted or removed from e-Permit before submitting the renewal application for CoA to the Commission.
- (6) Application will be rejected if unwanted models are not removed from e-Permit. In this case applicant needs to apply for a new CoA.
- (7) Application for renewal of CoA received less than 14 days before the expiry date will automatically be rejected. In this case the applicant needs to apply for a new CoA.

B. Technical documents required are:

- (1) The test report shall be valid for not less than one year and not exceeding five years from the date of the report.
- (2) The Type Test Report validity period shall not exceed five years from the date of report and shall not be less than twelve months from the date of CoA application.
- (3) In the case of renewal application for CoA to import, the proof of purchase of SIRIM's label for the period of importing or consignment invoice are required.
- (4) In the case of renewal application for CoA to manufacture and import, the proof of purchase of SIRIM's label and copy of valid Product Certification License (PCL) issued by SIRIM are required. If the expiry date of the PCL is less than 2 months, an Audit Notice shall be provided.

C. Annual Fee for Renewal of CoA

An annual fee of RM110.00 for single phase and RM220.00 for three phase equipment shall be paid upon approval of the CoA.

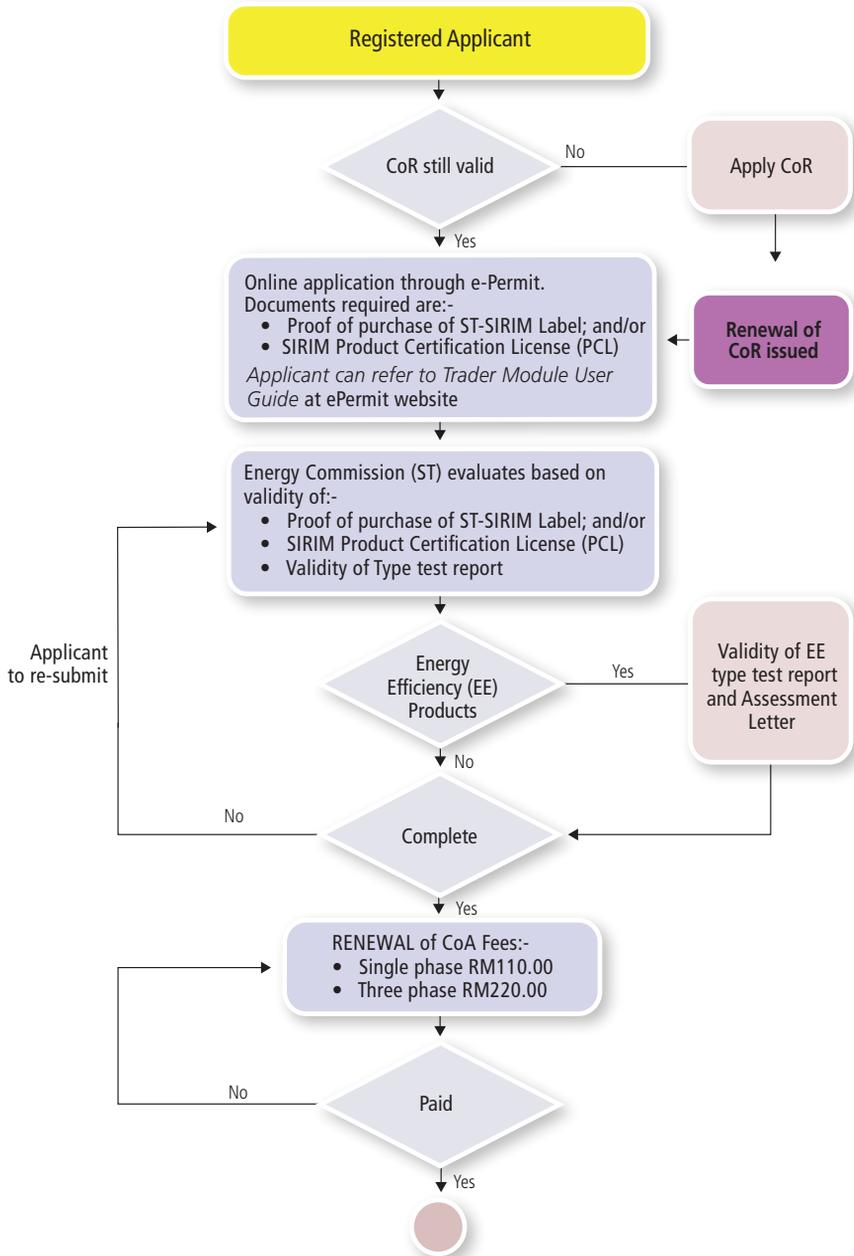
D. Requirement for Manufacture

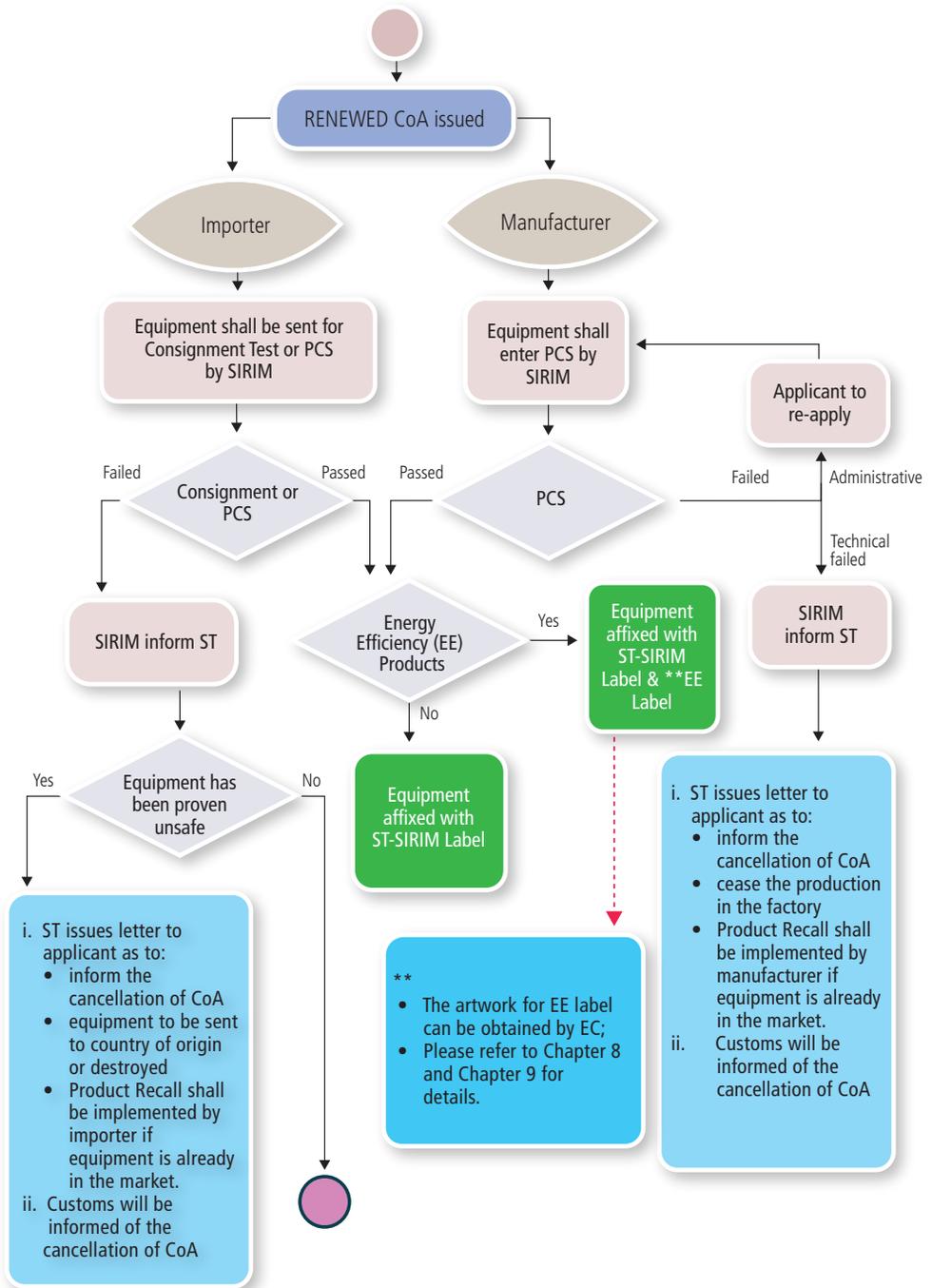
The manufacturer of any electrical equipment that has been approved for manufacture shall also renew his SIRIM's PCS. The electrical equipment shall be affixed with labels issued by SIRIM or bear the SIRIM Certification Mark.

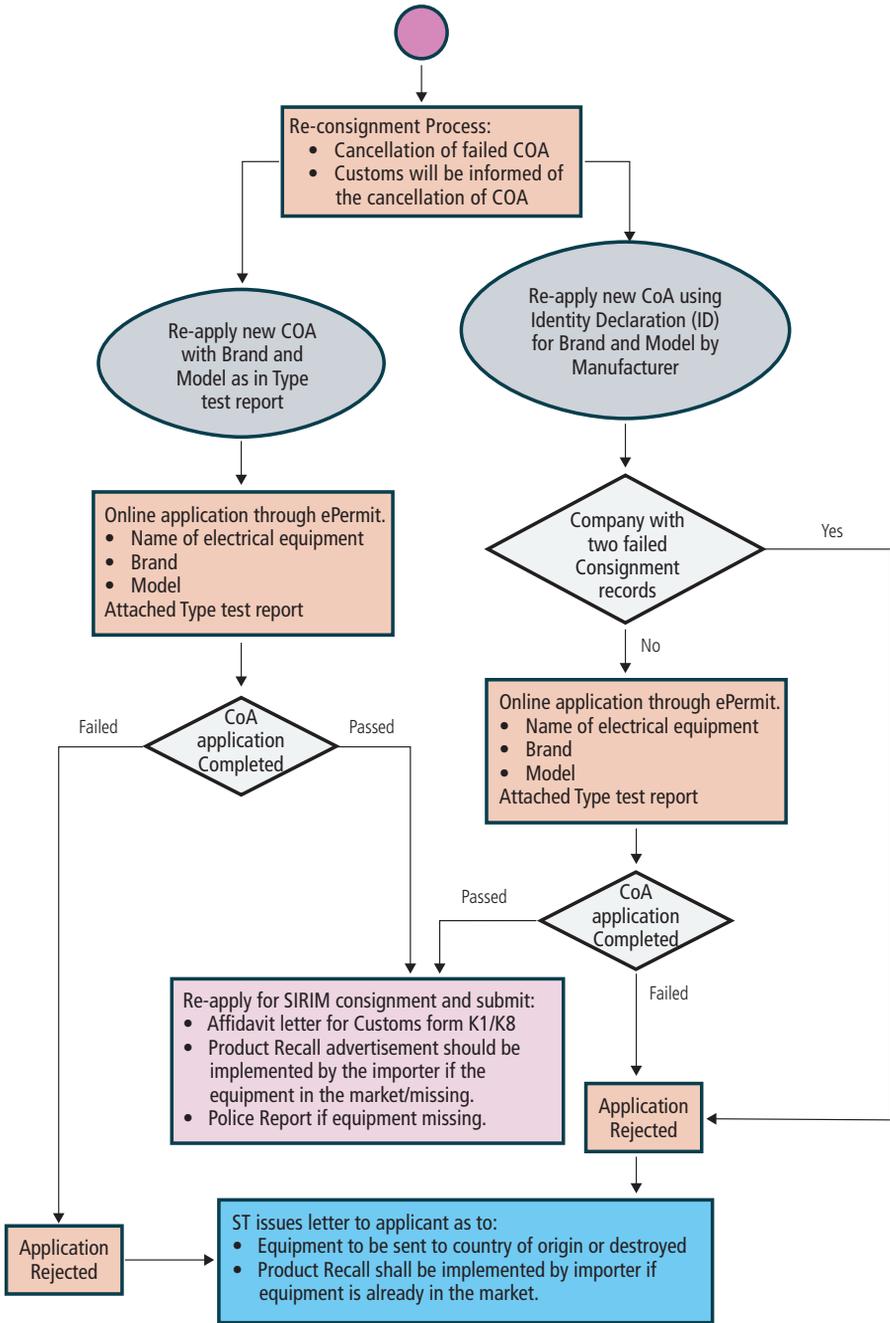
E. Requirement for Importing

- (1) Any electrical equipment that has been approved for import into Malaysia shall comply with the consignment test by SIRIM's for every batch or participate in SIRIM's PCS within the validity period of the CoA. The electrical equipment shall be affixed with labels issued by SIRIM or bear SIRIM Certification Mark.
- (2) Electrical equipment which fails the Consignment Test need to be sent back to the country of origin or shall be destroyed.
- (3) Electrical equipment shall be constructed with power supply cord and power plug which comply with Malaysia's requirements and standards.
- (4) The requirements and standards of Power Supply Cord and Power Plug are as stated in Chapter 8, No.4.

6.3(a) Process Flow: Renewal of Certificate of Approval (CoA) to Manufacture, Import, Display, Sell or Advertise Electrical Equipment







6.4 APPLICATION FOR A CERTIFICATE OF APPROVAL (CoA) TO DISPLAY (FOR EXHIBITION PURPOSES)

A. Application Procedure

- (1) The applicant is required to apply for a CoA for Display (Exhibition) through e-Permit <https://epermit.dagangnet.com.my>.
- (2) The applicant is required to apply for a CoR prior to applying for a CoA.
- (3) Details for applications to be a registered manufacturer or importer can be referred in Chapter 6.1 of these Guidelines.
- (4) The applicant shall complete application by providing all information correctly and attach all required documents.
- (5) Information such as Name of Electrical Equipment, Brand and Model shall be correct or else application will be rejected.
- (6) Detailed steps on application procedures are available at e-Permit website on Trader Module User Guide.
- (7) Technical documents required for CoA for Exhibition purposes are:
 - (a) a cover letter to specify name, place, address, exhibition date and length of exhibition or offer letter to participate in the related exhibition; and
 - (b) the Invoice and Air Way Bill (AWB) for importation by air or Bill of Lading (BL) for importation by sea should be made available.
- (8) Applicant shall pay RM30.00 as processing fee.

B. Display Fee

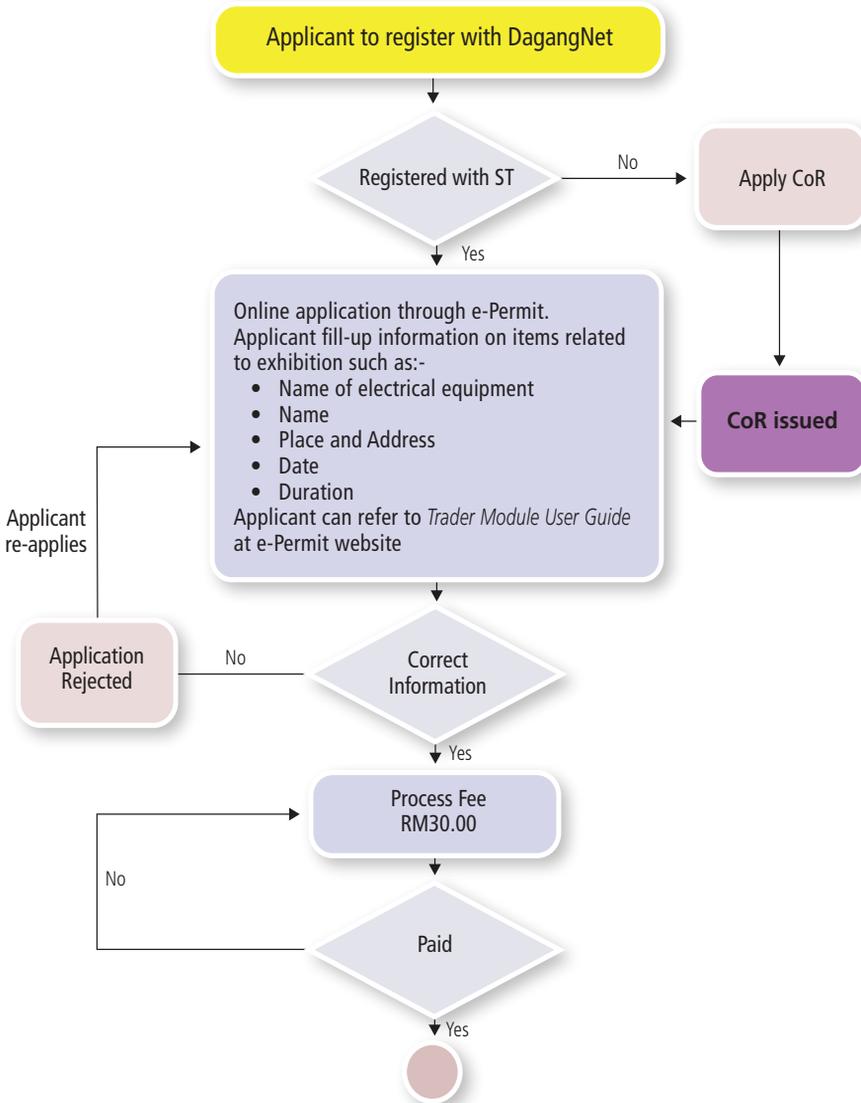
Display Fee of RM220.00 shall be paid upon the approval of the CoA.

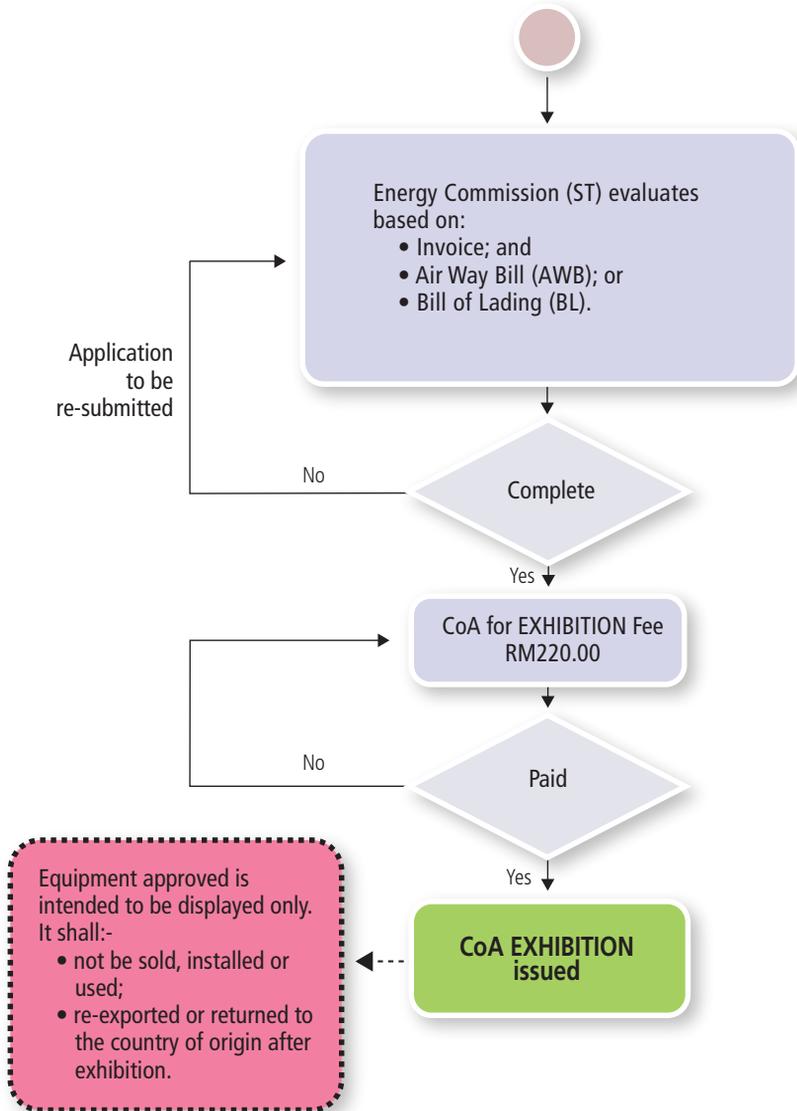
C. Requirement for CoA for Display (Exhibition Purposes)

The approved equipment is intended to be displayed for exhibition purposes only. It shall—

- (i) not be sold, installed or used; and
- (ii) re-exported or returned to the country of origin after exhibition.

6.4(a) Process Flow : Application for Certificate of Approval (CoA) for Display (Exhibition Purposes)





APPLICATION FOR RELEASE LETTER (RL)

A. Application Procedure

- (1) The Energy Commission (ST) will issue a Release Letter to Customs as blanket approval for exemption from Certificate of Approval (CoA) for importation of ST's regulated electrical equipment.
- (2) Release Letter is applicable for Special Purpose, Concert, Factory Research, Quality Research, Re-Work and Re-Export, Imported Components used for Equipment Manufactured for 100% Export or Local Market and Transit.
- (3) For non-regulated equipment, the applicant may request a notification letter to be issued by the Commission for customs notification purposes.
- (4) Application of Release Letter shall be apply through e-Permit at <https://epermit.dagangnet.com.my>.
- (5) Applicant shall complete application by providing all information correctly and attach required documents.
- (6) Information such as Name of Electrical Equipment, Brand and Model shall be correct or else application will be rejected.

B. Fee for Release Letter

There is no fee imposed for Release Letter.

C. Technical Documents Required

1. Regulated Equipment for CoA Exemption

* Release letter for CoA Exemption only valid per letter or per application.

- i) Specific Purpose - Oil Rig, Tanker, SIRIM/Laboratory Test, Energizer for Electric Fence, DC Electric Vehicle Charger (Mode 4), Cruise Ship, Yatch, Etc.
 - Cover letter to specify the purpose of import, name and address of user as well as place of use.
 - Invoice and Air Way Bill (AWB) for importation via air or Bill of Lading (BL) for importation via sea should be made available.
 - Test report of Energizer for Electric Fence and DC Electric Vehicle Charger (Mode 4) as stated in respective guide/guideline should be made available.
 - All applications are subjected to Energy Commission's approval.
- ii) Concert
 - The imported equipment shall not be sold, advertised or exhibited and must be re-exported after the concert.

- Invoice and Air Way Bill (AWB) for importation via air or Bill of Lading (BL) for importation via sea should be made available.
 - Equipment catalogue should also be made available.
- iii) **Factory Research**
- The imported sample shall not be sold, advertised or exhibited and the sample must be disposed after the end of the research.
 - Invoice and Air Way Bill (AWB) for importation via air or Bill of Lading (BL) for importation via sea should be made available.
 - A maximum of 10 units per model is allowed for factory research. A copy of manufacturing license should also be made available.
- iv) **Quality Research**
- The imported sample shall not be sold, advertised or exhibited and the sample must be disposed after end of research.
 - Invoice and Air Way Bill (AWB) for importation via air or Bill of Lading (BL) for importation via sea should be made available.
 - A maximum of 4 units per model is allowed for quality or market research.
- v) **Repair And Re-Export**
- The imported sample shall not be sold, advertised or exhibited and the sample must be re-exported after repair.
 - Invoice and Air Way Bill (AWB) for importation via air or Bill of Lading (BL) for importation via sea should be made available.
 - Export invoice as proof that the manufactured equipment has been re-exported.
 - Manufacturing license should be made available.
- vi) **Imported Components Used For Equipment Manufactured For 100% Export**
- Letter of confirmation that the completed equipment will be full exported.
 - A copy of License of Manufacturing Warehouse (LMW) manufacturing license with related appendices or tax exemption letter from the Ministry of Finance/MIDA or tax exemption letter from the Royal Malaysian Customs Department.
- vii) **Imported Components Used For Equipment Manufactured For Local Market**
- A copy of COA to Manufacture for equipment which uses imported components; and
 - Test reports as proof that the components to be imported are required for the equipment to be manufactured.

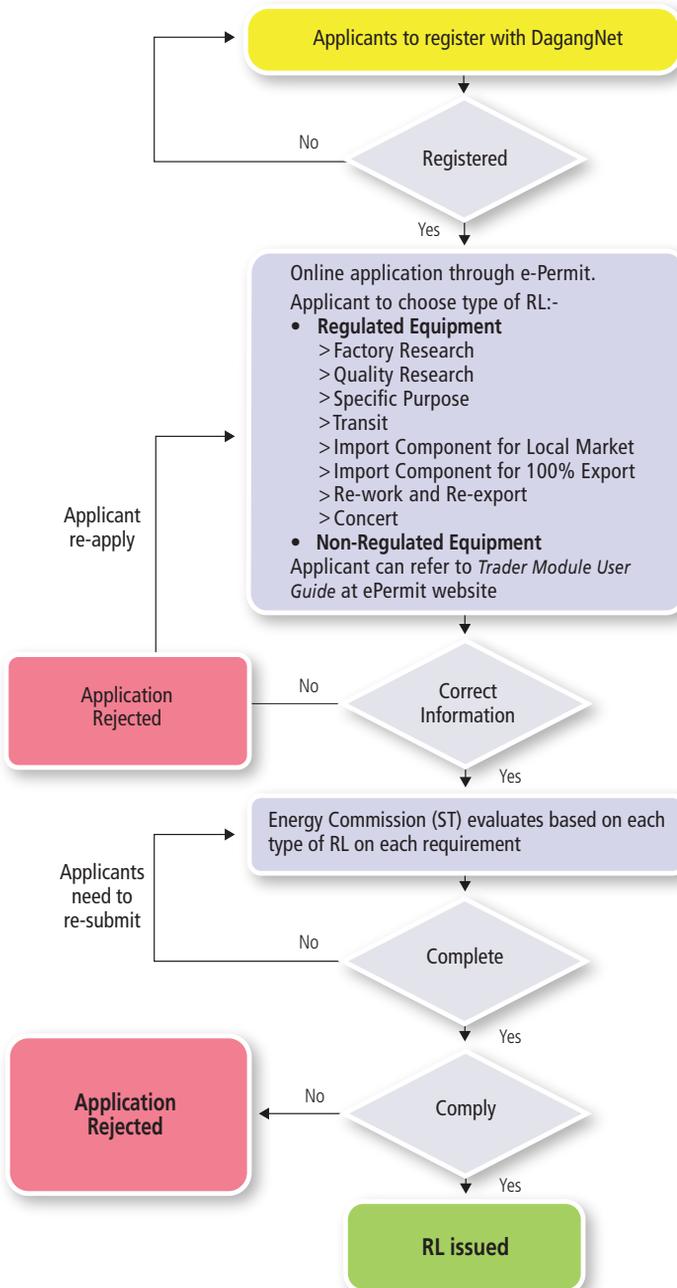
viii) **Transit Purposes**

- Cover letter should specify:
 - a. name and address of Bonded Customs Warehouse where imported equipment will be placed, including the name and telephone number of the officer to be contacted; and
 - b. equipment will 100% re-exported to the related country. The country should be named.
- Invoice and Air Way Bill (AWB) for importation via air or Bill of Lading (BL) for importation via sea should be made available.

2. Non-Regulated equipment

Equipment catalogue, test report, pictures of product and sample (if requested).

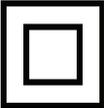
7.1(a) Process Flow : Application for Release Letter (RL)



REGULATORY REQUIREMENTS RELATED TO NATIONAL DIFFERENCES

| No | Items | Requirements | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|--|---|---|---------------------|------------------------------|--|------------------------|--|---|---|------|------|-------------------|-----|----|---|-----|-----|------------------|-----|----|---|-----|-----|
| 1 | Nominal Voltages and Frequency | <p>(a) Nominal Voltage The nominal voltage for low voltage supply in Malaysia is 230/400V (+10%, -6%) in accordance with MS IEC 60038. The details of voltages and variations are as below:-</p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th rowspan="2">Nominal Voltage (V)</th> <th colspan="2">Percentage of Variations (%)</th> <th colspan="2">Voltage Variations (V)</th> </tr> <tr> <th>+</th> <th>-</th> <th>Min.</th> <th>Max.</th> </tr> </thead> <tbody> <tr> <td>Single phase, 1 Ø</td> <td>230</td> <td>10</td> <td>6</td> <td>216</td> <td>253</td> </tr> <tr> <td>Three phase, 3 Ø</td> <td>400</td> <td>10</td> <td>6</td> <td>376</td> <td>440</td> </tr> </tbody> </table> <p>(b) Nominal Frequency Nominal frequency for low voltage supply voltage in Malaysia is allowed to fluctuate at $\pm 1\%$ from 50Hz.</p> | | Nominal Voltage (V) | Percentage of Variations (%) | | Voltage Variations (V) | | + | - | Min. | Max. | Single phase, 1 Ø | 230 | 10 | 6 | 216 | 253 | Three phase, 3 Ø | 400 | 10 | 6 | 376 | 440 |
| | Nominal Voltage (V) | Percentage of Variations (%) | | | Voltage Variations (V) | | | | | | | | | | | | | | | | | | | |
| | | + | - | Min. | Max. | | | | | | | | | | | | | | | | | | | |
| Single phase, 1 Ø | 230 | 10 | 6 | 216 | 253 | | | | | | | | | | | | | | | | | | | |
| Three phase, 3 Ø | 400 | 10 | 6 | 376 | 440 | | | | | | | | | | | | | | | | | | | |
| 2 | Voltages and Frequency Marking for Regulated Equipment | <p>In line with (a) above, the electrical equipment to be used in Malaysia shall be designed to operate at the country's nominal voltage and frequency as follows:</p> <p>(a) Voltage Single-phase equipment shall be rated / marked at 230V or 240V. If the equipment is rated with multiple or a range of voltages, voltage of 230V shall be included.</p> <p>Three-phase equipment shall be rated/marked at 400V or 415V. If the equipment is rated with multiple or a range of voltages, voltage of 400V shall be included.</p> <p>(b) Frequency Equipment shall be rated / marked at 50Hz. If the equipment is rated with multiple or a range of frequency, frequency of 50Hz shall be included.</p> | | | | | | | | | | | | | | | | | | | | | | |

| No | Items | Requirements | | | | | | | | | | | | | | | | |
|-------------------|---|--|--|------------------------|--|-------|-------|-------------------|-----|-----|--|------------------------|--|-------|-------|------------------|-----|-----|
| 3 | Testing Voltage and Frequency on Electrical Equipment | <p><u>Type Test Report for Equipment</u> The test shall be conducted by the Conformity Assessment Body (CAB) at voltage variations as below:</p> <p>a) Voltage <u>Single-phase equipment</u></p> <p>Testing shall be conducted based on the equipment standard requirement and shall cover the supply voltage variations both at lower and upper value of 216V to 253V.</p> <p>Test reports shall comprise of test data at upper and lowest range whichever is required in the specified equipment's standard.</p> <p>Note: The lower value is not applicable if equipment standard requirement does not include lower test voltage tolerance.</p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Voltage variations (V)</th> </tr> <tr> <th>Lower</th> <th>Upper</th> </tr> </thead> <tbody> <tr> <td>Single phase, 1 Ø</td> <td>216</td> <td>253</td> </tr> </tbody> </table> <p><u>Three-phase equipment</u></p> <p>Testing shall be conducted based on the equipment standard requirement and shall cover the supply voltage variations both at lower and upper value of 376V to 440V.</p> <p>Test reports shall comprise of test data at upper and lowest range whichever is required in the specified equipment's standard.</p> <p>Note: The lower value is not applicable if equipment standard requirement does not include lower test voltage tolerance.</p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Voltage variations (V)</th> </tr> <tr> <th>Lower</th> <th>Upper</th> </tr> </thead> <tbody> <tr> <td>Three phase, 3 Ø</td> <td>376</td> <td>440</td> </tr> </tbody> </table> <p>(b) Frequency Testing shall be conducted at 50Hz. If the product is marked with 50/60Hz or 50-60Hz, then testing shall be conducted either at 50Hz or 60Hz, whichever is more unfavourable.</p> | | Voltage variations (V) | | Lower | Upper | Single phase, 1 Ø | 216 | 253 | | Voltage variations (V) | | Lower | Upper | Three phase, 3 Ø | 376 | 440 |
| | Voltage variations (V) | | | | | | | | | | | | | | | | | |
| | Lower | Upper | | | | | | | | | | | | | | | | |
| Single phase, 1 Ø | 216 | 253 | | | | | | | | | | | | | | | | |
| | Voltage variations (V) | | | | | | | | | | | | | | | | | |
| | Lower | Upper | | | | | | | | | | | | | | | | |
| Three phase, 3 Ø | 376 | 440 | | | | | | | | | | | | | | | | |

| No | Items | Requirements | | | | | | | | | | | | | | | | | | |
|----|---|--|----|--------------|---|----|--|------|----|---|------|----|---|------|----|---|------|----|--|-----|
| 4 | Power supply cord and main plug requirements | <p>Equipment shall be fitted with a suitable and appropriately approved power supply cord and mains plug. Both are regulated equipment and must be approved by the regulatory body before it can be used with the appliances.</p> <p>(a) The Power Supply Cord shall be certified to:-</p> <ul style="list-style-type: none"> • MS2112-5 or BS EN 50525-2-11 or IEC 60227-5 (PVC insulated - flexible cables/cords);or • or MS 2127-4 or IEC 60245-1 & IEC 60245-4 (Rubber insulated - flexible cables/cords) <p>(b)The mains Plug to be used in Malaysia shall be as follows:</p> <ul style="list-style-type: none"> • 13A fused plug complying with MS 589-1 or BS 1363-1; • 15A plugs complying with MS 1577; • 2.5A, 250V, flat non-rewireable two-pole plug with cord for the connection of class II equipment comply with MS 1578 or BS EN 50075. | | | | | | | | | | | | | | | | | | |
| 5 | Class I and Class II Equipment | <p>Only Class I with symbol as in Figure 1 and Class II with symbol as in Figure 2 are allowed to be used in Malaysia.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Figure 1 : Class 1</p> </div> <div style="text-align: center;">  <p>Figure 2 : Class 11</p> </div> </div> <p>Class 0 and Class 01 appliances as defined in MS IEC 60335 series or IEC 60335 series are NOT ALLOWED to be used in Malaysia.</p> | | | | | | | | | | | | | | | | | | |
| 6 | Minimum Regulated Fans Performance | <p>(a) Minimum Co-efficient of performance (COP) for ceiling fan, pedestal fan, table/desk fan, wall fan and box fan are as follows:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No</th> <th>Type of fans</th> <th>Minimum Co-efficient of performance (COP) (m³/min/W)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Ceiling Fan (1200 mm /48 inch – 1500 mm /60 inch)</td> <td>2.58</td> </tr> <tr> <td>2.</td> <td>Pedestal Fan (250 mm /10 inch – 400 mm /16 inch)</td> <td>1.01</td> </tr> <tr> <td>3.</td> <td>Table / Desk Fan (250 mm /10 inch – 400 mm /16 inch)</td> <td>1.01</td> </tr> <tr> <td>4.</td> <td>Wall Fan (250 mm /10 inch – 400 mm /16 inch)</td> <td>1.01</td> </tr> <tr> <td>5.</td> <td>Box Fan (250 mm /10 inch – 350 mm /14 inch)</td> <td>0.5</td> </tr> </tbody> </table> | No | Type of fans | Minimum Co-efficient of performance (COP) (m ³ /min/W) | 1. | Ceiling Fan (1200 mm /48 inch – 1500 mm /60 inch) | 2.58 | 2. | Pedestal Fan (250 mm /10 inch – 400 mm /16 inch) | 1.01 | 3. | Table / Desk Fan (250 mm /10 inch – 400 mm /16 inch) | 1.01 | 4. | Wall Fan (250 mm /10 inch – 400 mm /16 inch) | 1.01 | 5. | Box Fan (250 mm /10 inch – 350 mm /14 inch) | 0.5 |
| No | Type of fans | Minimum Co-efficient of performance (COP) (m ³ /min/W) | | | | | | | | | | | | | | | | | | |
| 1. | Ceiling Fan (1200 mm /48 inch – 1500 mm /60 inch) | 2.58 | | | | | | | | | | | | | | | | | | |
| 2. | Pedestal Fan (250 mm /10 inch – 400 mm /16 inch) | 1.01 | | | | | | | | | | | | | | | | | | |
| 3. | Table / Desk Fan (250 mm /10 inch – 400 mm /16 inch) | 1.01 | | | | | | | | | | | | | | | | | | |
| 4. | Wall Fan (250 mm /10 inch – 400 mm /16 inch) | 1.01 | | | | | | | | | | | | | | | | | | |
| 5. | Box Fan (250 mm /10 inch – 350 mm /14 inch) | 0.5 | | | | | | | | | | | | | | | | | | |

| No | Items | Requirements | | | | | | | | | | | | |
|--------------------|---|---|------------|-----------|---------------|---------------------------|---------------|---------------------------|-------------|---------------------------|------------|---|--------------------|---|
| | | <p>Where, COP = $\frac{\text{Air Delivery (m}^3\text{/min)}}{\text{Input Wattage (W)}}$</p> <p>Note: The test method used to determine COP is in accordance with MS1220:2010 or IEC 60879:1986 with modification.</p> <p>The acceptable value of COP must be at least or above the stated value shown.</p> <p>Note : Value of COP for No.1,2,3 & 4 are included in the MEPS requirements</p> <p>(b) Suspension System for Electric Ceiling Fans.</p> <p>Electric ceiling fans must be provided with a special wire as a secondary suspension system. The test method used to check that the secondary suspension system of the electric ceiling fan has adequate mechanical strength is in accordance with MS 1597: Part 2-80 or IEC 60335-2-80 with modification for ceiling fan only.</p> | | | | | | | | | | | | |
| 7 | (a) Component used for Fluorescent Lamp Fitting | <p>Standards for Fluorescent Lamp Fitting are MS IEC 60598-2-1 or IEC 60598-2-1 (for fixed luminaries) and MS IEC 60598-2-2 or IEC 60598-2-2 (for recessed luminaries). Components such as glow starter, starter holder, lamp holder, capacitor, connecting device, ballast and internal wiring are used as part of the fitting. Thus, the components used for both standards mentioned shall comply to the following standards:</p> <table border="1" data-bbox="362 962 1002 1331"> <thead> <tr> <th data-bbox="362 962 590 1042">Components</th> <th data-bbox="590 962 1002 1042">Standards</th> </tr> </thead> <tbody> <tr> <td data-bbox="362 1042 590 1094">Glow-Starters</td> <td data-bbox="590 1042 1002 1094">MS IEC 60155 or IEC 60155</td> </tr> <tr> <td data-bbox="362 1094 590 1149">Starterholder</td> <td data-bbox="590 1094 1002 1149">MS IEC 60400 or IEC 60400</td> </tr> <tr> <td data-bbox="362 1149 590 1201">Lampholders</td> <td data-bbox="590 1149 1002 1201">MS IEC 60400 or IEC 60400</td> </tr> <tr> <td data-bbox="362 1201 590 1278">Capacitors</td> <td data-bbox="590 1201 1002 1278">MS IEC 61048 or IEC 61048 & MS IEC 61049 or IEC 61049</td> </tr> <tr> <td data-bbox="362 1278 590 1331">Connecting devices</td> <td data-bbox="590 1278 1002 1331">MS IEC 60998 (Series) or IEC 60998 (Series)</td> </tr> </tbody> </table> | Components | Standards | Glow-Starters | MS IEC 60155 or IEC 60155 | Starterholder | MS IEC 60400 or IEC 60400 | Lampholders | MS IEC 60400 or IEC 60400 | Capacitors | MS IEC 61048 or IEC 61048 & MS IEC 61049 or IEC 61049 | Connecting devices | MS IEC 60998 (Series) or IEC 60998 (Series) |
| Components | Standards | | | | | | | | | | | | | |
| Glow-Starters | MS IEC 60155 or IEC 60155 | | | | | | | | | | | | | |
| Starterholder | MS IEC 60400 or IEC 60400 | | | | | | | | | | | | | |
| Lampholders | MS IEC 60400 or IEC 60400 | | | | | | | | | | | | | |
| Capacitors | MS IEC 61048 or IEC 61048 & MS IEC 61049 or IEC 61049 | | | | | | | | | | | | | |
| Connecting devices | MS IEC 60998 (Series) or IEC 60998 (Series) | | | | | | | | | | | | | |

| No | Items | Requirements | | | | | | | | | |
|---|---|---|--|------------|-----------|-------------------------------|---|--------------------|---|-----------------|--|
| | | <table border="1"> <thead> <tr> <th data-bbox="348 150 573 233">Components</th> <th data-bbox="573 150 986 233">Standards</th> </tr> </thead> <tbody> <tr> <td data-bbox="348 233 573 501">Magnetic/conventional Ballast</td> <td data-bbox="573 233 986 501"> Safety test: MS IEC 61347-1 or IEC 61347-1 + MS IEC 61347-2-8 or IEC 61347-2-8 and Performance test: MS 141 with MS IEC 60921 or IEC 60921 <i>Note : Ballast Watt Loss shall not be more than 6W for all fluorescent lamps ballast.</i> </td> </tr> <tr> <td data-bbox="348 501 573 703">Electronic Ballast</td> <td data-bbox="573 501 986 703"> Safety test: MS IEC 61347-1 or IEC 61347-1 + MS IEC 61347-2-3 or IEC 61347-2-3 and Performance test: MS IEC 60929 with MS IEC 61000-3-2 or IEC 60929 with IEC 61000-3-2 </td> </tr> <tr> <td data-bbox="348 703 573 895">Internal Wiring</td> <td data-bbox="573 703 986 895"> MS 2112-3 or IEC 60227-3, MS 2112-4 or IEC 60227-4 The insulating material of internal wiring must be capable of withstanding the maximum temperature to which it is subjected (heat resistance). </td> </tr> </tbody> </table> | | Components | Standards | Magnetic/conventional Ballast | Safety test: MS IEC 61347-1 or IEC 61347-1 + MS IEC 61347-2-8 or IEC 61347-2-8 and Performance test: MS 141 with MS IEC 60921 or IEC 60921 <i>Note : Ballast Watt Loss shall not be more than 6W for all fluorescent lamps ballast.</i> | Electronic Ballast | Safety test: MS IEC 61347-1 or IEC 61347-1 + MS IEC 61347-2-3 or IEC 61347-2-3 and Performance test: MS IEC 60929 with MS IEC 61000-3-2 or IEC 60929 with IEC 61000-3-2 | Internal Wiring | MS 2112-3 or IEC 60227-3, MS 2112-4 or IEC 60227-4 The insulating material of internal wiring must be capable of withstanding the maximum temperature to which it is subjected (heat resistance). |
| Components | Standards | | | | | | | | | | |
| Magnetic/conventional Ballast | Safety test: MS IEC 61347-1 or IEC 61347-1 + MS IEC 61347-2-8 or IEC 61347-2-8 and Performance test: MS 141 with MS IEC 60921 or IEC 60921 <i>Note : Ballast Watt Loss shall not be more than 6W for all fluorescent lamps ballast.</i> | | | | | | | | | | |
| Electronic Ballast | Safety test: MS IEC 61347-1 or IEC 61347-1 + MS IEC 61347-2-3 or IEC 61347-2-3 and Performance test: MS IEC 60929 with MS IEC 61000-3-2 or IEC 60929 with IEC 61000-3-2 | | | | | | | | | | |
| Internal Wiring | MS 2112-3 or IEC 60227-3, MS 2112-4 or IEC 60227-4 The insulating material of internal wiring must be capable of withstanding the maximum temperature to which it is subjected (heat resistance). | | | | | | | | | | |
| (b) Component used for LED Lamp Fitting | | <p>Standards for LED Lamp Fitting are MS IEC 60598-2-1 or IEC 60598-2-1 (for fixed luminaries), MS IEC 60598-2-2 or IEC 60598-2-2 (for recessed luminaries), MS IEC 60598-2-4 or IEC 60598-2-4 (Portable LED Lamp), MS IEC 60598-2-12 or IEC 60598-2-12 (LED Night Lamp) and MS IEC 60598-2-8 or IEC 60598-2-8 (LED hand lamp).</p> <p>Components such as driver, module, lampholder, connecting device and internal wiring are used as part of the fitting. Thus, the components used for above standards mentioned shall comply to the following standards:</p> <table border="1"> <thead> <tr> <th data-bbox="344 1166 571 1227">Components</th> <th data-bbox="571 1166 1005 1227">Standards</th> </tr> </thead> <tbody> <tr> <td data-bbox="344 1227 571 1270">Driver</td> <td data-bbox="571 1227 1005 1270">MS IEC 61347-1 and MS IEC 61347-2-13</td> </tr> <tr> <td data-bbox="344 1270 571 1417">Module / Lamp</td> <td data-bbox="571 1270 1005 1417">MS IEC 62031 or MS IEC 62776 or MS IEC 62560 Requirement of the blue light hazard (Photobiological Safety) shall be assessed according to IEC/TR 62778 and classified as Risk Group 0 or Risk Group 1.</td> </tr> <tr> <td data-bbox="344 1417 571 1460">Lampholders</td> <td data-bbox="571 1417 1005 1460">MS IEC 60400 or MS IEC 60238</td> </tr> </tbody> </table> | | Components | Standards | Driver | MS IEC 61347-1 and MS IEC 61347-2-13 | Module / Lamp | MS IEC 62031 or MS IEC 62776 or MS IEC 62560 Requirement of the blue light hazard (Photobiological Safety) shall be assessed according to IEC/TR 62778 and classified as Risk Group 0 or Risk Group 1. | Lampholders | MS IEC 60400 or MS IEC 60238 |
| Components | Standards | | | | | | | | | | |
| Driver | MS IEC 61347-1 and MS IEC 61347-2-13 | | | | | | | | | | |
| Module / Lamp | MS IEC 62031 or MS IEC 62776 or MS IEC 62560 Requirement of the blue light hazard (Photobiological Safety) shall be assessed according to IEC/TR 62778 and classified as Risk Group 0 or Risk Group 1. | | | | | | | | | | |
| Lampholders | MS IEC 60400 or MS IEC 60238 | | | | | | | | | | |

| No | Items | Requirements | | | | | | |
|--------------------|---|---|------------|-----------|--------------------|--|-----------------|--|
| | | <table border="1"> <thead> <tr> <th data-bbox="365 153 591 213">Components</th> <th data-bbox="591 153 1024 213">Standards</th> </tr> </thead> <tbody> <tr> <td data-bbox="365 213 591 274">Connecting Devices</td> <td data-bbox="591 213 1024 274">MS IEC 60838-1 and MS IEC 60838-2-2 or IEC 61984</td> </tr> <tr> <td data-bbox="365 274 591 344">Internal Wiring</td> <td data-bbox="591 274 1024 344">MS 2112-3 or IEC 60227-3, MS 2112-4 or IEC 60227-4</td> </tr> </tbody> </table> | Components | Standards | Connecting Devices | MS IEC 60838-1 and MS IEC 60838-2-2 or IEC 61984 | Internal Wiring | MS 2112-3 or IEC 60227-3, MS 2112-4 or IEC 60227-4 |
| Components | Standards | | | | | | | |
| Connecting Devices | MS IEC 60838-1 and MS IEC 60838-2-2 or IEC 61984 | | | | | | | |
| Internal Wiring | MS 2112-3 or IEC 60227-3, MS 2112-4 or IEC 60227-4 | | | | | | | |
| 8 | Requirement for electric vehicle system equipment charger | <p>Equipment shall be fitted with a suitable and appropriately approved cable and mains plug/socket.</p> <p>(a) The charging cable shall be certified to IEC 62893-1, IEC 62893-2 and IEC 62893-3.</p> <p>(b) The mains Plug to be used in Malaysia shall be as follows:</p> <ul style="list-style-type: none"> • 13 A fused plug complying with MS 589-1 or BS 1363-1; or • 15 A fused plug complying with MS 1577; or • Up to 32 A appliance inlet complying with MS IEC 60309-1 and MS IEC 60309-2 or IEC 60309-1 and IEC 60309-2 <p>(c) Mode 1 charger is prohibited.</p> | | | | | | |
| 9 | Manufacturing requirements | <p>(a) Manufactured regulated equipment shall participate in Product Certification Scheme (PCS) by SIRIM and electrical equipment shall be affixed with label issued by SIRIM or bear SIRIM Certification Mark (under Label Licensing Programme). The sample of ST-SIRIM label and SIRIM Certification Mark can be referred in Chapter 9.</p> <p>(b) Manufacturer of regulated electrical equipment that are approved to the specified Minimum Energy Performance Standard (MEPS) must also affix the Energy Efficiency Label onto the equipment before it can be sold to the consumer. The samples of Energy Efficiency (EE) label are shown in Figure 6 in Chapter 9.</p> | | | | | | |

| No | Items | Requirements |
|-----|---|---|
| 10 | Importing requirements | <p>(a) Imported regulated electrical equipment shall undergo Consignment Test conducted by SIRIM or participate in Product Certification Scheme (PCS) by SIRIM.</p> <p>Electrical equipment which passes the Consignment Test shall be affixed with the ST-SIRIM label. The sample of ST-SIRIM label can be referred in Chapter 9.</p> <p>Electrical equipment which fails the Consignment Test need to be sent to the country of origin or shall be destroyed.</p> <p>Electrical equipment shall be constructed to be used with power supply cord and power plug which comply with Malaysia's requirements and standards.</p> <p>The requirements and standards of power supply cord and power plug are stated as in item No.4 above.</p> <p>(b) Importers of regulated electrical equipment that are approved to the specified Minimum Energy Performance Standard (MEPS) must also affix the Energy Efficiency Label onto the equipment before it can be sold to the consumer. The samples of Energy Efficiency (EE) label are shown in Figure 6 in Chapter 9.</p> |
| 11 | Climate Conditions | Equipment to be used in Malaysia shall be subjected to tests under tropical conditions as specified in the related standards. |
| 12 | Requirements for MEPS | To meet the requirements of the MEPS, the performance criteria when tested using the relevant testing standards has to be met. The testing standards and performance criteria have been set as prescribed in Chapter 4.1. |
| 13 | Requirement for Luminaires | <p>To meet the requirements of the Photobiological Safety:</p> <p>(a) the blue light hazard for LED lamp and luminaire (with LED light source) shall be assessed according to IEC/TR 62778 and shall be classified as Risk Group 0 or Risk Group 1.</p> <p>(b) the ultraviolet hazard for luminaire with UV lamp (tungsten halogen, metal halide and other significant UV light) shall be assessed according to IEC 62471 and the ultraviolet hazard efficacy of luminous radiation of lamp shall not exceed 2 mW/klm.</p> |
| 14. | Regulated Accessories incorporated with main products (eg. Accessories such as Lamp, usb adaptor/ charger, etc) | To meet the requirement of related accessories standards. |

LABELLING OR CERTIFICATION MARK

A. Objective and Rationale

Labeling or marking of regulated electrical equipment will enable consumers to differentiate between the approved and non-approved regulated electrical equipment. It also serves as a deterrent and a means to check for non-approved regulated electrical equipment in the market.

B. Labeling or Marking

All regulated electrical equipment approved by the Commission shall be labeled or marked in accordance with regulation 98 of the Electricity Regulations 1994 and shall be done in the manner which has been determined by the Commission as below:

(a) Sticker Type

There are two types of ST-SIRIM label which shall be affixed on the equipment.

(i) ST-SIRIM label (BATCH)

Importer who has passed Consignment Test shall purchase ST-SIRIM label and shall affix the label on each of equipment. The Word BATCH printed on the label shows that the imported equipment has undergone the BATCH Consignment Test. Sample of the label is as shown below:



New ST-SIRIM Label
(effective February 2022)



Old ST-SIRIM Label

Figure 3: ST-SIRIM label (BATCH) for Imported Equipment

(ii) ST-SIRIM label

Local manufacturer and importer who have entered the Product Certification Scheme shall purchase ST-SIRIM label and shall affix the label on each equipment. Sample of the label is as shown below:



New ST-SIRIM Label
(effective February 2022)



Old ST-SIRIM Label

Figure 4: ST-SIRIM label for Locally Manufactured and Imported Equipment

(b) Embossed Type

- (i) For manufacturer or importer who participated in the ST-SIRIM Label Licensing Programme, they may use the SIRIM Certification Mark as shown in Figure 5 below.



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

Figure 5: SIRIM Certification Mark

- (ii) For small regulated electrical equipment such as lampholder, starterholder, glow starter and cable¹, the SIRIM Certification Mark shall be marked on their products.

The manufacturer, importer, exhibitor, seller or advertiser is responsible to ensure that the regulated electrical equipment is affixed with ST-SIRIM label or SIRIM Certification Mark whichever is specified. The Commission will conduct surveillance/enforcement from time to time on manufacturers' or importers' premises and distributors' outlets.

C. Placement of ST-SIRIM label or SIRIM Certification Mark

The ST-SIRIM label or SIRIM Certification Mark shall be affixed on the regulated electrical equipment itself in a legible manner. The ST-SIRIM label shall not be affixed on the packaging.

D. Requirement for Energy Efficiency (EE) Labelling

The Energy Efficiency (EE) label is as per in Figure 6 below:-

- (i) Font Specification
- (ii) Colour Specification
- (iii) 2-Star rating until 5-Star rating

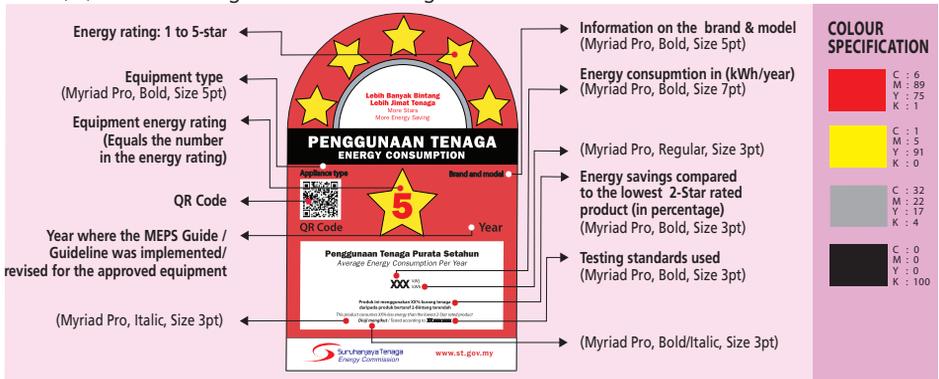


Figure 6: Energy Efficiency Labelling Specifications

¹ Details marked on cable are SIRIM Cert. Mark/labs, standards, size of cable, manufacture's company.

² QR code to be downloaded from <https://edik.st.gov.my/> with reference to CoA approval number.

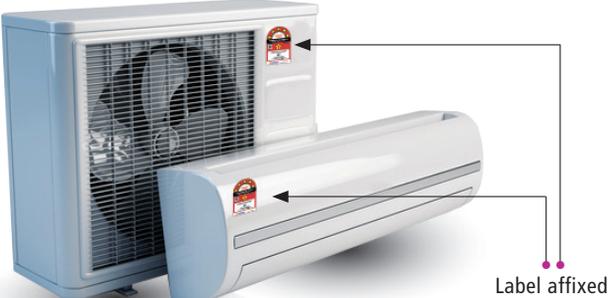
E. Information Required to be Displayed on the EE Label Product.

Manufacturers and Importers that have obtain COA for EE products are required to print out the EE label by referring to the relevant guide on the MEPS issued by the Commission. EE Labelling guide for MEPS products are as below:-

1) Electric Oven

| Item | Details |
|--|--|
| Reference Guide. | Guidelines on the Minimum Energy Performance Standard (MEPS) for Electric Oven |
| Size EE label | 7 cm (width) X 11 cm (height). |
| Annual Energy Consumption Calculation | A = Annual Energy Consumption (kWh) = 365 x Energy Consumption (kWh) |
| Percentage Energy Saving Compared to the Lowest 2-Star Rating Compared Calculation | $= \left(100 - 100 \times \left(\frac{\text{EEI cavity}}{\text{EEI lowest 2-star}} \right) \right)$ <p>Where EEI cavity = Energy Efficiency Index for each cavity of an electric oven, in % (From Test Report)</p> |
| EE Label Placement |  <p>Label affixed</p> <p>Label affixed</p> |

2) Air Conditioner

| Item | Details |
|--|--|
| Reference Guide | Guide on Minimum Energy Performance Standards Requirements for Air Conditioner with Cooling Capacity ≤ 7.1kW |
| Size EE label | 9 cm (width) X 13.5 cm (height). |
| Annual Energy Consumption Calculation | $A = \text{Annual energy consumption (kWh)}$ $= \frac{\text{CSEC(kWh)}}{1817 \text{ hours}} \times 4380 \text{ hours}^*$ <p>Where CSEC = Cooling Seasonal Energy Consumption (From Test Report) *Operating hours per year = 12 hours per day x 365 days = 4380 hours</p> |
| Percentage Energy Saving Compared to the Lowest 2-Star Rating Compared Calculation | $= 100\% - \left(100 \times \frac{\text{CSPF}_{\text{Lowest 2-Star}}}{\text{CSPF}_{\text{Measured}}}\right)$ <p>Where CSPF_{Measured} = Obtained from test report</p> |
| EE Label Placement |  <p>Label affixed</p> |

3) Refrigerator

| Item | Details |
|--|--|
| Reference Guide | Guide on Minimum Energy Performance Standard (MEPS) Requirements for Refrigerator |
| Size EE label | 8 cm (width) X 12 cm (height) |
| Annual Energy Consumption Calculation | <p>A = Annual energy Consumption (kWh) A = E_{Total} (Obtained From the Test Report)</p> |
| Percentage Energy Saving Compared to the Lowest 2-Star Rating Compared Calculation | $= 100\% - \left(\frac{EEF_{\text{Lowest 2-Star}}}{EEF_{\text{Tested}}} \times 100 \right)$ <p>Where EEF_{Tested} = can be obtained from the Test Report</p> |
| EE Label Placement |  <p>• Label affixed</p> |

4) Television

| Item | Details |
|--|---|
| Reference Guide | Guide on Minimum Energy Performance Standard (MEPS) for Television |
| Size EE label | 7 cm (width) X 11 cm (height) |
| Annual Energy Consumption Calculation | A = Annual energy consumption (kWh) from test report |
| Percentage Energy Saving Compared to the Lowest 2-Star Rating Compared Calculation | $= 100\% - \left(100 \times \frac{EEF_{\text{lowest 2-star}}}{EEF_{\text{Tested}}} \right)$ <p>Where EEF_{Tested} can be obtained from the test report</p> |
| EE Label Placement |  <p>Label affixed</p> |

5) Washing Machine

| Item | Details |
|--|---|
| Reference Guide | Guide On Minimum Energy Performance Standard (MEPS) Requirement for Washing Machine (Amendment 1) |
| Size EE label | 8 cm (width) X 12 cm (height). |
| Annual Energy Consumption Calculation | $A = \text{Annual energy consumption (kWh)}$ $= 365 \times \text{energy Consumption from test report (kWh)}$ |
| Percentage Energy Saving Compared to the Lowest 2-Star Rating Compared Calculation | $= \frac{365 \times \text{EER of lowest 2-star} \times \text{Rated capacity}}{1000}$ |

EE Label Placement



Label affixed



Label affixed

6) Microwave Oven

| Item | Details |
|--|---|
| Reference Guide | Guide On Minimum Energy Performance Standard (MEPS) for Microwave Oven |
| Size EE label | 4 cm (width) X 6 cm (height). |
| Annual Energy Consumption Calculation | $A = \text{Annual energy consumption (kWh)}$ $= 0.365 \times 3 \times \frac{W_{in}}{3600}$ |
| Percentage Energy Saving Compared to the Lowest 2-Star Rating Compared Calculation | $= 100\% \left[\left[100 \left(\frac{n_{\text{Lowest 2 star}}}{n_{\text{Tested}}} \right) \right] \right]$ |
| EE Label Placement |  <p>● Label affixed</p> |

7) Electric Rice Cooker

| Item | Details |
|--|--|
| Reference Guide | Guide On Minimum Energy Performance Standard (MEPS) for Electric Rice Cooker |
| Size EE label | 4 cm (width) X 6 cm (height). |
| Annual Energy Consumption Calculation | Annual energy consumption (kWh) = 365 x 2 x E |
| Percentage Energy Saving Compared to the Lowest 2-Star Rating Compared Calculation | $100\% \left[100 \times \left(\frac{n_{\text{Lowest 2 star}}}{n_{\text{Tested}}} \right) \right]$ <p>Where n = is the energy efficiency, in %, E = is the energy consumption, in Wh</p> |
| EE Label Placement |  <p style="text-align: center;">● Label affixed</p> |

8) Freezer

| Item | Details |
|--|--|
| Reference Guide | Guide On Minimum Energy Performance Standard (MEPS) for Freezer |
| Size EE label | 8 cm (width) X 12 cm (height). |
| Annual Energy Consumption Calculation | $A = \text{Annual energy consumption (kWh)}$ $A = E_{\text{Total}}$ (Obtained From the Test Report) |
| Percentage Energy Saving Compared to the Lowest 2-Star Rating Compared Calculation | Percentage of Energy Saving Compared to lowest 2-Star $= 100\% - \left(\frac{\text{EEF}_{\text{Lowest 2 star}}}{\text{EEF}_{\text{Tested}}} \times 100 \right)$ Where $\text{EEF}_{\text{Tested}}$ can be obtained from the test report |
| EE Label Placement |  <p>• Label affixed</p> |

9) Domestic Fan

| Item | Details |
|--|---|
| Reference Guide | Minimum Energy Performance Standard (MEPS) for Domestic Fan |
| Size EE label | 4 cm (width) X 6 cm (height). |
| Annual Energy Consumption Calculation | $A = \text{Annual energy consumption (kWh)}$ $A = 365 \times 8 \times \text{Power input measured from test report (kW)}$ |
| Percentage Energy Saving Compared to the Lowest 2-Star Rating Compared Calculation | <p>For Ceiling Fan</p> $B = \frac{365 \times 8 \times \frac{\text{Tested air delivery capacity (m}^3\text{/min) from test report}}{2.58}}{1000}$ <p>For Pedestal, Wall & Desk Fan</p> $B = \frac{365 \times 8 \times \frac{\text{Tested air delivery capacity (m}^3\text{/min) from test report}}{1.01}}{1000}$ <p>Percentage of energy saving compared to the lowest 2-Star rating model = $100\% - (100 \times A/B)$</p> |
| EE Label Placement |  <p>The diagram illustrates the correct placement of the Energy Efficiency (EE) label on two types of domestic fans. On the left, a ceiling fan is shown with the label affixed to the bottom of its motor housing. On the right, a pedestal fan is shown with the label affixed to the front of its motor housing. Red dots and arrows indicate the specific locations for label placement on each fan type.</p> |

10) Lighting

| Item | Details |
|--|---|
| Reference Guide. | Minimum Energy Performance Standard (MEPS) for Lamp |
| Size EE label | The energy efficient label size for lamp to be affixed on packaging shall be clearly visible and legible at packaging of the individual product. |
| Annual Energy Consumption Calculation | Declared efficacy value (lumen/watt) of the lamp and testing hours that has been conducted must be stated at packaging of the individual product. |
| Percentage Energy Saving Compared to the Lowest 2-Star Rating Compared Calculation | Not applicable |
| EE Label Placement |  <p data-bbox="728 1284 868 1316">Label affixed</p> |

| Item | Details | | |
|---|---|---|---|
| Special requirement | <p>For Light Emitting Diode (LED) Lamps:-</p> <p>1) The Lumens maintenance test will be carried out every 1,000 hours until the completion of 6,000 hours. *An interim report will be issued after completing the first 1,000 hours. The interim report can be used for CoA application. The test will be continued to complete the 6,000 hours. A final full test report will then be issued to supersede the interim report.</p> <p>*This procedure will only apply to the products tested according to MS IEC 62612 standard by local registered conformity assessment body accredited by Standards Malaysia. For LED lamps tested according to IEC 62612 in overseas accredited labs, only full test reports will be accepted for COA application.</p> <p>2) Once the CoA has been issued, the applicant is required to state the Efficacy value onto the packaging of the product together with the number of hours the LED lamp has been tested as per example below:-</p> <table border="1" data-bbox="340 823 1016 930"> <tr> <td data-bbox="340 823 673 930"> <p>i) After completing first 1,000 hours test</p> <p>Efficacy Value: 55 lm/W </p> <p>This product has been tested up to 1000 hours</p> </td> <td data-bbox="673 823 1016 930"> <p>ii) After completing 6,000 hours test</p> <p>Efficacy Value: 55 lm/W </p> <p>This product has been tested up to 6000 hours</p> </td> </tr> </table> <p>3) If the product fails after the first 1,000 hours before completing the 6,000 hours, the local conformity assessment body is required to inform Energy Commission of such failure. The Energy Commission will then not approve the application for the renewal of the CoA.</p> | <p>i) After completing first 1,000 hours test</p> <p>Efficacy Value: 55 lm/W </p> <p>This product has been tested up to 1000 hours</p> | <p>ii) After completing 6,000 hours test</p> <p>Efficacy Value: 55 lm/W </p> <p>This product has been tested up to 6000 hours</p> |
| <p>i) After completing first 1,000 hours test</p> <p>Efficacy Value: 55 lm/W </p> <p>This product has been tested up to 1000 hours</p> | <p>ii) After completing 6,000 hours test</p> <p>Efficacy Value: 55 lm/W </p> <p>This product has been tested up to 6000 hours</p> | | |

Note: For Guideline/Guide on MEPS for related products, please refer to the latest document available in the ST website.



APPENDIX A



* | | |

ACCEPTABLE AND NON-ACCEPTABLE 2-PIN MAINS PLUG

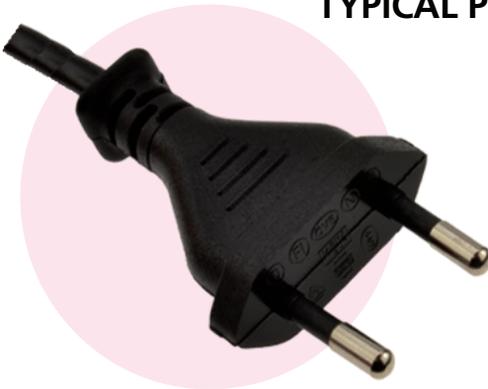
SOURCE

SOURCE: CEE 7: 1963 Standard Sheet XVI
IEC 83: 1975 Standard C5

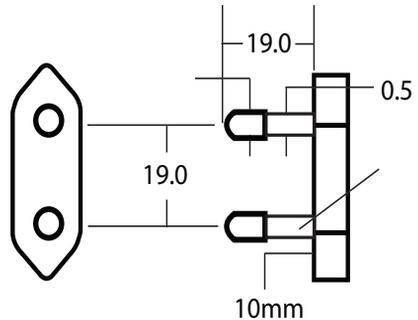
NOTES

This plug is available in two profiles
Version I : Round plug
Version II : Flat plug, with insulating collar
Intended to be fitted to class II (double insulated)
appliances 2.5 A, 250 V
Two pole - no earth contact

TYPICAL PLUG



ACCEPTABLE



SOURCE

SOURCE: CEE 7: 1963 Standard Sheet XVI
IEC 83: 1975 Standard C5

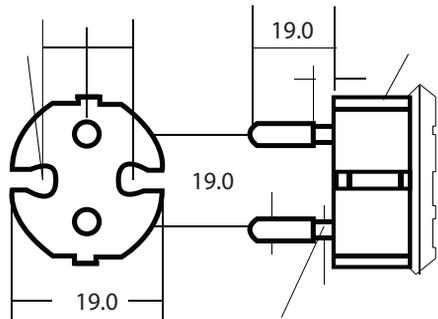
NOTES

Intended to be fitted to class II (double insulated)
appliances 2.5 A, 250 V
Two pole - no earth contact

TYPICAL PLUG



UNACCEPTABLE



ENERGY COMMISSION CONTACT INFORMATION

HEADQUARTERS

Suruhanjaya Tenaga (Energy Commission)
No. 12, Jalan Tun Hussein, Precinct 2, 62100 Putrajaya, Malaysia
T: (603) 8870 8500
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| REGIONAL OFFICES | ADDRESS | CONTACT NUMBER |
|------------------------------------|---|------------------------------------|
| Pulau Pinang, Kedah & Perlis | Tingkat 10, Bangunan KWSP 13700, Seberang Jaya, Butterworth PULAU PINANG | T: 04 398 8255 F: 04 390 0255 |
| Perak | Tingkat 1, Bangunan KWSP Jalan Greentown 30450 Ipoh PERAK | T: 05 253 5413 F: 05 255 3525 |
| Kelantan & Terengganu | Tingkat 6, Bangunan KWSP Jalan Padang Garong 15000 Kota Bharu KELANTAN | T: 09 748 7390 F: 09 744 5498 |
| Pahang | Tingkat 7, Menara Zenith Jalan Putra Square 6 25000 Kuantan PAHANG | T: 09 514 2803 F: 09 514 2804 |
| Selangor, Kuala Lumpur & Putrajaya | Tingkat 10, Menara PKNS No 17, Jalan Yong Shook Lin 46050 Petaling Jaya SELANGOR | T: 03 7955 8930 F: 03 7955 8939 |
| Johor | Suite 18A, Aras 18 Menara ANSAR 65, Jalan Trus 80000 Johor | T: 07 224 8861 F: 07 224 9410 |
| Negeri Sembilan & Melaka | Tingkat 3, Wisma Perkeso Jalan Persekutuan, MITC 75450 Ayer Keroh MELAKA | T: 06 231 9594 F: 06 231-9620 |
| Labuan | Operating from below Regional Office starting 1 January 2024 until further notice: Tingkat 3, Wisma PERKESO Jalan Persekutuan, MITC 75450 Ayer Keroh MELAKA | T: 06 231 9594 F: 06 231 9620 |



 **SURUHANJAYA TENAGA (ENERGY COMMISSION)**

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