Report No/ Rapor No : 2024060402
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Sample ID : **Polipropilen Şerit**

	TEST/ INSPECTION	DIRECTIVE	METHOD	RESULT
*	**Plastics — Methods of exposure to laboratory light sources — Part 2: Xenon-arc lamps**	**The General Product Safety Directive (GPSD) (2001/95/EC)**	**ISO 4892-2**	**See Tables**

NOTE: This test/inspection result replaces the conformity assessment, can be presented to official institutions, and used in products and brochures.

Seal

Customer Representative

Merve Nur KIRVELİ

Laboratory Manager

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Scope

This part of ISO 4892 specifies methods for exposing specimens to xenon-arc light in the presence of moisture to reproduce the weathering effects (temperature, humidity and/or wetting) that occur when materials are exposed in actual end-use environments to daylight or to daylight filtered through window glass.

Specimen preparation and evaluation of the results are covered in other International Standards for specific materials.

General guidance is given in ISO 4892-1.

Principle

A xenon arc, fitted with filters, is used to simulate the relative spectral irradiance of daylight in the ultraviolet (UV) and visible regions of the spectrum.

Specimens are exposed to various levels of light, heat, relative humidity and water under controlled environmental conditions.

Wetting is produced by spraying the test specimens with demineralized/deionized water, by immersion in water or by condensation of water vapour onto the surfaces of the specimens.

The procedure includes measurements of the UV irradiance and UV radiant exposure in the plane of the specimens.

Test Specimens

If the test method used for property measurement does not specify the number of test specimens to be exposed, it is recommended that a minimum of three replicate specimens of each material be prepared for each exposure stage.

Exposure Conditions

Exposures using daylight filters (artificial weather)						
Loop No.	**Exposure Period**	**Brightness**		**Black Panel Temperature** ° C	**Room Temperature** °C	**Relative Humidity** %
		Broadband (300 nm to 400 nm) W / m^2	**Narrow Band (340 nm)** W / (m^2nm)			
1	102 min dry 18 min water spray	60 ± 2 60 ± 2	0,51 ± 0,02 0,51 ± 0,02	63 ± 3 —	38 ± 3 —	50 ± 10 —

Procedure

General

It is recommended that at least three test specimens of each material evaluated be exposed in each run to allow statistical evaluation of the results.

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Mounting the test specimens
Attach the specimens to the specimen holders in the equipment in such a manner that the specimens are not subject to any applied stress. Identify each test specimen by suitable indelible marking, avoiding areas to be used for subsequent testing.

Exposure
Programme the apparatus with the selected conditions to operate continuously for the required number of cycles at the selected exposure conditions. Maintain these conditions throughout the exposure, keeping any interruptions to service the apparatus and to inspect the specimens to a minimum.

Determination of changes in colour or other appearance attributes

General
When a polymeric material is exposed to UV radiation and other moderate environmental stresses, the change in most physical properties can be attributed to chemical aging, and the extent of chemical changes may be related to the duration of natural outdoor or artificial weather exposure.

Changes in Color
Changes in colour of plastics test specimens exposed in accordance with the specific exposure standard are determined by one of the following methods:

a) *An instrumental method;* CIE tristimulus values or CIE 1976 L*a*b* Colour space.

b) *Visual assessment using a scale;* The grey scale is used for assessing change in colour. In this scale, grade 1 corresponds to the strongest contrast, and grade 5 to zero contrast (two samples with identical colour).

Visual Assessment

For Color Changes	For Saturation Changes	For Lightness Changes
- More blue or less blue - More green or less green - More red or less red - More yellow or less yellow	- Less intense - Busier	- Light - Black

Test Result
UV Exposure Time : 40 Day (5 Year)

An instrumental method;

	Test Sample	Color Values Before Test				Color Values After Test			
UV		L	a	b	Brightness	L	a	b	Brightness
	Sample 1	29.45	1.15	-2.21	0000.4 GU	30.31	0.74	-1.79	0000.5 GU
	Sample 2	28.88	0.51	-2.47	0000.9 GU	30.21	0.50	-1.53	0000.8 GU
	Sample 3	29.02	0.98	-2.35	0000.6 GU	28.77	0.55	-1.39	0000.7 GU

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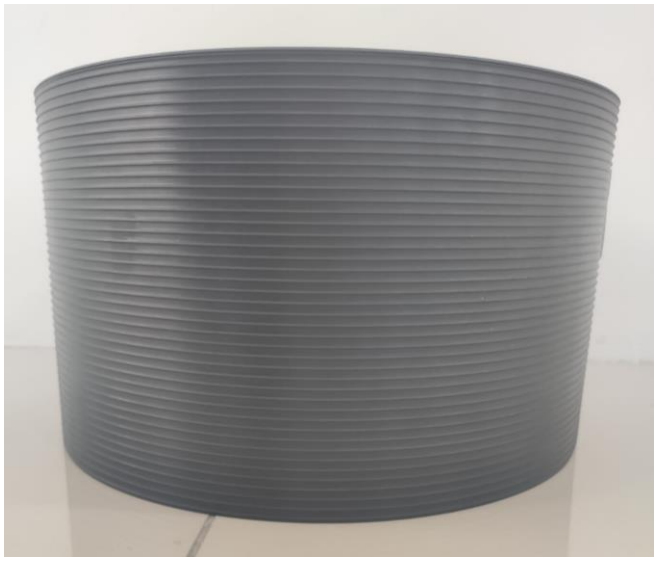
Visual assessment using a scale;

Test Sample	Grey Scale Score	Visual Assessment
Sample 1	4-5	No visible change
Sample 2	4-5	No visible change
Sample 3	4-5	No visible change

Sample Image



*****End Of Report*****

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