

Environmental Exposure

	Unexposed	Humidity (1)	Weathering (2)
Light Transmittance (%) (3)	91	91	0
Haze (%) (3)	0.4	0.5	1-2 (7)
Adhesion (%) (3)	100	100	100
Yellowness Index Change (6)	0	0	3-4 (7)

1. Humidity: 120 hours @ 52°C and 100% RH (ASTM D-2247)
2. Weathering: ASTM G-53 (cycle of 8 hrs UV @ 70°C and 4 hrs condensing humidity @ 50°C for 2,500 hrs using Q-Panel QUV test equipment)
3. Light Transmittance: ASTM D-1003
4. Haze: ASTM D-1003
5. Adhesion: ASTM D-3359
6. Yellowness Index: ASTM D-1925
7. After 1000 hours of QUV exposure start of color change of the polycarbonate substrate

Scratch Abrasion Tests

	Haze Change (4)	
	Uncoated	Coated
Steel-Wool Scratch (8)	28.1	0.4
Taber Abrasion (9) 100 Cycles	32.0	3-4

8. Steel-Wool Scratch: Steel-wool rotary test representing severe scratching using a 1.25-square-inch #0000 steel-wool pad at 24 psi for 100 rotations
9. Taber Abrasion: ASTM D-1044 (CS10F wheels with 500g load)

Chemical Resistance (10), (11)

	Uncoated	Coated
Gasoline	X	M
Toluene	X	S
Acetone	X	S
Ethanol	L	L
Trichloroethylene	X	S
5% Ammonia	S	L
10% Caustic Soda	S	L
50% Caustic Soda	X	M
10% Sulfuric Acid	L	L

10. Chemical Resistance: Similar to ASTM D-1308 but more severe. Evaporation minimized through continuous contact with reagent by means of a pad in the mouth of an inverted bottle placed on the specimen.
11. L—Long-term contact, greater than 24 hours
M—Medium-term contact, up to 8 hours
S—Short Term contact, up to 1 hour
X—Immediate attack: do not use

VUEGUARD 911®

coating treatment is available as Water-Clear (WC) for plastic sheets and molded articles, offering superior resistance to ultraviolet degradation and abrasion. While Vueguard 911® has been designed primarily for polycarbonate substrates, other plastics may benefit from its application.

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