



Aluminum Coil Anodizing Corporation
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Product Specification Document

ACAD-451PG-NC Rev 5

Product ID: 451PG/NC Specular + CR (Aluminum Substrate)		
Application: Aluminum Reflectors with Increased Corrosion Resistance		
Aluminum Substrate Properties: Aluminum Association		
Alloy:	5052	
Temper:	H32	
Mechanical Properties (typical):		
Tensile Strength:	230 N/mm ²	(33,000 psi)
Yield Strength:	190 N/mm ²	(28,000 psi)
Elongation:	12%	
Minimum Bend Radii:	0T	
Polyester Silver Film Properties: (typical)		
Film Strength:	185 N/mm ²	(27,000 psi)
Film Elongation:	130%	
Film Thickness:	25 μ	(0.001 in)
Optical Properties: (specification)		
Total Reflectance (TR%) ¹ :	97 minimum	¹ (Technidyne TR-2 (ASTM 1651-94))
Distinctness of Image (DI) ² :	92 minimum	² (Hunter Labs D47 Dorigon (ASTM E430-83))
Specular Reflectance (RS) ² :	84 minimum	
15° Diffuseness (15°) ² :	0.0	
Iridescence Rating:	Premium Low Iridescence	
Availability:	Sheet and Coil	
Gage:	0.40 to 0.50 mm	(0.016 to 0.020 inch)
Width:	25.4 to 1250 mm	(1.0 to 49.213 inch)
Length:	up to 3660 mm	(up to 144 inch)
Laminate Product Characteristics: Vacuum metallized silver on polyester film, laminated to metal substrate.		
<ul style="list-style-type: none"> • Improved corrosion resistance (CR). • Film delamination strength – film tearing bond strength. • Formability – no bend restrictions, no crazing, no cracking. • Laminate reflector – ultraviolet exposure – 2500 hours with UV351 lamp - <1% reflectivity loss. • Film UV exposure – 2000 hours with QUV A340 lamp with no visual affect on film. • Surface abrasion resistance – 3000 cycles with no wear through (Taber Model 503). • Satisfies UL flame spread requirements. • Durable, easy to clean. • White painted backside for corrosion protection. • Recommended for fluorescent and other lighting applications where temperature is <170 °F (not for high output lighting systems). • Film passes 1000 hours of humidity exposure. • 10 year warranty for “traditional” internal lighting applications. 		