weneos
Sunscreen Testing Expertise
ex HelioScreen

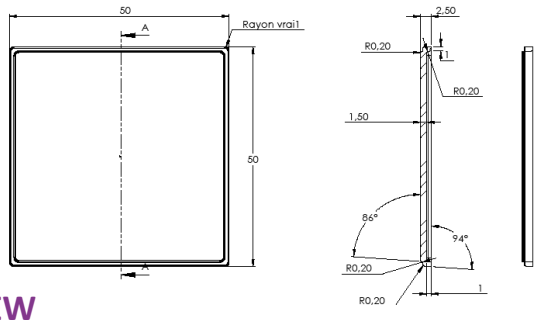
Helioplate SB6
Sandblasted PMMA plate

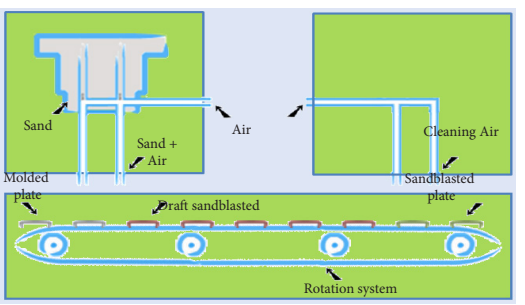
Manufactured by means of a sandblasting process plate by plate, this substrate is delivered with a quality control ensuring the reproducibility of roughness [1]. These plates are certified with topography parameters in compliance with ISO 24443:2021, ISO/DIS 23675, FDA monograph 2011 and Boots Star Rating system rev. 2011.

PROCESS DESCRIPTION

Overall size (WxLxH): 50 mm x 50 mm x 1.5 mm
Weight: 4.5 g
Manufacturing process: Plate by plate
Package contenance: 50 plates

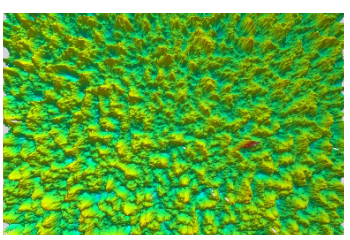
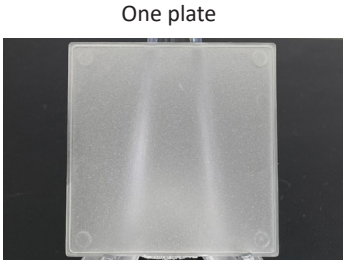
Spreading area: 47 mm x 47 mm
Temperature: Optimal temperature range 20 - 40°C
Material: PMMA (polymethylmethacrylate)
Use: To use only one time (cannot be cleaned)





VIEW

2D | 3D | One plate | One package


TOPOGRAPHIC PARAMETERS

Surface profile characteristics of the substrate is measured covering at least a surface area of 10 mm x 5 mm in 15-µm intervals. Non-contact surface topographic analysis is conducted using a lab work station consisting of an optical sensor, a motion controller, an x-y translation stage, and microtopography software. A sensor based on a white light chromatic aberration principle is used which allows for a high resolution: 10 nm vertically and 1 um horizontally.

Parameter	Ra	Rv	Rdq	A1	Ssc	Vvv
Target value	4,188 ± 0,514	11,402 ± 2,499	11,004 ± 1,938	238,252 ± 72,663	0,032 ± 0,015	8,701 . 10-4 ± 2,325 . 10-4

Ra (µm): The mean arithmetic deviation of the roughness profile.
Rv (µm): The maximum depth of profile valleys within a sampling length.
Rdq (°): The root-mean-square slope of the profile within a sampling length.
A1 (µm2.mm-1): The upper area, i.e. the area of the rest overs of the peaks extending above an average profile ± kernel.
Ssc (L.µm-1): The arithmetic mean summit curvature of the surface, which indicates the meanform of peaks and valleys.
Vvv (mm3.m-2): The volume of void in the valleys, i.e., the volume of rest overs of valleys extending below an average profile ± kernel.

PLATE OPTICAL CHARACTERISTICS

Limits for the treated plate transmission values are: 290 nm >60 %T - 300 nm >69 %T - 320 nm >81 %T

INFORMATION AND GENERAL TIMETABLE

MADE IN FRANCE

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[1] S. Miksa, D. Lutz and C. Guy. Sandblasting to Improve the Reproducibility of In vitro Sunscreen Evaluation, Cosmetics & Toiletries, April 2014

Update: 03/2024