## CRITICAL INTERPRETATION/ ADDITIONAL REQUIREMENTS WHERE LISTED STANDARDS ARE INSUFFICIENT/SILENT/VAGUE

Member State	Product <sup>1</sup>	Applied Standard	Clause/s	Issues/Concerns	Critical Interpretation	Additional requirements	Remarks
1	2	3	4	5	6	7	8
Indonesia							
1.	Audio, video and similar electronic apparatus — Safety requirements	IEC 60065 (2001–12)	4.1.3	Temperature adjustment for tropical countries		Unless otherwise specified, the tests are carried out under normal operating conditions at:	
Malaysia		1	l .	1			•
1	Household Appliances	IEC 60335-1: (year of publication)	7.14	What is the force/pressure applied during rubbing test?     How thick is the cloth?	This is the method that most international labs use  Rubbingtest(2X - each 15 s)  a) A piece of cloth soaked with/into water.  b) Rub it on the marking plate c) Do not rub too hard d) Repeat with petroleum spirit The objective is to check that the marking is not water or petroleum spirit soluble For such a simple test, std does not specify the value for applied force/pressure		
		IEC 60335-1: (year of publication)	22.14	How to objectively determine sharpness of edges	The purpose of the requirement is to check that the product complies with the requirement for protection against mechanical hazards.  And the IEC 60335-1 standards has already specified that check is by		

<sup>&</sup>lt;sup>1</sup> Regulated products of each AMS

					INSPECTION ( i.e—visual inspection). So the lab can make a decision based on the result of inspection done on the product. Through the exercise, experience, technical know-how on the product design together with ability to make a professional judgment should be able to help in making a decision.
2	Rice Cooker	IEC 60335-2- 15:(year of publication)	All relevant clauses	1. What test condition to be used? 2. What is the load,rice or water? 3.Is IEC335-2-15 really appropriate?	IEC 60335-2-15 Edition 6.0 : 2012 has already included the requirement for rice cookers  Kindly refer to the latest IEC 60335-2-15  Edition 6.0: 2012 underclause (UNDERNORMALOPERATION)  It specifies that  1) Rice cookers are operated with the rice container filled with water to the level of maximum rated capacity. Water is added to maintain the level during boiling  2) When operated in the keep warm mode, the rice cooker is operated with the rice container empty
3.	Circuit breaker			What standard to be used, IEC 947or IEC 898?	As stated in Energy Commission (ST) Information booklet  1) Miniature Circuit breaker(MCB)(ac)-IEC 60898- 1:2003  2) Miniature Circuit breaker(MCB)(ac&dc)- IEC60898-2:2003  3) Switch Fuse upto 63AIEC 60947- :2007&IEC 60947-3:2008

4	All electrical equipment	Relevant standard	Related clauses	Those issues of concern normally deliberated in CTL Decision – under IECEE CB scheme	Kindly refer to the availability of interpretation of test methods in IEC (IECEE CTL decisions) that can be used by JSC EEE in clarifying how the test should be conducted. The link to access the IECEE Committee on Testing Laboratories (CTL) Decisions is at: <a href="http://decisions.iecee.org/iecee/SearchCMC">http://decisions.iecee.org/iecee/SearchCMC</a> .nsf/de h.xsp?v=ctl.		
5	Household and similar	MS 1597-2- 21:2015 IEC 60335-2-				As specified in MS 1597-2- 21:2015	
	electrical appliances -	21:2012, MOD)				There modifications to clauses;	
	Safety - Part 2-21: Particular requirements for Electric					Cl.1 Scope: Additional statement as "Solar water heater with the provision of electric boost element"	
	Storage Water Heaters					CI.5.7 –Additional water having temperature of 30°C±3°C	
						CI.7.12.1 – Marking instruction :Additional statement as "Incorporated RCD in the installation circuit of storage water heater in instruction manual"	
						CI.22.103 –Modified Note: as "The pressure relief device shall be free fitted in the appliance	

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			22.106-Construction – To delete sentence "However, for appliances intended to be connected to fixed wiring the neutral conductor need not be disconnected"	
6	Household and similar electrical appliances -	MS 1597-2- 35:2010 (IEC 60335-2- 35:2006, MOD)	As specified in MS 1597-2-35  There modifications to clauses;	
	Safety - Part 2-35: Particular requirements	ar	Cl.4General condition for tests: Replace of 15°C±5°C with 30°C±3°C	
	for Instantaneous Electric Water		CI.6.2: Classification: Replace IPX1 with IP25	
	Heaters		CI.7.104 – Marking instruction :Additional warning label required	
			CI.22.107 – Requirement for a non-conductive hose	
			CI.22.111 and CI.22.112 – Additional requirement for leakage current protection required	
7	Household and similar	MS 1597-2- 80:2010	As specified in Malaysia Standard MS 1597-2-80:2010	
	electrical appliances - Safety - Part 2-80: Particular	IEC 60335-2-80	There modifications to clauses; CI.3.102 and CI.3.103 – New definition	

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	requirements		CI.7.12.1 – Marking
	for fans		instruction :Additional for
			new requirement of torque
			value for traceability
			purpose
			Cl.21.102 and 22.103—
			Annex S, T, and U with the
			following reason and
			inclusion of Figure S1 and
			T1
			The addition has been
			made to improve the quality
			of fans as follows;
			a) The quality if fan
			and the length of
			fan usage period
			perday are very
			high due to tropical
			climate, and
			a) Preventive action to
			avoid any possible
			accident due to
			suspension failure
8	Household	MS	As specified in MS 1597
		1597:Part2-	Part2-24
	and similar	24:2005	
	electrical	24.2005	There modifications to
	appliances -	IEC 60335-2-24	clauses;
	Safety - Part		ciauses,
	2-24:	Ed.5.0(2000)	010.0.0.400(.400) 45-
	Particular		Cl.3.2.9.102(+103), the
	requirements		water temperature has been
	for Refrigrating		changed from 15°C±5°C to
	appliances, ice		25°C±5°C
	cream		Cl.3.2.9.104, the initial
	appliances		temperature for the mixture
	and ice		of the ingredients has been
	makers		changed from 23°C±2°C to
	1		Changed from 23 C±2 C to

						25°C±5°C  Cl.5.7, the ambient temperature has been changed from 20°C±5°C to 25°C±5°C	
						20 0±3 0 to 23 0±3 0	
Myanmar							
1.	Double-capped Fluorescent lamps (Linear)	IEC 60972 IEC 60400 (1996)	-	For Safety	Import Appliances to Myanmar are tested in accordance with the Electrical Regulations 1985 for Registration and Certification (Safety)		
2.	Electronic Switch	IEC 60669- 2-1 (1996)	-	For Safety	Import Appliances to Myanmar are tested in accordance with the Electrical Regulations 1985 for Registration and Certification (Safety)		
Philippines							
1.	Household Appliances	IEC 335-1	7.14	1. What is the force/pressure applied during rubbing test? 2. How thick is the cloth?	Pressure not measured during test;     Test cloth is folded to achieve thickness of at least 3 mm.		
2.		IEC 335-1	22.14	How to objectively determine sharpness of edges	Test analyst decide only by visual inspection (subjective judgement)		
3.	Rice Cooker	IEC 335-2-15	All relevant clauses	1. What test condition to be used?	Test condition for kettle is used.     Water is used as load.		3. No specific standard

				2. What is the load, rice or water? 3. Is IEC 335-2-15 really appropriate?		for rice cooker.
4.	Circuit breaker			What standard to be used, IEC 947 or IEC 898?	PH uses IEC 947	
Thailand						·
1	PVC insulated Copper cables	IEC 60227-1 Ed 3.0 (2007)	3.4	Additional Information	Addition: Subclause 3.4 Packaging	
			4.1.2	Defined for wiring scheme	Replace "- two-core cable: no prefer colour scheme;" with "- two-core cable: blue, brown scheme;"	
2	Residual current operated circuit- breakers with integral overcurrent protection for household and similar uses (RCBOs)	IEC 61009-1 (2003)	1	According toThailand system voltages	Replace "for rated voltages not exceeding 440 V a.c.;" with for rated voltages between 220 and 440 V a.c.;	
			5.3.1	Relate toThailand's system voltages	Delete the second row of the table in subclause 5.3.1	
			9.22.1.3	Relate to Thailand's Ambient temperature	Replace the testing temperature "25 °C±3°C" with "37 °C±3°C"	
3	Mains operated electronic and related	IEC 60065 (1985) Am.1 (1989	9.1.1		the current measured shall not exceed 0.3 mA (peak)	

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	apparatus for				
	household and				
	similar general				
	use : safety				
	requirements				
4	Tumbler	IEC 60335-2-	1.1	Scope excluding rated voltage 480 V.	
	dryers : safety	11 Ed 4.0			
	requirements	(1993			
			4.3.1.4	temp. rise of the accessible front surface	
				made of glass, ceramic and plastic parts.	
			4.14.6	minimum cross-sectional area of conductors	
				of supply cords	
			4.15.3	nominal cross-sectional area of conductors.	
			4.18.2	requirements on creepage distance,	
				clearance and distance through insulation.	
		TIS 1389-			TIS 1389-2539
					Sub-clause 1.1
		2539 (1996)			
		IEC 60335-2-			Scope excluding rated
		11 Ed 4.0			voltage 480 V.
		(1993			Sub-clause 4.3.1.4
		(1993			temp. rise of the
					accessible front surface
					made of glass, ceramic
					and plastic parts.
					Sub-clause 4.14.6
					minimum cross-sectional
					area of conductors of
					supply cords
					Sub-clause 4.15.3
					nominal cross-sectional
					area of conductors.
					Sub-clause 4.18.2
					requirements on
					creepage distance,
					clearance and distance
					CICATATICE ATTU CISTATICE

						through insulation.
5	Electric fryers: safety requirements	IEC 60335-2- 13 Ed 5.0 (2002) IEC 60335-2- 15 Ed5.0 (2002)	6	For safety	Classified electric fryers into 3 classes; 0I, I and II.	
		TIS 1509- 2547 (2004) IEC 60335-2- 13 Ed.5.0(2002) IEC 60335-2- 15 Ed.5.0(2002)				TIS 1509-2547 Clause 1 Scope of the Standard cover fryers, frying pans and similar appliances as defined in Subclause 3.101,3.102 and 3.103 Remark 102 Scope of the Standard does not cover high frequency-heating electric fryers. Subclause 3.101 Definition of electric fryers. Subclause 3.102 Definition of electric deep-fryers. Subclause 3.103 Definition of electric frying pans. Clause 6 Classified electric fryers into 3 classes; OI, I and II.
6	Household refrigerators : safety	IEC 60335-2- 24 Ed 6.0 (2002)	5.7	For safety	Addition "Appliances used in Thailand are testes at the ambient temperature for appliances	

re	equirements				used in warm damp equable climates	
			6.1	For safety	"Appliances used in Thailand shall be class	
				,	OI, class I class II and Class III	
		TIS 2214- 2548 (2005)				TIS 2214-2548 Subclause 5.7
		IEC 60335-2- 24 Ed 6.0 (2002)				Addition"Appliances used in Thailand are testes at the ambient temperature for appliances used in warm damp equable climates" Subclsuse 6.1 Addition "Appliances used in Thailand shall be class OI, class I class II and Class III"
_	umbler ryers	TIS 1389- 2539 (1996) IEC 60335-2- 11 Ed 4.0 (1993				TIS 1389-2539 Sub-clause 1.1 Scope excluding rated voltage 480 V. Sub-clause 4.3.1.4 temp. rise of the accessible front surface made of glass, ceramic and plastic parts. Sub-clause 4.14.6 minimum cross-sectional area of conductors of supply cords Sub-clause 4.15.3 nominal cross-sectional area of conductors. Sub-clause 4.18.2 requirements on

				creepage distance, clearance and distance through insulation.
8	Washing Machines	TIS1463- 2556 (2013) IEC 60335-2- 7 Ed 7.0 (2008-06)		TIS 1463-2540 Sub-clause 2.10 water temperature 45±5°C. Sub-clause 4.18 requirements on creepage distance, clearance and distance through insulation. Sub-clause 7.1 ambient temperature 27±2 °C. Annex B.5 ambient temperature 27±2 °C, humidity 65±5%.
9	Cassette player, Children video games, Compact disc players, Digital versatile disc players, Equalizers/ Mixers, Karaoke, High-fidelity set, PA system,	TIS 1195- 2536 (1993) IEC 60065 (1985) Am.1 (1989		TIS 1195-2536 Sub-clause 9.1.1 the current measured shall not exceed 0.3 mA (peak)

	1 =	T	T		T	1
	Portable Hi-					
	Fi System,					
	Radio,					
	Portable					
	radio					
	cassette					
	player/record					
	er, Projection					
	television,					
	Sub-woofer,					
	Amplifiers,					
	Television					
	sets, Radio					
	alarm, Tuner					
	/ Receiver,					
	Turn tables /					
	Record					
	players,					
	Video					
	cassette					
	recorder /					
	players,					
	Video					
	cassette					
	recorder,					
	Video					
	rewinder,					
Singapore			I .	1	1	
1	Household			All appliances must be tested to 230 VAC,		
	Appliances			50 Hz.		
			Controlled Goods	The additional function must be tested to its		
			incorporated with	applicable safety standard.		
			additional function			
			Voltage selector	Appliance fitted with voltage selector shall		
			(voltage mis-match	be tested as follows:		
			test)	Connect appliance to 230 VAC mains with		

voltage selector switch to settings not suitable for operation at 230 VAC.  Tropical condition test requirements in applicable Standards) shall comply with the tropical condition test as stated in the relevant IEC Standards.	
Tropical condition test requirements in applicable Standards) shall comply with the tropical condition test as	
test requirements in applicable Standards) shall comply with the tropical condition test as	
comply with the tropical condition test as	
stated in the relevant IFC Standards	
Class I appliances All Class I appliances must be fitted with 3-	
(3-pin mains plug)   pin mains plugs compiled with SS 145/SS	
472 that are registered with the Safety	
Authority.	
Class II appliances a) All Class II appliances must be fitted	
(mains plug) with 2-pin mains plug (Appendix T)	
complied with EN 50075.	
b) Class II appliances that are fitted with 3-	
pin mains plugs must use plugs that are	
complied with SS 145 and registered with	
the Safety Authority.	
the durity numbers.	
Appliances rated ≥ Electric appliance ≥ 3 kW must be	
3 kW or connected connected to fixed wiring. All connection to	
to fixed wiring must be in accordance with	
Code of Practice CP5.	
Detachable power   Detachable power cord set must be listed in	
cord set (consists the test report critical component list.	
of mains plug,	
mains cord and	
appliance	
connector	
Circuit diagrams must be indicated with	
component's values for products tested to	
IEC 60065 and IEC 60950.	
Circuit diagrams of Circuit diagrams of the electronic modules	
electronic modules in the electrical appliances must be	
in electrical provided.	
appliances	
Controlled Goods Controlled Goods, having an enclosure,	
likely to be treated which is shaped and decorated so that it is	
as toy by children likely to be treated as a toy by children, shall	

			not be accepted for certification and registration.	
		Controlled Goods with rated voltage that are not suitable for local supply voltage	a) Controlled Goods with rated voltage that are not suitable for local supply voltage will not be allowed for registration unless they are supplied with step-down isolating transformer and are tested together with the transformer as a complete set.	
			b) A test to ensure that the Controlled Goods shut-down/fail safely should the consumer accidentally plugs the product directly into the 230 V mains supply socket outlet without using the isolating step-down transformer shall be conducted.	
		Controlled Goods with direct plug-in 3-pin (eg. 3-pin AC adaptor, 3-pin Power Line Adaptor)	Test report showing that the 3-pin complied with sub-clauses 12.1 & 12.3 of SS 246 or BS 1363-3 shall be provided.	
		Controlled Goods with direct plug-in 2-pin (eg. 2-pin AC adaptor, 2-pin Power Line Adaptor)	The 2-pin (Appendix U) shall be in accordance with EN 50075.	
2	Electric Airpot	Reboil switch	No part of the reboil switch is allowed to protrude into the water pot, even if it is located above the maximum water level mark.	
3	AC Adaptor	Detachable power supply cord set not supplied by Registered Supplier	a) Registered Supplier who is not supplying the detachable power supply cord set together with the AC Adaptor must provide written instruction to its customer on the type of approved detachable power cord set	

		AC Adaptor incorporated with	to use and declare to Conformity Assessment Body when applying for Certificate of Conformity. This requirement is only applicable to Register Supplier whose core business is supplying AC Adaptor or its Registered Supplier name is affiliated with the AC Adaptor's manufacturer.  Additional tests clauses to 13, 17 and 18 of SS 246 would be required.	
		13A socket-outlet	33 246 would be required.	
4	Computer products	CD/DVD ROM (used in personal computer)	Test certificate showing that CD/DVD ROM has complied with IEC 60825-1 must be provided.	
		Modem Card (used in personal computer)	Modem card incorporated in the personal computer must be tested at set level (subclauses 5.1 & 6 of IEC 60950) or at component level.	
		Powerline Ethernet Adaptor incorporated with 13A socket-outlet	Additional tests to clauses 13, 17 and 18 of SS 246 would be required.	
5	Ceiling fan and cycle fan		<ul> <li>a) These appliances must be tested to subclauses 5.7 and 5.8 of SS 360: 1992.</li> <li>b) Installation instruction must mention the 3 expansion bolts for fastening the main suspension, safety cord, expansion bolt with hook for fastening safety cord and mounting plate.</li> </ul>	
		Decorative ceiling fan	a) Decorative ceiling fan submitted to Conformity Assessment Body (CAB) for certification shall subject to conformity check. CAB shall request a new sample and check the identical safety components are listed in the test report of IEC 60335-2-80. The check also covers the minimum dimension requirements and availability of the safety cord indicated in the test report of	

			sub-clauses 5.7 & 5.8 of SS 360.	
			b) Drawing to show that the wires within the motor shaft are not stressed must be provided.	
6	Portable/wall socket-outlet and portable cable reel		a) If residual current device (RCD) is incorporated, its tripping current must be less than 30mA and operating time must be less than 0.1 second and testing to subclauses 9.9.2.1, 9.9.2.2, 9.9.2.3 and 9.16 of SS 97: Part 1: 2000 are required. b) The shutters screening the current-carrying socket contacts shall not be opened by the insertion of any corresponding SINGLE pin of the plug into any current-carrying socket aperture.	
		Wall switched socket-outlet (2 x single socket-outlet)	Single socket-outlet with 2-gang faceplate/frame must be fulfilled with the test requirements as 2-gang socket-outlet.	
7		Remote controlled wall socket-outlet	Remote controlled wall socket-outlet shall not be allowed for registration.	
8	Roaster		A metal ring must be provided to prevent the roaster from falling off in case of the glass bowl shattered.  If supplier has other method, approval would be required from the Safety Authority. Note: This requirement is not applicable to roaster that is provided with metal bowl.	
9	Residual Current Circuit Breaker		Registration of RCCB is limited to those with 30 mA sensitivity and the operating time must be less than 0.1 second. Electronic RCCB will not be accepted for registration.	
10	Electric instantaneous and storage water heater		a) Heating elements used must not be of the 'bare-element' type. b) Registered Supplier must declare that the water heater is not using bare heating element when applying Certificate of	

		Water heater incorporated with Residual Current Device (RCD)  Pressure-relief device (for closed storage water heater)	Conformity with Conformity Assessment Body.  Testing to sub-clauses 9.9.2.1, 9.9.2.2, 9.9.2.3 and 9.16 of SS 97: Part 1: 2000 are required.  a) Closed water heaters having a rated pressure of 0.6 MPa and above shall be provided with a pressure-relief device. b) Pressure-relief devices shall prevent the pressure in the container from exceeding the rated pressure by more than 0.1 MPa.	
		Thermal cut-out (for closed instantaneous and storage water heater)	a) Closed water heaters shall incorporate a thermal cut-out providing all-pole disconnection and which operates independently from the thermostat. b) Registered Supplier must declare that the water heater is incorporated with a thermal cut-out providing all pole disconnection when applying Certificate of Conformity with Conformity Assessment Body.	
11	Multi-way adaptor	Multi-way adaptor with 3-pin socket-outlets or combination of 3-pin and 2-pin socket-outlets	a) The socket contacts of the adaptor shall only accept 13A 3-pin mains plug complying with SS 145 and/or 2.5A 2-pin mains plug complying with EN 50075. b) The shutters screening the current-carrying socket contacts shall not be opened by the insertion of any corresponding <b>SINGLE</b> pin of the plug into any current-carrying socket aperture. c) A barrier or other acceptable means shall be provided on the engagement surface of the 2.5A 2-pin socket-outlet of the adaptor to PREVENT entry of any types of 2-pin mains plugs except those complying with	

					EN 50075. (note: shutters cannot be regarded as barriers)	
					d) Adaptor incorporates with switch would require additional test to sub-clauses 13.11, 17.1.3 and 18.1.3 of SS 145: Part 2: 1997.	
12	Plasma/LCD display monitor			Plasma/LCD display monitor with TV tuner	Plasma/LCD display monitor tested to IEC 60950 would require additional test to clauses 9 (related to antenna only), 10.1, 10.2, 10.3 and 12.5 of IEC 60065.	
13	Table lamp / standing lamp			Child appealing table lamp/standing lamp	Child appealing table/standing lamp will not be allowed for registration unless it is powered by an AC Adaptor. Only the AC Adaptor would need registration.	
14	Hot/Warm & cold water dispenser				a) Hot water dispenser which has below boiling temperature shall be tested to IEC 60335-2-21 or IEC 60335-2-35. b) Testing to IEC 60335-2-24 shall be required if the water dispenser is incorporated with compressor for dispensing cold water.	
Vietnam	•			•		
1	Household Appliances	IEC 60335-1	10	Power input of equipments with PTC heating elements	1. Base on CTL DSH-554	
	Household Appliances	IEC 60335-1	11.3	Positioning of the thermocouples disc in the test corner	1. Base on CTL DSH-591	
	Household Appliances	IEC 60335-1	11.8	Temperature rise of appliance inlets (pins) • Very Hot Condition: 130K • Very Hot Condition: 95K	1. Base on standard shape.  for cold applications for hot applications applications  2. Base on CTL DSH-480	

			<ul> <li>Very Hot         Condition: 45K</li> <li>1. How to         determine: very         hot conditions,         hot conditions,         cold conditions?</li> <li>2. How to         measure: test         position to stick         thermocouples?</li> </ul>	
Household Appliances	IEC 60335-1	25.5	Some examples of type attachment	1. X type attachment
				Pillar terminal> < Quick connection termin 2. Y attachment

				Insulation cover (made of fire-resistant synthetic resin) Core wire connected part (crimp)  (Cross-section view)	
Household Appliances	IEC 60335-1	29.1.3 Table 15	Calculate rated impulse voltage for appliances having higher working voltages than rated voltage	Rated impulse voltage (Higher working votages parts) = Rated impulse + peak working voltage of such parts – peak rated voltage  Example (See CTL DSH-727)  • Appliance is in overvoltage category II  • Rated voltage of appliance 120V  • => Rated impulse voltage 1500V  • Secondary's peak working V of H.V.trans 424V (Working voltage 300V)  • => Rated implulse voltage to determine by interpolation  = 1500 + 424 – 170  = 1754V	

Note: Applied standard includes IEC and/or national standard which non-equivalent