



## VTT 3000 Series High Resolution Optical Hard Coat

### DESCRIPTION

This optically clear hard coating combines excellent abrasion and chemical resistance for acrylic and polycarbonate substrates. This widely used hard coating offers excellent durability, at an economical price level. This family of hard coatings also provides exceptional antiglare properties. The antiglare hard coatings improve display readability by reducing the clarity of the reflected image while maintaining display resolution. The combination of these features assures longer product life and increases the overall value and performance of the display.

### PERFORMANCE FEATURES

- Excellent Chemical Resistance
- Excellent Optical Clarity
- Excellent Abrasion Resistance
- Excellent Weatherability
- Excellent Light Transmission
- Good surface printability

### CURED COATING PROPERTIES

<b>Properties</b>	<b>Typical Values</b>
Coating thickness	5.0 – 7.0 microns
Cross hatch adhesion	100%
Taber abrasion (□ % haze): CS10F wheel, 500 grams 3090 coating tested	
• 100 revolutions	2.5
• 250 revolutions	3.5
• 500 revolutions	7.5

### WEATHERABILITY

<b>Test</b>	<b>Typical Values</b>
Haze (ASTM D1003)	
3090 coating	< 0.5 %
3060 antiglare coating	< 6.5 %
3040 antiglare coating	< 20 %
Yellowness index (ASTM D1925)	1
Light Transmission (ASTM D1003)	92.0 %
Heat Aging (168 hours @ 180 F)	No Change
Humidity Resistance (720 hrs @ 100 F, 100% R.H.)	No Change



**CHEMICAL RESISTANCE**

Chemical	Results	
	One Hour	Three Hours
<b>Continuous Surface Contact at 73 °F</b>		
Acetone	Passed	Failed*
MEK	Passed	Failed*
Toluene	Passed	Failed*
Methylene Chloride	Passed	Failed*
Isopropyl Alcohol	Passed	Passed
Cyclohexanone	Passed	Passed
Ethyl Acetate	Passed	Failed*
Xylene	Passed	Passed
40% NaOH	Passed	Passed
Concentrated HCl	Passed	Passed
Gasoline (Regular)	Passed	Passed
Gasoline (Unleaded)	Passed	Passed
Butyl Cellosolve	Passed	Passed
<b>24 Hour Surface Exposure at 120 °F</b>		
Coffee	Passed	* A few small coating blisters
Top Job*	Passed	
Fantastik*	Passed	
Formula 409*	Passed	
Windex w/Ammonia D*	Passed	
Wisk*	Passed	
Downy*	Passed	
Spray N Wash*	Passed	
Clorox*	Passed	
Mustard	Passed	
Mr. Clean*	Passed	
Ketchup	Passed	
Tea	Passed	
Tomato Juice	Passed	
Lemon Juice	Passed	
Grape Juice	Passed	
Vinegar	Passed	
Milk	Passed	

**Manufacturing Specifications**

Nominal Gauge Ranges	Min/Max Limit of Nominal
0.007" (0.175 mm)	± 10%
0.010-0.015" (0.250-0.375 mm)	± 5%
0.020-0.030" (0.500-0.750 mm)	± 3%

**Taber Abrasion Resistance (ASTM D1044)**

Condition	Units	Typical Value
CS10F Wheel, 500 grams		
50	Change in % Haze	1.5
100	Change in % Haze	2.5
250	Change in % Haze	3.5
500	Change in % Haze	7.5