

Technical Literature F-02

## Weathering Resistance of AURUM<sup>®</sup>

Generally, a characteristic degradation phenomenon occurs in plastics when they are exposed to sunlight and ultraviolet light. What are usually observed are changes in their chemical structure such as the yellowing of the surface layer, a decline in the molecular weight due to the breakage of the main chains, crosslinking and formation of gels. As the mechanical properties decline, crazes and cracks occur.

The best practical method for evaluating the weathering resistance of plastics is outdoor exposure. But since this method produces results dependent on varying geographical day-to-day climate conditions and requires a long time for evaluation, the weatherometer is commonly used to accelerate degradation. The weatherometer is designed to bring about the effects of sunlight and rain by means of the ultraviolet light of a carbon arc and spray of water. Table 1 gives results of an evaluation of AURUM<sup>®</sup> carried out by use of the equipment.

Table 1 Weathering Resistance of AURUM<sup>®</sup>

	(%)		
	200 hrs	500 hrs	1,000 hrs
Retention percentage:			
Tensile strength	100	100	100
Tensile elongation at break	90	90	90
Tensile elasticity modulus	90	110	100
Izod impact strength (with notch)	110	90	90
Appearance	No change	No change	No change

The information contained herein is based on the information and data available at this moment, but none of the data or evaluation results contained herein provide any warranty whatsoever.