

Technical Literature F-01-11

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

### 1. Nitric Acid (19%)

Dumbbell specimens of AURUM<sup>®</sup> PL450 were immersed in 19% nitric acid, and changes in their appearance and mechanical properties were determined.

#### 1-1. Testing Conditions

Test sample: PL450 (neat resin), small dumbbell specimens  
Nitric acid concentration: 19%  
Immersion temperature: 60°C  
Immersion time: 168 and 720 hrs

#### 1-2. Test Results

- (1) Appearance: After 168 hrs: No change  
After 720 hrs: No gloss
- (2) Percent retention of physical properties::  
Refer to the Table below. (Note: Percent retention with the value before immersion taken as 100%)

Immersion time	Weight	Dimension	Tensile strength	Elongation	Flexural modulus
168 hrs	100%	100%	96%	96%	100%
720 hrs	99%	100%	57%	7%	108%

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.

Technical Literature F-01-11

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### 2. Phosphoric Acid (98%)

Dumbbell specimens of AURUM<sup>®</sup> PL450 were immersed in 98% phosphoric acid, and changes in their appearance and mechanical properties were determined.

#### 2-1. Testing Conditions

Test sample:	PL450 (neat resin), small dumbbell specimens
Phosphoric acid concentration:	98%
Immersion temperature:	214°C
Immersion time:	200 hrs

#### 2-2. Test Results

- (1) Appearance: Lost gloss and whitened surface
- (2) Percent retention of physical properties::  
Refer to the Table below. (Note: Percent retention with the value before immersion taken as 100%)

Weight	Dimension	Tensile strength	Elongation	Flexural modulus
99%	100%	88%	65%	103%

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