

Index Update – Suntest Light Fastness FT-11

<i>Update Date</i>	<i>Changed Items</i>
25.07.01	<ul style="list-style-type: none"> • DIN 54002 substituted by DIN EN 20105-A03 • adidas Salomon logo added
16.04.03	<ul style="list-style-type: none"> • Specimen size changed due to capacity problems • Handling of specimen adjusted
29.01.04	<ul style="list-style-type: none"> • Optical filter system is added in “Apparatus” section • “Test Procedure” section revised in many places due to customer information
26.02.07	<ul style="list-style-type: none"> • Procedure consolidated to adidas Group

Valid for : All Materials

Reference : SOP 36

Purpose

- To determine the dependency of materials to light fastness

Apparatus

- Atlas SUNTEST XLS+. The optical filter system only with Optical filter “coated quartz dish” installed, without any optional additional filters.



- Greyscale, compliant with DIN EN 20105-A03 (not more than 12 months old).

Number Of Test Pieces

- 2 test specimens with 70 x 30 mm, are cut out from different areas of the material.

Test Conditions

- 550 Watt, Black Standard Temperature 70°C, 2 hours

Test Procedure

1. Calibration of the machine and programming
 - Switch on SUNTEST machine.

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Suntest Light Fastness

- Right side of the machine there is a control panel and a numeric keypad. Press the "ENTER" button .
- Press numeric key "4" to enter machine cooling method selection. Use the buttons ↑↓ to select "FLOATING WATER" and press "ENTER". The control panel will display "FLOATING WATER = ON" to confirm your selection.
- Use the buttons ↑↓ to select "Parameter". Press "ENTER".
- Adjust the filter system by pressing the "ENTER"-button until "Filter Selection" appears.
- Use the buttons ↑↓ to select "Filter A" and press "Enter".

Program the test :

- Select "Program" and press the "ENTER" button.
- Use the buttons ↑↓ to select "Programming", press "ENTER".
- Select "Program (1-6) " type in "1" and press "ENTER".
- Select "Phases (1-6) " type in "1" and press "ENTER".
- Input of Irradiation (E). Type in PH1=> 550. Press "ENTER".
- "FW (0=OFF/1=ON)" appears on the control panel. Type in "0", control panel will display "PH1=> OFF", and press "ENTER".
- Input of Black Standard Temperature (BST). Type in 70. Press "ENTER".
- Input of "phase time" . Type in PH1 => 120. Press "ENTER".
- Select "Switch off". Select "time". Press "ENTER".
- "Switch off – Time [h]:" Type in "2". Press "ENTER".
- Program automatically saving data then return to main manual.

NOTE....The programming steps need only be done when a new program is needed. In case not just follow the next steps for starting the test.

2. Prepare the machine for testing

- Open the door.
- Cover the specimens half on length by using an opaque foil.
- Put specimens into the testing chamber.
- Use some weights to fix the specimens firmly on the sample table because during test there is strong cooling current blow thru the chamber.
- Close the door.

NOTE....The Black Standard Sensor is installed on the right of the sample table near the test chamber door. When putting specimens on sample table, DO NOT let any specimen cover the Black Standard Sensor! There are two slots on left and right chamber walls, make sure they are not blocked by thick/big piece of specimens.

3. Start the program

- Use the buttons ↑↓ to select "Program"
- Select "Program Start ". Press "ENTER".
- If "PROGRAM INTERRUPTED;CONTINUE → START" appears on the control panel, press "ESCAPE".
- Select "Check Filter". No Change. Press "ESCAPE".
- Select "Check Printout" No Change. Press "ESCAPE".
- Input of programm no.1-6. Press. Type in 1. Press "ENTER"

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Suntest Light Fastness

- Press "Start".

NOTE....In no case to open the door of a RUNNING SUNTEST machine to add or take away test specimens. The door can only be opened when machine is stopped.

4. Confirm programmed parameters on running SUNTEST machine

NOTE....The parameters on running SUNTEST machine have to be checked twice in each test. The first time is right after the machine be started, the second time is after test being ran after 1 hour. All parameters display on the control panel have to be same as following descriptions:

- SUNTEST PROGRAM IS RUNNING
- PROGRAM NUMBER: 1; PHASE NUMBER: 1
- PHASE TIME SET: 120; PHASE TIME (min): (change from 0 to 120)
- TIME (h) SET: 2; TIME (h) ACT: (change from 0:00 to 1:59)
- E (W/m²) SET VAL: 550; E (W/m²) ACT VAL: 550
- BST (°C) SET VAL: 70; BST (°C) ACT VAL: (change from room temperature eventually to 70).
- CHT (°C): (in the range of 40 to 50 depends on the maintenance of standard lab room conditions); FW (ON/OFF): OFF
- DOSE (kJ/m²): (change from 0 to 3960)
- XENONLAMP (h): (change from 0 to 1500. when reach 1500, the lamp has to be replacing with a new one.)
- OPER.HOURS(h): (change from 0 to accumulation of machine operation time)

NOTE....When error message “E_MAX. POWER REACHED; CHANGE XENONLAMP?” appears on the control panel, this means SUNTEST machine has problem to continue the test. In this case, shut down the machine immediately by pressing “STOP” then press “ESCAPE” to prevent further damage. Contact your SUNTEST machine dealer to solve the problem.

5. Finish the program

- When reaching the program end, following display will appear on the control panel
- “SWITCH OFF CRITERIA REACHED”, press “ENTER” to check the irradiance and total test time.
- Control panel displays “DOSE 3960 (kJ/m²); TIME 2:00 h ok?”, press “ENTER” to return to main manual.
- Switch off machine then take specimens out for evaluation.

Evaluation

Compare the contrast between the covered part and the non-covered part of the specimen using the greyscale (grade 1 to 5).

Purchasing Addresses

1) Atlas SUNTEST XLS+

2) Greyscale

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