

TEST REPORT

REPORT NO : 2026EA0721	PAGE : 1 OF 28
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Applicant : CP ELECTRICAL & LIGHTING TRADING
D3 – 12A - G, Jalan Dutamas 3
Taman Dutamas, 43200 Cheras
Selangor, Malaysia.
File No.: P5-018655 / License No.: PC013152
(Requested by Muhammad Fadil Arsad Mohd Usope, ICCS2,
SIRIM QAS International Sdn. Bhd.)

Manufacturer : KKH ENGINEERING & FOUNDRY SDN BHD.
150, Jalan Villaraya 1/5, Villaraya Industrial Park 1
Batu 23, Jalan Sungai Lalang,
43500 Semenyih, Selangor, Malaysia.

Product : RIGID ALUMINIUM CONDUIT FITTINGS FOR CABLE MANAGEMENT

Reference Standard / Method of Test : MS 61386-21: 2010 read in conjunction with MS IEC 61386-1: 2010

Description of sample/ Description of Test Specimen : Brand Name: A - MAX
Model / Type: Heavy Duty
Size: 20 mm & 25 mm
Classification: 4422

Disclaimer: All the information stated above has been provided/agreed by the Applicant. SIRIM QAS International Sdn. Bhd. shall not be held responsible for the accuracy, completeness, or validity of the information provided by the Applicant which may affect the validity of the test results. The accuracy and reliability of the test results are contingent upon the integrity and accuracy of the information provided by the Applicant.

Job No. : J20261420104

Description of Test : COMPLIED (See page 3 for details)

Results/ Overall Test Result

Issued Date : 12 June 2026

Approved Signatory;


.....
(HASBAR RAFAQ BIN ABD RA) (M)
Testing Executive




.....
(M.ZAMRI BIN MUSTAFFA)
Head
Electrical & Electronics 1 Section
Testing Services Department

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DISCLAIMER:

1. The laboratory is responsible for all the information provided in the report except for the information provided by the customer.
2. The laboratory is responsible for all the data results reported in this test report except for the information provided by the manufacturer which can compromise the validity of the test result (if applicable) in the report except for the information provided by the customer. The said information is identified as “ # ”.

SUMMARY OF TESTS:

1. This is a type test report as requested by the applicant.
2. The samples submitted for testing has been checked in accordance to MS 61386-21: 2010 read in conjunction with MS IEC 61386-1: 2010
3. The samples submitted for testing have been checked in accordance to clause 6, 7, 8, 9, 10.3, 10.7, 11, 14.1 and 14.2 of MS 61386-21: 2010.

No.	Model	Nominal size
1	Terminal Box - 1 Way End	20 mm
2	Through Box - 2 Ways	
3	Angle Terminal Box - 2 Ways	
4	Tee Terminal Box - 3 Ways	
5	Cross Terminal Box – 4 Ways Cross	
6	Terminal Box - 1 Way End	25 mm
7	Through Box - 2 Ways	
8	Angle Terminal Box - 2 Ways	
9	Tee Terminal Box - 3 Ways	
10	Cross Terminal Box – 4 Ways Cross	

4. All the tests were carried out at ambient temperature of $25 \pm 5^\circ \text{C}$, unless otherwise specified.
5. The classification of the conduit is as following;

Numerals / Digits	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀	X ₁₁	X ₁₂
Ref. Sub Clauses	6.1.1	6.1.2	6.2.1	6.2.2	6.1.3	6.3	6.4.1	6.4.2	6.4.3	6.1.4	6.5	6.1.5
Digits Marks on Sample	4	4	2	2	-	-	-	-	-	-	-	-



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6. The abbreviation used in this test report denotes as follows;

Pass : Complied with the requirement
Fail : Not complied with the requirement
NA : Not applicable with the requirement

7. Simple Acceptance Rule is used for the conformity statement. The level of risk regarding the Probability of False Accept is up to 50% according to ILAC G8:09

8. Disclaimer CL 5.10 TCQS PRO13

- Exclusion of Non-accredited clauses

SUMMARY OF TEST RESULTS:

The test results for the submitted test samples as described in this test report complied with the requirements of the above reference standard.

ADDITIONAL INFORMATION:

1. Tested by: Adam Aiman Zulkiflie
2. Prepare by: Hasbar Rafeq Abd Rahim
3. Checked by: Mohamad Ismail Hamid
4. Date received of application: 22 January 2026
5. Date of item(s) received: 20 February 2026
6. Date of test performed: 20 March – 20 May 2026
7. Testing location: SIRIM QAS International Sdn. Bhd, No.1, Persiaran Dato' Menteri, Section 2, P.O. Box 7035, 40700 Shah Alam, Selangor, Malaysia.



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Clause	Requirement	Remark	Results
4	General requirements		Pass
4.1	Conduit and conduit fittings shall be designed and constructed to provide;		Pass
	- Mechanical protection for the cable inside		Pass
	- Electrical protection		Pass
4.2	The mfg shall give instructions on how to install the system to comply with this standard.		NA

5	General conditions for tests		Pass
	Conduit are classified the same type if only varies in the colour.		NA
	Test are carried out at (25 ± 5) °C		Pass
	Test shall be carried out on three new samples		Pass

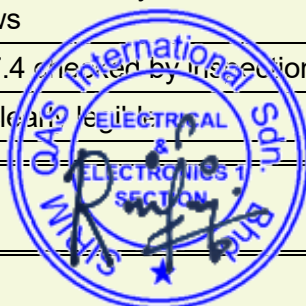
6	Classification Note: The sequence of the following sub clauses is based on numerals marked on sample (in order) in accordance to requirement of clause 6 and annex A of this standard.		
6.1	According to mechanical properties		Pass
6.1.1	Resistance to compression (X ₁)	4	Pass
6.1.2	Resistance to impact (X ₂)	4	Pass
6.2.1	Lower temperature range (X ₃)	2	Pass
6.2.2	Upper temperature range (X ₄)	2	Pass
6.1.3	Resistance to bending (X ₅)	-	-
6.3	Electrical characteristics (X ₆)	-	-
6.4.1	Protection against ingress of solid object (X ₇)	-	-
6.4.2	Protection against ingress of water (X ₈)	-	-
6.4.3	Resistance against corrosion (X ₉)	-	-
6.1.4	Tensile strength (X ₁₀)	-	-
6.5	According to resistance to flame propagation (X ₁₁)	-	-
6.1.5	Suspended load capacity (X ₁₂)	-	-



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Clause	Requirement	Remark	Results
7	MARKING AND DOCUMENTATION		Pass
7.1	Conduit (conduit fitting) is marked on the product with a trade mark or a name identifying the manufacturer or responsible vendor	A -MAX	Pass
	Conduit (conduit fitting) is marked in addition in such a way that it can be identified in the manufacturer's, or responsible vendor's, literature		NA
7.1.1	Conduit is also marked with the classification code, in accordance with annex A, and includes at least the first four digits (optional)	Not marked	NA
7.1.2	Manufacturer indicates the compatibility of parts within a conduit system		NA
7.1.101	Conduit is marked in accordance with 7.1 along its entire length at regular intervals of preferably 1 m but not longer than 3 m (m)		NA
	Each length is marked at least once		NA
7.1.102	Minimum inside diameter and the classification for the system in accordance with clause 6 are documented by the manufacturer	See appended table 7.1.102	NA
7.2	Conduit fitting is marked in accordance with 7.1, on		Pass
	- the product	Marked	Pass
	- a label attached to the product, or on the box or carton containing the fittings (if the marking on the product is impractical)		NA
7.3	Flame propagating material is orange in colour		NA
	Flame propagating material is not coloured orange by painting or other superficial means		NA
	Non-flame propagating material is of any colour except yellow, orange or red, unless is clearly marked on the product to be of non-flame propagating material		NA
7.4	Earthing facilities are indicated by the symbol for protective earth in accordance with IEC 60417, symbol 60417-IEC-5019-a		NA
	This marking is not placed on easily removable parts, for example screws		NA
7.5	Compliance with 7.1 to 7.4 checked by inspection		Pass
7.6	Marking is durable and clear		Pass



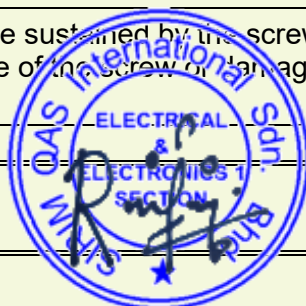
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Clause	Requirement	Remark	Results
	Compliance checked by inspection and by rubbing the marking by hand for 15 s with a piece of cloth soaked with water, and again for 15 s with a piece of cloth soaked with petroleum spirit		Pass

8	DIMENSIONS		Pass
8.1	Outside diameters comply with IEC 60423 :	See appended table 8.1A	Pass
	Threads comply with IEC 60423 :	See appended table 8.1B	Pass
8.2	Threadable conduits and threadable conduit fittings comply with table 101 (except terminating conduit fittings) :	See appended table 8.2A	Pass
	Non-threadable conduit fittings comply with table 102 (except fittings which are part of a conduit system declaring tensile strength) :	See appended table 8.2B	NA
	Minimum inside diameter of the conduit system is as declared by the manufacturer	See appended table 8.2C	NA

9	CONSTRUCTION		Pass
9.1	There are no sharp edges, burrs or surface projections within the conduit system		Pass
	The manufacturer provides guidelines to assist the safe installation of the conduit system		Pass
9.2	Screws, if any, used for attaching components or covers to conduit fittings, or in joints to conduits, do not cause damage to cable insulation when correctly inserted	No such screw	Pass
	Screws have ISO metric threads		NA
	Thread-cutting screws are not used		NA
	Fixing screws and small clips for use with non-metallic or composite conduit fittings, of non-metallic material, are isolated from insulated conductors or cables		NA
9.3	Test for screw fixing using preformed threads	See appended table 9.3	Pass
	After the test: no damage sustained by the screw or nut, such as breakage of the screw or damage to the head or thread		Pass

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Clause	Requirement	Remark	Results
9.4	Test for screw fixing using thread-forming screws	See appended table 9.4	Pass
	After the test: no damage, such as breakage of the screw or damage to the head or thread		NA
9.5	Any material within the joint have at least the same level of resistance to the external influence as either the conduit or the conduit fitting :		NA
9.6	Indications whether the conduit system that are assembled by means other than threads can be disassembled and if so, how this can be achieved, are provided by the manufacturer		Pass

10	MECHANICAL PROPERTIES		Pass
10.1	Mechanical strength		Pass
10.1.1	Conduit systems have adequate mechanical strength		Pass
10.1.2	Conduits do not crack and are not deformed when bent or compressed, or exposed to impact or extreme temperature, according to their classification		NA
10.1.3	Conduit systems intended as a mounting for other equipment have adequate mechanical strength		NA
10.1.4	Compliance of 10.1.1 to 10.1.3 checked by the tests specified in 10.2 to 10.8		NA
10.2	Compression test		NA
	3 samples of conduit, each (200 ± 5) mm long, subjected to a compression test at (23 ± 2) °C, using the apparatus shown in figure 1	See appended table 10.2	NA
10.3	Impact test		Pass
	12 samples of conduit, each (200 ± 5) mm in length, or 12 samples of conduit fittings subjected to an impact test using the apparatus shown in figure 2	See appended table 10.3	Pass
10.3.3	At least 9 of the 12 samples passed the test		Pass
10.4	Bending test		NA
	Conduits declared by the manufacturer as being bendable tested in accordance with 10.4.101, 10.4.102 or 10.4.103		NA
10.4.101	Metallic conduits		NA



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Clause	Requirement	Remark	Results
10.4.101.1	Conduit sizes 16, 20 and 25, having a length equal to 30 times the nominal diameter, subjected to a bending test using the apparatus shown in figure 101	See appended table 10.4.101	NA
	Other sizes tested in accordance with the manufacturer's instructions		NA
10.4.102	Non-metallic conduits		NA
	Conduit sizes 16, 20 and 25, having a length of approximately 500 mm, subjected to a bending test using the apparatus shown in figure 103	See appended table 10.4.102	NA
	Other sizes tested in accordance with the manufacturer's instructions		NA
10.4.103	Composite conduits		NA
	Composite conduits declared by the manufacturer as being bendable tested both in accordance with 10.4.101 and 10.4.102, using new samples for each test	See appended tables 10.4.101 and 10.4.102	NA
	Other sizes tested in accordance with the manufacturer's instructions		NA
10.5	Flexing test		NA
	Sub-clause of part 1 not applicable		—
10.6	Collapse test		NA
10.6.101	Metallic conduits		NA
	Metallic conduits not subjected to a collapse test		NA
10.6.102	Non-metallic and composite conduits		NA
10.6.102.1	Conduits declared by the manufacturer as being bendable tested in accordance with 10.4.102 with the exception of 10.4.102.3		NA
	Conduit sizes 16, 20 and 25, having a length of approximately 500 mm, subjected to a bending test using the apparatus shown in figure 103	See appended table 10.6.102	NA
	Other sizes tested in accordance with the manufacturer's instructions		NA
10.6.102.2	Samples tested after fixing to a rigid support by means of four straps as shown in figure 104	See appended table 10.6.102	NA
10.7	Tensile test		Pass



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Clause	Requirement	Remark	Results
	Conduit systems declaring tensile strength: test carried out on an assembly prepared in accordance with the manufacturer's instructions so that the overall length is approximately 200 mm	See appended table 10.7	Pass
10.8	Suspended load test		NA
	Conduit fitting declared by the manufacturer to be suitable for suspended loads: test carried out with a load suspended by the means provided and installed in accordance with the manufacturer's instructions for a time duration given in table 7	See appended table 10.8	NA

11	ELECTRICAL PROPERTIES		Pass
11.1	Electrical requirements		Pass
11.1.1	Conduit systems declaring electrical continuity characteristics are checked by the tests in 11.2 immediately after the tests in 14.2		Pass
11.1.2	Conduit systems of metal or composite materials are so constructed that accessible metal parts can be bonded to earth		NA
11.1.3	Accessible conductive parts of the metal or composite conduit system, which may become live in the event of a fault, are effectively earthed		NA
11.1.4	Conduit systems of non-metallic or composite materials, where declared, have an adequate electrical insulating strength and insulating resistance		NA
11.2	Bonding test		Pass
	Test carried out on an arrangement of conduits and conduit fittings prepared in accordance with the manufacturer's instructions and figure 3: resistance not exceed 0,1 Ω	See appended table 11.2	Pass
11.3	Electrical insulating strength and resistance		NA
11.3.1	Conduits		NA
	3 samples of conduit tested in a salt water solution at $(23 \pm 2) ^\circ\text{C}$, in accordance with figure 4, and submitted after 24 h $\pm$ 15 min to a voltage of 2000 V maintained for a period of 15 min $\pm$ 5/0 s: trip device incorporated into the circuit not trip during the test	See appended table 11.3.1	NA



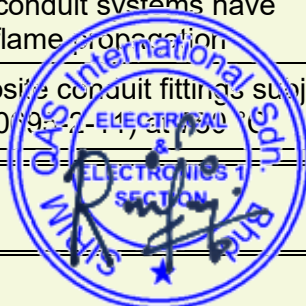
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Clause	Requirement	Remark	Results
	Same samples then subjected to an electrical insulation resistance test with a direct voltage of 500 V applied for (60 ± 2) s: measured insulation resistance greater than 100 M Ω	See appended table 11.3.1	NA
11.3.2	Conduit fittings		NA
	3 samples of conduit fittings immersed for 24 h $\pm$ 15 min in water at (23 ± 2) °C and then submitted by means of lead spheres to a voltage of 2000 V maintained for a period of 15 min $\pm$ 5/0 s: trip device incorporated into the circuit not trip during the test	See appended table 11.3.2	NA
	Same samples then subjected to an electrical insulation resistance test with a direct voltage of 500 V applied for (60 ± 2) s: measured insulation resistance greater than 100 M Ω	See appended table 11.3.2	NA

12	THERMAL PROPERTIES		NA
12.1	Non-metallic and composite conduits have adequate resistance to heat	NA	NA
12.2	Samples of conduit, each (100 ± 5) mm long, together with the test apparatus as shown in figure 8, kept for 4 h $\pm$ 5 min in a heating cabinet at the declared temperature given in table 2, with a tolerance of ± 2 °C	NA	NA
	Each sample then loaded for 24 h $\pm$ 15 min in the apparatus of figure 8 with a total mass as shown in table 9	NA	NA
12.3	It is possible to pass the appropriate gauge of figure 102 immediately after the removal of the load	NA	NA

13	FIRE HAZARD		NA
13.1	Reaction to fire		NA
13.1.1	Initiation of fire (not applicable)		—
13.1.2	Contribution to fire (under consideration)		—
13.1.3	Spread of fire		NA
	Non-flame propagating conduit systems have adequate resistance to flame propagation		NA
13.1.3.1	Non-metallic and composite conduit fittings subjected to glow-wire test of IEC 60695-2-1/1 (IEC 60695-2-11) at 1000 °C		NA

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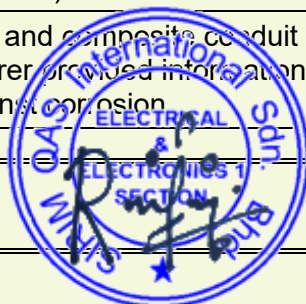


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Clause	Requirement	Remark	Results
	No visible flame or sustained glowing,	See appended table 13.1.3.1	NA
	Flames and glowing extinguished within 30 s of the removal of the glow-wire (s)	See appended table 13.1.3.1	NA
13.1.3.2	Non-metallic and composite conduits subjected to 1 kW flame of IEC 60695-2-4/1 (IEC 60695-11-2), according to the arrangement of figure 7, applied for the period given in table 11		NA
	▪ Sample does not ignite, or	See appended table 13.1.3.2	NA
	▪ In case of ignition:		NA
	a) Flame extinguishes within 30 s	See appended table 13.1.3.2	NA
	b) No ignition of the tissue paper	See appended table 13.1.3.2	NA
	c) No evidence of burning or charring within 50 mm of the lower extremity of the upper clamp	See appended table 13.1.3.2	NA
13.1.4	Additional reaction to fire characteristics (under consideration)		—
13.2	Resistance to fire (not applicable)		—

14	EXTERNAL INFLUENCES		Pass
14.1	Degree of protection provided by enclosure		Pass
	Conduit systems, when assembled in accordance with the manufacturer's instructions, have adequate resistance to external influences according to the classification declared by the manufacturer, with a minimum requirement of IP30		Pass
14.1.1	Degree of protection – Ingress of foreign solid objects	See appended table 14.1.1	NA
14.1.2	Degree of protection – Ingress of water	See appended table 14.1.2	NA
14.2	Resistance against corrosion		NA
14.2.1	Resistance to corrosion classification for painted and zinc coated steel and steel composite conduits and conduit fittings (table 10)	4	NA
	For non-ferrous metallic and composite conduit systems, the manufacturer provided information about its protection against corrosion		NA

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Clause	Requirement	Remark	Results
14.2.2	Tests for resistance to corrosion for painted and zinc coated steel and steel composite conduits systems		NA
14.2.2.1	Low protection conduit and conduit fittings inspected for completeness of covering by the protective coating, both inside and outside		NA
14.2.2.2	Test for medium protection conduit and conduit fittings: after completion of the test, the samples showed no more than two blue coloured spots on each square centimetre of the surface, and no blue spot had a dimension larger than 1,5 mm		NA
14.2.2.3	Test for high protection conduit and conduit fittings: after the test, the sample showed no precipitation of copper which cannot be scrubbed off in running water, if necessary after immersion for 15 s in a 10% solution of hydrochloric acid in water	No copper sulphate after scrubbing	NA
15	ELECTROMAGNETIC COMPATIBILITY		NA
	Products covered by this standard are, in normal use, passive in respect of electromagnetic influences (emission and immunity)		NA



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7.1.102	TABLE: Minimum inside diameter declared by manufacturer for the system		NA
	Size	Minimum inside diameter declared by manufacturer for the system (mm)	Verdict
	6	-	NA
	8	-	NA
	10	-	NA
	12	-	NA
	16	-	NA
	20	-	NA
	25	-	NA
	32	-	NA
	40	-	NA
	50	-	NA
	63	-	NA
	75	-	NA
Supplementary information: No document provided.			

8.1A	TABLE: Checking of dimensions of conduits						Pass
Size		Maximum outside diameter (all type of conduits)		Minimum outside diameter (metallic conduits)		Minimum outside diameter (non-metallic conduits)	
Outside diameters (mm)	Metric threads	Gauge fig.2 d _g (mm)	Comply (P-F-N/A)	Gauge fig.3A c (mm)	Comply (P-F-N/A)	Gauge fig.3b d _g (mm)	Comply (P-F-N/A)
6 +0/-0,1	M6	6.04	NA	5.900	NA	5,90	NA
8 +0/-0,2	M8	8.04	NA	7.800	NA	7,80	NA
10 +0/-0,2	M10	10.04	NA	9.800	NA	9,80	NA
12 +0/-0,2	M12	12.04	NA	11.800	NA	11,70	NA
19 +0/-0,3	M19	20.04	NA	19.700	NA	19,70	NA
20 +0/-0,3	M20	20.04	Pass	19.700	Pass	19,70	NA
25 +0/-0,4	M25	25.04	Pass	24.800	Pass	24,60	NA
32 +0/-0,4	M32	32.04	Pass	31.500	NA	31,60	NA

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40 +0/-0,4	M40	40,04	NA	39,600	NA	39,60	NA
50 +0/-0,5	M50	50,04	NA	49,500	NA	49,50	NA
63 +0/-0,6	M63	63,04	NA	62,400	NA	62,40	NA
75 +0/-0,6	M75	75,04	NA	74,400	NA	74,40	NA

Supplementary information:

8.1B	TABLE: Checking of dimensions of threads					Pass
Size		External threads of conduits and fittings		Internal threads of fittings		
Outside diameters (mm)	Metric threads	Go gauge fig. 4 (threaded) Comply (P-F-N/A)	No go gauge fig. 4 (plain) Comply (P-F-N/A)	Go gauge fig. 5 (threaded) Comply (P-F-N/A)	No go gauge fig. 5 (plain) Comply (P-F-N/A)	
6 +0/-0,1	M6	NA	NA	NA	NA	
8 +0/-0,2	M8	NA	NA	NA	NA	
10 +0/-0,2	M10	NA	NA	NA	NA	
12 +0/-0,2	M12	NA	NA	NA	NA	
19 +0/-0,3	M19	NA	NA	NA	NA	
20 +0/-0,3	M20	NA	NA	Pass	NA	
25 +0/-0,4	M25	NA	NA	Pass	NA	
32 +0/-0,4	M32	NA	NA	NA	NA	
40 +0/-0,4	M40	NA	NA	NA	NA	
50 +0/-0,5	M50	NA	NA	NA	NA	
63 +0/-0,6	M63	NA	NA	NA	NA	
75 +0/-0,6	M75	NA	NA	NA	NA	
Supplementary information:						

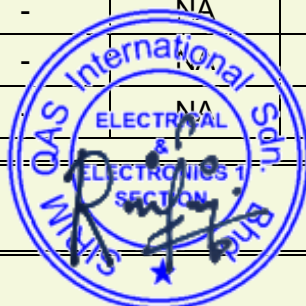
Supplementary information:



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8.2A	TABLE: Checking of thread lengths according to table 101 (threadable conduits and threadable conduit fittings)						Pass
Size	External thread			Internal thread			
	Minimum length allowed (mm)	Length measured (mm)	Comply (P-F-N/A)	Minimum length allowed (mm)	Length measured (mm)	Comply (P-F-N/A)	
6	5,5	-	NA	6,5	-	NA	
8	6,5	-	NA	7,5	-	NA	
10	8,5	-	NA	9,5	-	NA	
12	10,5	-	NA	11,5	-	NA	
19	12,5	-	NA	13,5	-	NA	
20	14,0	-	NA	15,0	20.77	Pass	
25	17,0	-	NA	18,0	23.73	Pass	
32	19,0	-	NA	20,0	-	NA	
40	19,0	-	NA	20,0	-	NA	
50	19,0	-	NA	20,0	-	NA	
63	19,0	-	NA	20,0	-	NA	
75	19,0	-	NA	20,0	-	NA	
Supplementary information:							

8.2B	TABLE: Checking of maximum entry diameter and minimum entry length details according to table 102 (non-threadable conduits and non-threadable conduit fittings)						NA
Size	Maximum entry diameter allowed (mm)	Entry diameter measured (mm)	Comply (P-F-N/A)	Minimum entry length allowed (mm)	Entry length measured (mm)	Comply (P-F-N/A)	
6	6,5	-	NA	6,0	-	NA	
8	8,5	-	NA	8,0	-	NA	
10	10,5	-	NA	10,0	-	NA	
12	12,5	-	NA	12,0	-	NA	
16	16,5	-	NA	16,0	-	NA	
20	20,5	-	NA	20,0	-	NA	
25	25,5	-	NA	25,0	-	NA	



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32	32,6	-	NA	30,0	-	NA
40	40,7	-	NA	32,0	-	NA
50	50,8	-	NA	42,0	-	NA
63	63,9	-	NA	50,0	-	NA
75	75,9	-	NA	50,0	-	NA

Supplementary information: Not applicable for threadable conduit

8.2C **TABLE: Checking of minimum inside diameter of the conduit system** NA

Size	Minimum inside diameter of the conduit system declared by manufacturer (mm)	Inside diameter of the conduit system measured (mm)	Comply (P-F-N/A)
6	-	-	NA
8	-	-	NA
10	-	-	NA
12	-	-	NA
19	-	-	NA
20	-	18.97	Pass
25	-	24.19	Pass
32	-	-	NA
40	-	-	NA
50	-	-	NA
63	-	-	NA
75	-	-	NA

Supplementary information: Minimum inside diameter not declared.

9.3 **TABLE: Screw test (screw fixing using preformed threads)** Pass

Threaded part identification	Nominal diameter of thread (mm)	Column number of table 3 (I or II)	Applied torque (Nm)	Times (5/10)	Verdict
20	3.82	I	1.2	10x	Pass
25	3.82	I	1.2	10x	Pass

Supplementary information: No such screw



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9.4	TABLE: Screw test (screw fixing using thread-forming screws)					Pass
Threaded part identification		Nominal diameter of thread (mm)	Column number of table 3 (I or II)	Applied torque (Nm)	Times (5/10)	Verdict
20		3.82	I	1.2	10x	Pass
25		3.82	I	1.2	10x	Pass
Supplementary information:						

10.2	TABLE: Compression test								NA
		Classification (first digit): 4 (Heavy)						—	
Size	N° of sample	$\varnothing_{bt}$ (mm)	F (N)	$\varnothing_{at1}$ (mm)	$[\varnothing_{bt} - \varnothing_{at1} / \varnothing_{bt}] 100 \leq 25 \%$ (%)	$\varnothing_{at2}$ (mm)	$[\varnothing_{bt} - \varnothing_{at2} / \varnothing_{bt}] 100 \leq 10 \%$ (%)	No visible cracks (P/F)	Verdict
20	1,2,3	-	-	-	-	-	-	-	-
25	1,2,3	-	-	-	-	-	-	-	-
Supplementary information:									
F = Compression force, reaching the value shown in table 4 within (30 ± 3) s									
$\varnothing_{bt}$ = Outside diameter measured before the test									
$\varnothing_{at1}$ = Outside diameter measured after the force given in table 4 has been applied for (60 ± 2) s where flattening has taken place, without removing the force									
$\varnothing_{at2}$ = Outside diameter measured after the test where flattening has taken place, (60 ± 2) s after removal of the force given in table 4 and the intermediate piece									



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10.3	TABLE: Impact test						Pass
	Classification (second digit)		4 (Heavy)				—
	Test temperature (table 1) (°C)		- 5				—
	Mass of hammer (table 5) (kg)		2				—
	Fall height (table 5) (mm)		300				—
Size	N° of sample	Check of possibility to pass the gauge of figure 102 through the sample		No sign of disintegration / No visible cracks		Total n° of samples which passed the test	Verdict
		N° of samples which passed the test	N° of samples which failed the test	N° of samples which passed the test	N° of samples which failed the test		
20	12	12	0	12	0	12	> 9
25	12	12	0	12	0	12	> 9

10.4.101	TABLE: Bending test (metallic or composite conduits)							NA
Size	N° of sample	Length of sample (mm)	Inside bending radius R (mm)	Welded seam, if any (outside of the bend/on the side)	No visible cracks (P/F)	Seam not opened, if any (P/F)	Section not distorted unduly: test with gauge of figure 102 (P/F)	Verdict
20	1,2,3	-	-	-	-	-	-	-
25	1,2,3	-	-	-	-	-	-	-
Supplementary information:								



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10.4.102	TABLE: Bending test (non-metallic or composite conduits)				NA
	Type of bending aid	Coiled spring / Other			—
	Classification (third digit)	1/2/3/4/5			—
	Samples conditioned at least 2 h at test temperature (table 1) (°C)				—
Size	N° of sample	Possibility to remove the bending aid without damage (P/F)	No visible cracks (P/F)	Possibility to pass the gauge of figure 102 (P/F)	Verdict
20	1,2,3	-	-	-	-
25	1,2,3	-	-	-	-
Supplementary information:					

10.6.102	TABLE: Collapse test (non-metallic and composite conduits)					NA
	Type of bending aid :		Coiled spring / Other			—
	Classification (fourth digit) :		1/2/3/4/5/6/7			—
	Test temperature of the heating cabinet at which the support with the sample in position was kept for 24 h ± 15 min (table 2) (°C) :					—
Size	N° of sample	Possibility to remove the bending aid without damage (P/F)	No visible cracks (P/F)	Possibility to pass the gauge of figure 102 (P/F)	Possibility to pass the gauge of figure 102 after the heating period of 24 h (P/F)	Verdict
20	1,2,3	-	-	-	-	-
25	1,2,3	-	-	-	-	-
Supplementary information:						

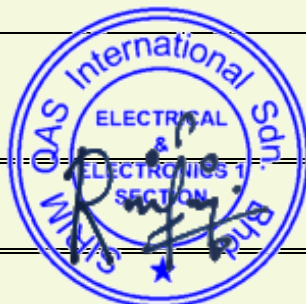


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10.7	TABLE: Tensile test					Pass
	Classification (tenth digit)		4 (Heavy)		—	
	Increasing tensile force value reached in (30 ± 3)s and then applied for (120 ± 10)s (table 6) (N) ..				—	
Size	N° of assembly sample	Art./Type Ref. of the conduit fittings assembled to the conduit	Elongation occurred (Y/N)	After the test the conduit fittings or terminating conduit fittings remained properly assembled (P/F)	No visible cracks (P/F)	Verdict
20	1,2,3	-	N	P	P	Pass
25	1,2,3	-	N	P	P	Pass
Supplementary information:						

10.8	TABLE: Suspended load test (conduit fittings)							NA
	Classification (twelfth digit) :				2/3/4/5		—	
	Test temperature of the heating cabinet at which the non-metallic and composite conduit fitting was kept during the test (table 2) (°C) :						—	
Size	N° of sample	Art./Type Ref. of the conduit fitting	Load (N)	Duration (h)	No visible cracks (P/F)	No deformation (P/F)	Verdict	
20	1,2,3	-	-	-	-	-	-	
25	1,2,3	-	-	-	-	-	-	
Supplementary information:								

11.2	TABLE: Bonding test					Pass
	Classification (sixth digit) :			1		—
Size	N° of arrangement sample	Number and Art./Type Ref. of the conduit fittings coupled together the 10 pieces of conduit		Voltage drop measured (V)	Resistance (Ω)	Verdict
20	10	Figure 3		0.8	0.032	< 0.1 Ω
25	10	Figure 3		1.25	0.050	< 0.1 Ω
Supplementary information:						



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11.3.1	TABLE: Electrical insulating strength and resistance test (conduits)			NA
Size	N° of sample	Device incorporated into the circuit not trip during the insulating strength test (P/F)	Insulation resistance measured (MΩ)	Verdict
20	1,2,3	-	-	-
25	1,2,3	-	-	-
Supplementary information: Metallic conduit				

11.3.2	TABLE: Electrical insulating strength and resistance test (conduit fittings)				NA
Size	N° of sample	Art./Type Ref. of the conduit fitting	Device incorporated into the circuit not trip during the insulating strength test (P/F)	Insulation resistance measured (MΩ)	Verdict
20	2	-	-	-	-
25	3	-	-	-	-
Supplementary information: Metallic conduit					

12	TABLE: Heating test (conduits)			NA
	Classification (fourth digit)		1/2/3/4/5/6/7	—
	Test temperature of the heating cabinet at which the non-metallic and composite conduit fitting was kept for 4 h ± 5 min (table 2) (°C) ...		-	—
	Classification (first digit)		2/3/4/5	—
	Total mass applied for 24 h ± 5 min in an apparatus as shown in figure 8 (table 9) (kg) ...		-	—
Size	N° of sample	Sample after the period of 24 h ± 5 min and then cool to room temperature under load: no visible cracks (P/F)	Possibility to pass the gauge of figure 102 immediately after the removal of the load (P/F)	Verdict
20	1,2,3	-	-	-
25	1,2,3	-	-	-
Supplementary information: Metallic conduit				



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13.1.3.1 TABLE: Glow-wire test (non-metallic and composite conduit fittings)						NA
		Material designation				—
		Test temperature (°C)				—
Size	N° of sample	Art./Type Ref. of the conduit fitting	Visible flame or sustained glowing (Y/N)	Time of extinguishment of flames and glowing, if any, after removal of the glow-wire (s)	Verdict	
20	1,2,3	-	-	-	-	-
25	1,2,3	-	-	-	-	-
Supplementary information: Metallic conduit						

13.1.3.2 TABLE: Flame-propagation resistance test (non-metallic and composite conduits)									NA
		Material designation							—
Size	N° of sample	Highest mean material thickness (mm)	Flame application time (+1/0) (s)	Sample did not ignite (P/F)	Time of extinguishment of flaming or glowing, if any, after removal of the test flame (s)	No ignition of the tissue paper (P/F)	No evidence of burning or charring (P/F)	Verdict	
20	1,2,3	-	-	-	-	-	-	-	-
25	1,2,3	-	-	-	-	-	-	-	-
Supplementary information: Metallic conduit									



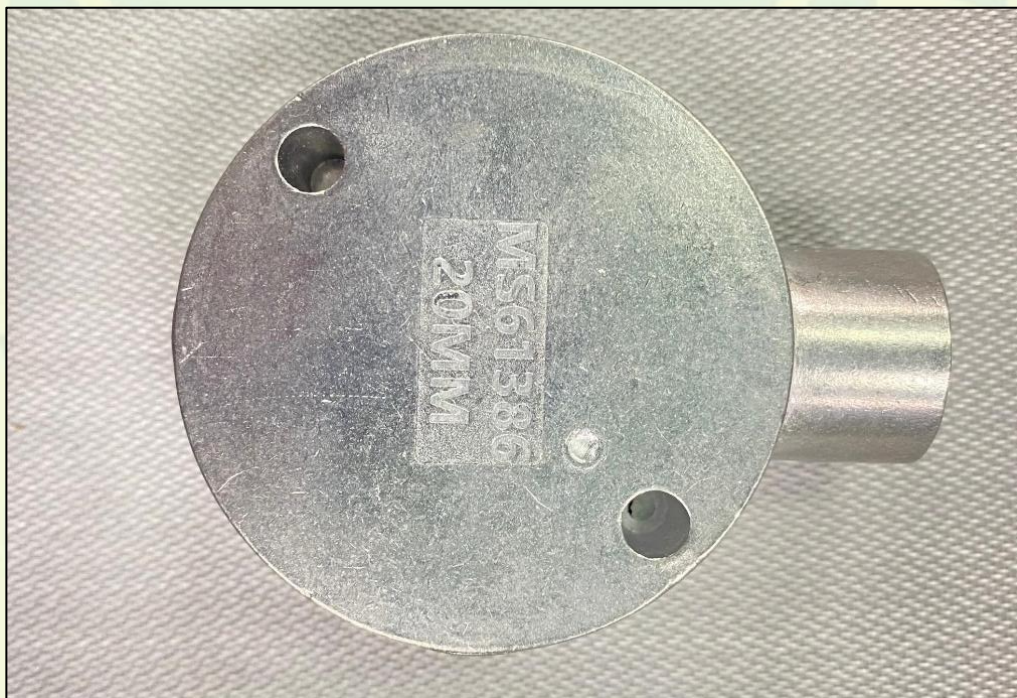
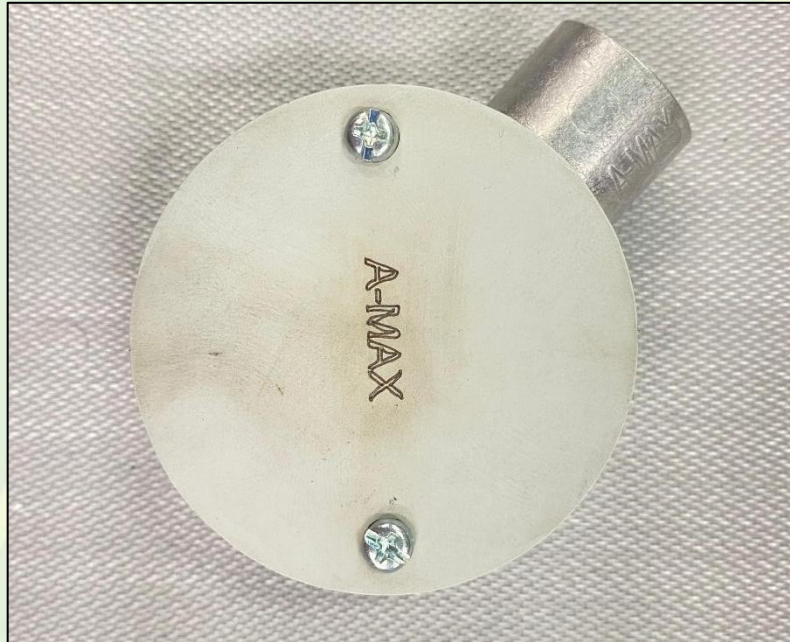
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14.1.1	TABLE: Verification of protection against ingress of solid objects				NA
	Classification - Protection against ingress of solid objects (seventh digit)		3/4/5/6		—
	For IP5X, category 2 applied				
Size	N° of assembly sample	Art./Type Ref. of the conduit fitting with a short length of conduit assembled in each conduit entry	Assembly tested in accordance with the appropriate test of IEC 60529 (P/F)	No ingress of dust visible to normal or corrected vision without magnification in the assembly tested for IP5X or IP6X (P/F/NA)	Verdict
20	1,2,3	-	-	-	-
25	1,2,3	-	-	-	-
Supplementary information:					

14.1.2	TABLE: Verification of protection against ingress of water				NA
	Classification - Protection against ingress of water (eighth digit)		0/1/2/3/4/5/6/7		—
	Oscillating tube used for IPX3 and IPX4				
Size	N° of assembly sample	Art./Type Ref. of the conduit fitting with a short length of conduit assembled in each conduit entry	Assembly tested in accordance with the appropriate test of IEC 60529 (P/F)	No sufficient ingress of water to form a drop visible to normal or corrected vision without magnification in the assembly tested for IPX1 and above (P/F/NA)	Verdict
20	1,2,3	-	Pass	IP30	Pass
25	1,2,3	-	Pass	IP30	Pass
Supplementary information:					



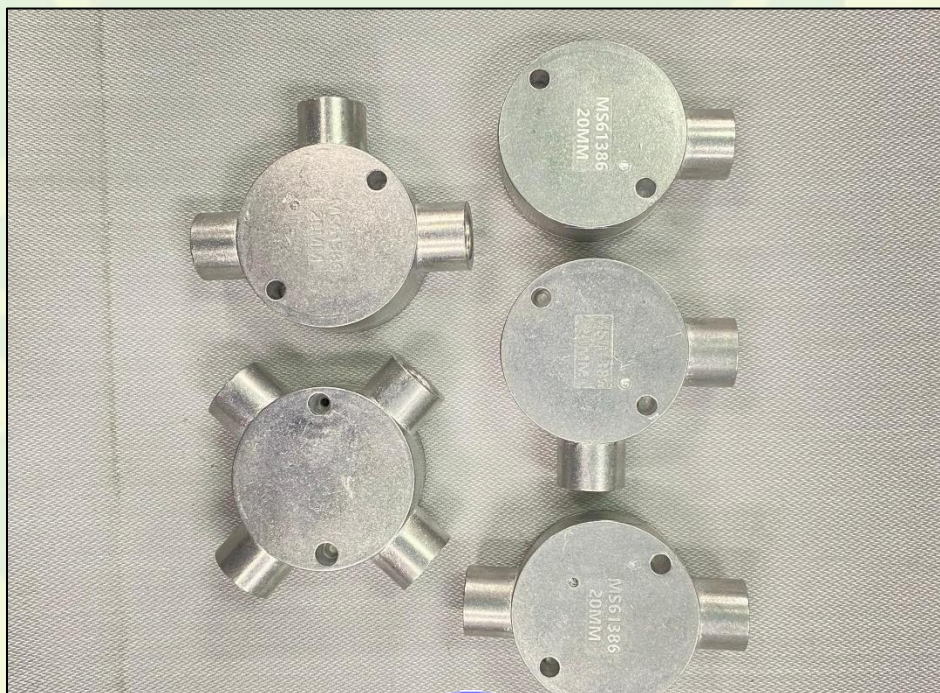
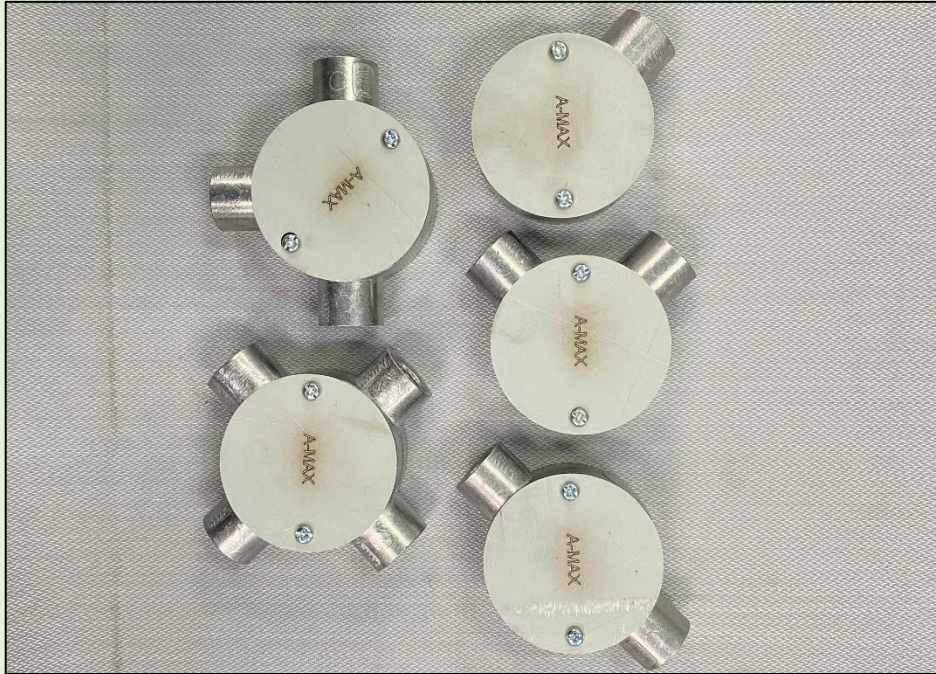
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PHOTOGRAPH(S) OF TEST SAMPLE(S)**Model: 20 (mm)**

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PHOTOGRAPH(S) OF TEST SAMPLE(S)

Model: 20 (mm)



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PHOTOGRAPH(S) OF TEST SAMPLE(S)**Model: 25 (mm)**

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PHOTOGRAPH(S) OF TEST SAMPLE(S)

Model: 25 (mm)



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CONDITIONS RELATING TO THE USE OF SIRIM QAS INTERNATIONAL TEST REPORT

1. A Test Report will be issued in respect of the Testing Services conducted and shall relate only to the sample actually tested by SIRIM QAS International. The results in the Test Report will be based on all the information provided by the Applicant, unless otherwise stated. SIRIM QAS International makes no warranties whatsoever, and the Applicant shall not represent in any manner that any duplication or mass production of the Product is identical to the Sample actually tested, or that SIRIM QAS International has tested any duplicated or mass-produced Product. Measurement uncertainty shall be included in the Test Report when no statement of conformity is required.
2. For quantitative test results (with values), when a statement of conformity to a specification or standard is applied, the Simple Acceptance Rule shall be used. Unless otherwise stated, the Acceptance Rule with Guard Band will be applied, and an additional charge will be incurred accordingly.
3. For qualitative test results (visual observation), when requested by the applicant, a statement of conformity shall be included in the Test Report. If there is no request by the Applicant, a statement of conformity can be included in the Test Report based on SIRIM QAS International Sdn. Bhd.'s discretion.
4. The Applicant shall not at any time misrepresent the content of any Test Report provided by SIRIM QAS International Sdn. Bhd., nor shall the Test Report be misused, amended, changed, varied, or modified in any manner whatsoever by the Applicant or otherwise.
5. The Test Report shall not be reproduced, except in full, without the written approval from the Head of Quality, Occupational Safety and Health & Environment (QOSHE) of SIRIM QAS International of No. 1, Block 8, Persiaran Dato' Menteri, Section 2, P.O. Box 7035, 40700 Shah Alam, Selangor Darul Ehsan.
6. The Applicant is not permitted to use any SIRIM QAS International Sdn. Bhd., SIRIM Berhad or other SIRIM subsidiaries logos or words on packaging, sample manuals, technical specifications, items and products.
7. Subject to consent and written approval from the Head of Quality, Occupational Safety and Health & Environment (QOSHE) of SIRIM QAS International Sdn. Bhd., the Applicant may use the SIRIM QAS International Sdn. Bhd. logo or word on promotional materials. The Applicant shall only include the phrase, "A sample of this product has been tested by SIRIM QAS International Sdn. Bhd. (Test Report No) ... (dated) ... (for what test) ... (to which standard)", or similar words emphasizing that only the sample was tested. This phrase shall only be used for product advertisements or promotions (e.g.: brochures, flyers, official website). For clarity, the statement shall not be used on the sample, packaging, items or products.
8. In the event there is an investigation from a Government Regulatory Agency concerning the Applicant's Test Report, SIRIM QAS International Sdn. Bhd. may disclose the information pertaining to the Test Report for the purposes of such investigation.
9. In the event that the Applicant is found in breach of this provision, SIRIM QAS International Sdn. Bhd., SIRIM Berhad and/or other SIRIM subsidiaries may, without prejudice to any other rights and remedies, take whatever actions are necessary including but not limited to:
 - a) Informing and placing a notice in the media;
 - b) Obtaining an injunction from the Court (costs on a solicitor-client basis to be borne by the Applicant);
 - c) Refusing to accept any further Products for Testing Services from the Applicant or whosoever related to the Applicant, whether subsidiary or otherwise;
 - d) Instructing the Applicant to withdraw and recall the advertisement, statement, or document in question and to publish a clarification and apology to SIRIM QAS International, SIRIM and/or other SIRIM subsidiaries twice in a national publication of SIRIM QAS International's choice at the Applicant's sole cost; and
 - e) Informing or lodging a report pertaining to the Applicant's Test Report with the relevant authorities.
10. SIRIM QAS International is committed to supporting environmentally friendly business practices by reducing paper consumption. Therefore, we do not issue any hard copies of the Test Report to the Applicant. However, additional certified true copies or softcopies of the Test Report may be issued upon request by the Applicant, subject to payment of the relevant fee. Certified true copies or softcopies of the Test Report shall only be provided for Test Reports issued not more than **three (3) years** from the date of issuance.
11. The Issuance of an Amendment Report due to the following reasons is chargeable to the Applicant:
 - a) Typo or change1 in details of the Applicant's name and/or address; or
 - b) Typo or change1 in details of the Manufacturer's name and/or address; or
 - c) Typo or change1 in details of the Factory location name and/or address; or
 - d) Typo or change1 in details of the brand, size, model and/or type designation; or
 - e) Typo in details of the description of sample.

Note: ¹Applicable only for electrical and electronic products based on IECCE OD-2020.
12. Any corrections and/or changes to the Report requested by the Applicant shall only be allowed if the date of issuance of the original Test Report has not exceeded six (6) months and shall be limited to a maximum of three (3) times. After either of these conditions is met, no further amendments to the Test Report shall be issued.
13. However, the issuance of a Supplementary Report due to the following reasons is free of charge (FOC):
 - a) Misprints and typographical errors;
 - b) Missing technical information as agreed in the PP1 form;
 - c) Test data not reported; or
 - d) Mistakes in the reporting of test data.