

RESISTANCE OF PLASTICS TO ARTIFICIAL WEATHERING

Application

This procedure is used to test the resistance of molded plastic parts to artificial weathering by exposure to ultraviolet energy, salt spray, heat and humidity.

Apparatus Required

Fluorescent Sunlamp Cabinet*

A modified oven equipped with four Westinghouse FS 20T-12 fluorescent sunlamps is required.

Oven*

Approximate internal dimensions, 700 mm wide, 600 mm deep, 500 mm high, and capable of maintaining a temperature of 60 +/- 2 °C.

A Grieves-Hendry oven, Model PL-1 is suitable.

Sunlamp Fixture*

To be completely installed in the cabinet. 20 gauge steel box with screw cover. One 20 watt high power factor ballast for each two lamps. Four fluorescent starter assemblies. Cover - 20 gauge steel with Alzak aluminum reflector overlay. Four pairs fluorescent lamp holders. Four Westinghouse FS 20T-2 fluorescent sunlamps.

*The complete Fluorescent Sunlamp Cabinet is available from:

Infra Corporation
5454 Dixie Highway
Waterford, MI 48095 U.S.A.
Telephone: 810/623-0400

Humidity Cabinet

The humidity cabinet must be maintained at 38 +/- 2 °C and a relative humidity of 98 +/- 2 %. The moist air must be circulated in the cabinet by a fan or other suitable means. Test specimens must be suitably supported and arranged in the test cabinet so that no water can drip from one specimen onto another.

Date	Action	Revisions
2001 03 28	Revised	Editorial – no technical change A. Cockman
1994 02 28		

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Salt Spray Cabinet

The salt spray cabinet and operating conditions must meet the requirements of ASTM B 117.

Exterior Plastic Parts

Expose exterior parts to five continuous cycles as detailed below.

Interior Plastic Parts

Expose interior parts to three continuous cycles as detailed below.

Note: The number of cycles indicated must be used unless otherwise specified by the relevant Engineering Specification or drawing.

Cycling Test

Each single cycle consists of the following:

- a) 4 hours in the fluorescent sunlamp cabinet. The test specimens must be 30 cm from the lamps.
- b) 4 hours in the salt spray cabinet.
- c) 16 hours in the humidity cabinet.

Evaluation

Examine and report any changes in appearance or other physical properties occurring as a result of this test as required by the relevant Engineering Specification or drawing.

Chemicals, materials, parts, and equipment referenced in this document must be used and handled properly. Each party is responsible for determining proper use and handling in its facilities.