



UV WEATHERING TEST CHAMBER TORONUVTM - 200

Sunlight and humidity cause billions of dollars in material damage each year. The UV Weathering Test Chamber ToronUV™ - 200 performs alternating UV and humidity cycle aging tests on materials to replicate the damage caused by sunlight, rain, and dew.

APPLICATIONS

A typical test cycle involves UV exposure at high temperatures followed by a dark humidity cycle at 100% relative humidity, simulating condensation. In just days or weeks, the UV testers can replicate the effects of months or years of outdoor exposure. With the UV aging tester, it is now possible to reproduce the aging damage caused by the 254nm UV light, which is commonly used in sterilization equipment. The **UV Accelerated Aging Tester** is the most effective solution for simulating long-term environmental exposure.

Applicable industries:

In the paint industry, national and chemical industry standards require the use of fluorescent ultraviolet aging to evaluate the weather resistance of various coatings. This includes ship hull paint, marine waterline paint, deck paint, solvent-based polyurethane wood coatings for interior decoration, water-based wood coatings for interior decoration, ultraviolet (UV) curing wood coatings, pre-coated coil coatings for home appliances, indoor water-based wood coatings, coil coatings, and architectural water-based fluorine coatings. Typical applications for this testing span across paint coatings, the automotive industry, plastic products, wood products, adhesives, and more.

Standards

- **ASTM D4587:** Conducting fluorescent UV condensation exposure tests for paints and related coatings

- **ASTM D5894:** Painted metal
- **ASTM G154:** Standard for fluorescent UV/water exposure of non-metallic materials
- **ASTM D4329:** Standard for fluorescent UV/water exposure of plastics
- **ASTM D:** Aging standard for asphalt roofing materials
- **SAE J 2020:** Accelerated exposure standards for automotive exterior materials
- **ISO 11507:** Paints and varnishes - Artificial aging exposure of coatings - Exposure to fluorescent UV light and water
- **ISO EN 4892-3:** Plastics - Methods of exposure to laboratory light sources - Part 3: UV fluorescent lamps

FEATURES

- **User-friendly design** offers the best sample loading solution.
- **UV lamps** deliver the most realistic simulation of the short-wave spectrum of sunlight.
- **Functional components** ensure high-quality performance.
- **Cost-effective** with both low purchase and operational expenses.
- **High-quality aging test chambers** and testing services provided.
- **Professional after-sales support** with expertise in installation, maintenance, training, and consulting.
- **Simple user interface**, easy to program and operate.
- **Enhanced security** for peace of mind.
- **Continuous display** of exposure conditions for monitoring.
- **Self-diagnostic alarms** and maintenance reminders for efficient operation.
- **Multi-color LED indicators** allow easy monitoring of the machine's status from a distance.

Performance features

- **UVA or UVB Lamps (USA):** Original UVA or UVB lamps ensure the comparability of test data.

- **Automatic Irradiation Control:** Fully automatic control of irradiation energy using a closed-loop control system, ensuring accurate and stable energy values, comparable to the highest international standards in the industry.
- **Spray and Condensation Functions:** Includes both spray and condensation functions for comprehensive testing.
- **Compliance with Standards:** Complies with a variety of domestic and international test standards, allowing for flexible test procedure settings.
- **Real-time Data Collection:** Test data is automatically generated, recorded in Excel format, and can be exported via USB for truly unattended operation.
- **Remote Monitoring:** Standard TCP/IP Ethernet network interface allows users to remotely monitor the machine's status through the network.
- **Touch Screen Control:** Touchscreen menu operation offers an intuitive and convenient interface, allowing you to view any test parameter at any time.
- **Precision Temperature Control:** High-precision Pt 100 blackboard temperature sensor with automatic temperature control.
- **Alarm Protection:** The system automatically alarms for low water levels, overheating, leakage, or heating overload, ensuring reliable and safe operation.

TECHNICAL SPECIFICATIONS

No.	Function	Parameter
1	Lamp model	UVA: 340nm or UVB: 313nm
2	UV fluorescent lamps	Quantity 8*40W
3	Irradiance can be set range	0.3W/m ² □ 1.55W/m ²
4	Irradiance sensor band	250-400nm
5	Sample placement angle	75 degrees from horizontal
6	Sample exposure area	5175cm ²

No.	Function	Parameter
7	Sample capacity	48 pieces, (75×150mm)
8	Blackboard temperature	Light cycle 45□ 80°C Condensation cycle 40□ 60°C
9	Water supply adjustment range	0□ 4 LPM
10	Inlet pressure	2.8-5.5 bar
11	Influent water purity	The pH of water is between 6.0 and 8.0, the conductivity is less than 5μm/cm, and the solids content is less than 1ppm
12	Water consumption	Condensation: 7L/day, Spray: 5L/min
13	Size (W×H×D)	1360×1290×560mm (W*H*D)
14	Weight	161kg
15	Voltage	220V, 50Hz, Maximum current 10A (110V is also available)

1. **Temperature Range:** Minimum and maximum board temperatures depend on the irradiance setting and ambient temperature.
2. **Sample Holders:** Standard or custom sample holders can accommodate samples of various sizes and shapes, including those with 3D anomalies.
3. **Booster Pump:** An optional booster pump can be used, which allows for the use of bottled water without requiring pressure.
4. **Water Purity:** Water purity requirements can be met using reverse osmosis, deionization, or distillation systems.
5. **Water Consumption:** Water consumption is dependent on test and laboratory conditions. The provided values represent the maximum consumption for most standards. To minimize water consumption, a pure water repurification system is recommended.
6. **Shipping Weight:** The actual shipping weight may vary depending on whether the equipment is shipped domestically, by sea, or by air.



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