

Artificial weathering in devices according to DIN EN ISO 4892-2

*Klammer från Iso Componenter är
"med" den UV-stabilizer som
nämns i testet*

1. Artificial weathering in devices acc. to DIN EN ISO 4892-2

Standardised test items according to DIN EN 527 1A have been manufactured for the artificial weathering. They are subjected to mechanical tests so that the results can be compared.

The artificial weathering is performed in accordance with DIN EN ISO table 3 - procedure A (cycle No. 1). A test duration of 1500 h has been defined.

Operating conditions

Test standard	EN ISO 4892-2 table 3 - procedure A (cycle No. 1)			
Stress period	Irradiance Narrow band (340nm) W/(m² · nm)	Black standard temperature °C	Test chamber temperature °C	Relative humidity %
102 min dry 18 min spray	0,51 ± 0,02 0,51 ± 0,02	65 ± 3 -	38 ± 3 -	50 ± 10 -
Test duration	1500 h			
Water temperature	40°C			
Testing device	ATLAS Suntest CPS+ incl. SunFlood			

2. Test results

After the end of the artificial weathering, the test items exposed to weathering and the reference test items are subjected to the following test:

- Tensile test according to DIN EN ISO 527

The results are compared with each other and are listed in the following tables.

No.	Material composition	Comparison before/after weathering	
		E modulus	Tensile strength
1	PP without UV stabiliser	- 13,9 %	- 2,8 %
2	PP with UV stabiliser	+ 0,5 %	+ 2,4 %

After 1500h of artificial weathering according to EN ISO 4892-2, a slight improvement of the rigidity and the E modulus can be detected for PP with UV stabiliser compared with PP without UV stabiliser.

No.	Material composition	Comparison before/after weathering	
		E modulus	Tensile strength
1	PA6 without UV stabiliser	- 48,6 %	- 26,1 %
2	PA6 with UV stabiliser	- 42,2 %	- 22,7 %

After 1500h of artificial weathering according to EN ISO 4892-2, a slight improvement of the rigidity and the E modulus can be detected for PA6 with UV stabiliser compared with PA6 without UV stabiliser.