

STANDARD INFORMATION

Standard: UL 2703

Standard ID: Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels [UL 2703:2015 Ed.1+R:20Jul2023]

Previous Standard ID: Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels [UL 2703:2015 Ed.1+R:24Mar2021]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **September 20, 2025**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: Per our accreditation, Intertek is required to review reports against the standard revisions to confirm compliance. Once compliance is confirmed, the standard reference in the report is updated to show continued compliance to the technical requirements of the standard. Reports not updated to this version by the effective date above will be withdrawn.

Overview of Changes:

- Aluminum alloys subjected to atmospheric corrosion tests
- Modification of the static salt spray test to a cyclic salt spray test

Specific details of new/revised requirements are found in table below

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.



STANDARD INFORMATION

CLAUSE	VERDICT	COMMENT
		<i>Additions to existing requirements are <u>underlined</u> and deletions are shown lined-out below.</i>
10	Info	Corrosion Resistance
10.1		Aluminum; <u>cast and wrought aluminum alloys of series 1XX.X, 1XXX, 3XX.X, 3XXX, 4XX.X, 4XXX, 5XX.X, 5XXX, 6XX.X, and 6XXX</u> ; 300 series stainless steel, copper and its alloys, or polymeric materials may be used without additional corrosion protection.
10.2		<u>Aluminum alloys of series 2XX.X, 2XXX, 7XX.X, 7XXX, 8XX.X, and 8XXX shall not be used, as test methods to assess the corrosion resistance of these alloys have not yet been developed.</u> Steel, iron or other non-inherently corrosion -resistant materials which may be exposed to the weather shall be made corrosion-resistant by one of the following minimum coatings:
	Info	PERFORMANCE
12	Info	General
12.2		Tests performed on representative samples are acceptable given that no differences from the representative samples, or any differences in design are within limits outlined in Appendix B, Retest Guidelines. <u>Samples shall be of sufficient length and width such that a 1.97 in (50 mm) scribe can be made while maintaining a 0.49 in (12.5 mm) distance (clearance) from the scribe to the sample edge. Samples with sizes or geometries that, in full scale, cannot meet this requirement are exempt from scribing.</u>
19	Info	Corrosive Atmosphere Tests
19.1	Info	Salt spray test
19.1.1		The samples shall be subjected to the salt spray test as described in <u>the Standard for Environmental testing – Part 2-52: Tests – Test Kb: Salt mist, cyclic (sodium chloride solution), IEC 60068-2-52, Test method 5.</u> The duration shall be a <u>maximum of 28 days with shorter durations allowed, provided that transitions between test conditions occur within the maximum times specified in Figure 19.1 and Figure 19.2.</u> Exception: A specimen constructed of materials such as plastic, 300 series stainless steel, or <u>alloys of aluminum that are considered to be inherently known to be resistant to atmospheric corrosion is in accordance with 10.1</u> are not required to be tested.



CLAUSE	VERDICT	COMMENT
19.1.8		<p>Reference specimens, 4 in by 12 in (102 mm by 305 mm) of commercial zinc coated sheet steel are to be used for comparison. <u>The selected [reference] specimens are to be sourced from sheet steel conforming with the coating designation G90 in the specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot Dip Process, ASTM A653/A653M.</u></p> <hr/> <p><i>New clause added;</i></p>
19.1.10		<p>Both the reference specimen and the samples under test are to be scribed as described in the Standard Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments, ASTM D1654, with a single groove approximately 1.97 in (50 mm) long, to expose the underlying steel while maintaining a 0.49 in (12.5 mm) distance (clearance) from the scribe to the sample edge. The scribe shall be made using the method described in ASTM D1654 and the scribing tool used is to be either a carbide tipped tool [Style E, with 1/64-in (0.4-mm) nose radius], or a carbide tipped tool ground to a single point having an included angle of 60 ±15 degrees. The scribe shall cut through all layers, including metallic coating layers if under paint. Samples meeting the exemption criteria described in 12.2 need not be scribed, but then comparison is to be made to the unscribed portion of the reference specimen.</p> <p>NOTE 1: The intent of scribing a corrosion protective coating is to assess the propagation of corrosion from the scribe area, acknowledging that accidental and foreseeable damage of coatings may occur. This damage may occur due to shipment, installation, operation and maintenance functions, and environmental exposures such as windblown debris, etc.</p> <p>NOTE 2: The scribe itself may exhibit local corrosion, as does a sheared edge or a drilled hole, so consideration shall only be made on the propagation of corrosion from the scribed edge to the perpendicular distance that base metal corrosion is evident.</p> <p>NOTE 3: The scribing of the reference specimen is done for qualitative purposes to potentially aid in assessing the results of the test specimen.</p> <hr/> <p><i>New clause added;</i></p>
19.1.11		<p>The test is to continue for the full test duration specified in 19.1.1 unless it is obvious that a failure has occurred prior to the completion of the test. Upon completion of the test, each specimen shall be prepared as followed: samples shall be rinsed using a gentle stream of water at a temperature up to 45°C (110°F). Scrape each specimen along the scribe vigorously with a rigid spatula, knife or similar instrument with no sharp edges or corners</p> <hr/>
19.1.12		<p>Following the sample preparation described in 19.1.11, the samples shall be assessed relative to the following acceptance criteria. To pass the salt spray test, the corrosion products formed in the field of the test sample shall not be more than that formed on the reference sample as determined by visual observation, and the following:</p> <hr/>



CLAUSE	VERDICT	COMMENT
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a) To pass the salt spray test, the corrosion products formed in the field of the test sample shall not be more than that formed on the reference sample as determined by visual observation, and

b) The maximum width of the corrosion zone along the scribe line shall be measured and recorded. The overall width of the corrosion zone along the scribe shall be measured at 6 locations uniformly distributed along the scribe line, ignoring 0.125 in (3 mm) at each end of the scribe. The arithmetic mean of the width of the corrosion zone shall be calculated from these measurements. The rust creepage, c is then determined by the following equation:

$$c = (wc - w)/2$$

where

wc = mean overall width of the corrosion zone and

w = width of the original scribe.

The test sample shall not exhibit a rust creepage, c , greater than Rating No. 5 [1/8 to 3/16 in (3.2 – 4.7 mm)] as designated in the Standard Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments, ASTM D1654, Procedure A; with maximum isolated spot not exceeding 3/8 in (9.5 mm), and

c) The combined results of the test sample as determined in (a) and (b) shall be compared Table 19.1 to determine whether the sample passes or fails the salt spray test.

New table added;

Table 19.1

Test sample assessment criteria

See standard for details.
