



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

CHEMITOX, INC.
YAMANASHI TESTING CENTER
18349 Egusa, Sutama-cho
Hokuto-shi, Yamanashi-Ken, JAPAN
Ms. Kuniko Ito (Authorized Representative)
Phone: 81 551 42 5061 email: k-ito@chemitox.co.jp
Mr. Kiyohiko Sakamoto (Deputy Authorized Representative)
email: k-sakamoto@chemitox.co.jp
Webpage: <http://www.chemitox.co.jp>

ELECTRICAL

Valid To: July 31, 2020

Certificate Number: 1136.04

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following electrical tests:

Tests:

Test Method(s)^{1,2}:

Dielectric Breakdown Voltage and
Dielectric Strength Test

UL 746A (Section 21);
CAN/CSA C22.2 No.0.17 (Section 6.2);
ASTM D149;
IEC 60243-1, -2;
JIS K6911;
JIS C 2110-1, -2, -3;
ASTM D3755;
IPC-TM-650 (2.5.6)

Comparative Tracking Index Test

UL 746A (Section 24);
CAN/CSA C22.2 No.0.17 (Section 6.5);
ASTM D3638;
IEC 60112; JIS C2134

High Voltage, Low Current,
Dry Arc Resistance Test

UL 746A (Section 23);
ASTM D495;
JIS K6911;
CAN/CSA C22.2 No.0.17 (Section 6.4);
IPC-TM-650 (2.5.1)

Hot Wire Ignition Test

UL 746A (Section 32);
ASTM D3874;
CAN/CSA C22.2 No.0.17 (Section 4.3.1)

<u>Test</u>	<u>Test Method(s)^{1,2}:</u>
Glow Wire Ignition Test	IEC 60695-2-13; UL 746A (Section 35); CAN/CSA C22.2 No. 17 (Section 4.3.5); IEC 60695-2-10; GB/T 5169.10
Glow Wire Flame Test	IEC 60695-2-12; IEC 60695-2-10; GB 5169.10
Glow Wire Flammability Test for End-Product Test	UL 746C (Sections 12.3 and 73); IEC 60695-2-11; GB 5169.10; GB 5169.11; IEC 60695-2-10; CAN/CSA C22.2 No. 17 (Section 9.3); BS EN 60695-2-11
Volume/Surface Resistivity	UL 746A (Section 22); ASTM D257; JIS C5016; JIS K6911; JIS C6481; JIS C6471; IEC 62631-3-1; IEC 62631-3-2; JIS 2139-3-1; JIS 2139-3-2; CAN/CSA C22.2 No. 17 (Section 6.3)
<u>Testing performed on Photovoltaic Modules^{1,2}</u>	
Maximum Power Determination	IEC 61215 (Section 10.2); IEC 61646 (Section 10.2); IEC 61215-2 (Section 4.2, MQT 02)
Photovoltaic (PV) Module Performance Testing and Energy Rating	IEC61853-1; IEC61853-2 (Section 7.2)
Ground Continuity	IEC 61730-2 (MST 13); UL 1703 (Section 25)
Dielectric Withstand Test	IEC 61730-2 (MST 16)
Insulation Test	IEC 61215 (Section 10.3); IEC 61215-2 (Section 4.3, MQT 03); IEC 61646 (Section 10.3)

<u>Test</u>	<u>Test Method(s)^{1,2}</u>
Wet Leakage Current Test	IEC 61730-2 (MST 17); IEC 61646 (Section 10.15); IEC 61215 (Section 10.15); UL 746C (Sections 25 and 57); UL 1703 (Section 26); UL 1703 (Section 27); IEC 61215-2 (Section 4.15, MQT 15)
Reverse Current Overload	IEC 61730-2 (MST 26); UL 1703 (Section 28)
Partial Discharge Test	IEC 61730-2:2011 (MST 15); IEC 60664-1 (Section 6.1.3.5, Annex D)
UV-Xenon Arc Exposure Test	UL 746C; ASTM G155; ISO 4892-2; IEC 61730-1 (Sections 5.2.c, 5.3.d, and 5.4.3)
Inclined Plane Tracking Test	IEC 61730-1 (Section 5.3.c), 60587; ASTM D2303; UL 746A (Section 26)
Detection of Potential-induced Degradation	IEC TS 62804-1; TPV-27
Measurement of Temperature Coefficient	IEC 61215-2 (Section 4.4, MQT 04)
Performance at STC and NMOT	IEC 61215-2 (Section 4.6, MQT 06); IEC 61215
Performance at Low Irradiance	IEC 61215-2 (Section 4.7, MQT 07)

¹ When the date, revision or edition of a test method standard is not identified on the scope of accreditation, the laboratory is required to be using the current version within one year of the date of publication, per part C., Section 1 of A2LA R101 - *General Requirements- Accreditation of ISO-IEC 17025 Laboratories.*

² UL 60950-1, IEC 60950-1, CSA C22 No. 60950-1, EN60950-1 base requirements are nearly identical, section numbers relate to all four editions, unless otherwise indicated. For example, North American Annex NAE is specifically included for Battery Circuits on this scope. Included in the product safety activities are visual observations and similar activities for markings and other characteristics.

On the following materials and products: Adhesives and Sealants; Ceramics; Films and Packaging; Leather; Packaging and Containers; Paper, Paperboard and Pulp; Plastics and Polymers; Rubber and Rubber Products; Textiles; Information Technology Equipment (ITE); Photovoltaic Modules; Printed Wiring Board; Magnet Wire; Varnish; Industrial Laminate; and Wire Positioning Devices.



Accredited Laboratory

A2LA has accredited

CHEMITOX, INC., YAMANASHI FACILITY

Yamanashi, Japan

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 7th day of January 2019.

A blue ink signature of the Senior Director of Accreditation Services.

Senior Director, Accreditation Services
For the Accreditation Council
Certificate Number 1136.04
Valid to July 31, 2020

For the types of tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.