

**COMPARISON OF NUVACOR™ HARDCOATED AND UNCOATED GRADES**

Typical Physical Properties:

<u>PROPERTY</u>	<u>TEST METHOD</u>	HARDCOATED	UNCOATED
<u>OPTICAL</u>			
Luminous Transmittance (%)	ASTM D1003	93	92
Haze (%)	ASTM D1003	0,5	0,6
Index of Refraction ND 23 C	ASTM D0542	1.43	1.49
<u>ABRASION RESISTANCE</u>			
EXPRESSED AS INCREASE IN PERCENTAGE HAZE			
Steel Wool Rotary Test			
12 p.s.i.		0.0	25
24 p.s.i.		0.1	31
Simulated Cleaning Test (abrasive slurry wiping)		0.6	14
Taber Abrasion (500g each wheel 100 revs.)	ASTM D1044 ANSI Z26.1-1966	0.03	14
Mar Resistance (1000g SIC)	ASTM D0673	1.0	29

## PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	HARDCOATED	UNCOATED	GLASS
<u>CHEMICAL RESISTANCE (2)</u>	ASTM D1303/5.2		<u>TIME UNTIL VISUAL ATTACK</u>	
10% sodium hydroxide		> 16 hr.	> 1hr.	>16 hr.
40% sulfuric acid		> 16 hr.	> 16 hr.	> 16 hr.
Petrol		> 16 hr.	> 16 hr.	> 16 hr.
Benzine (1)		> 16 hr.	< 1 hr.	> 16 hr.
Acetone (1)		> 1 hr.	< 1 min.	> 16 hr.
Methylene chloride (1)		> 1 hr.	> 10 min.	> 16 hr.
Ethylene di-chloride (1)		> 1 hr.	> 10 min.	> 16 hr.
Carbon tetra chloride		> 16 hr.	> 16 hr.	> 16 hr.
Methyl alcohol (1)		> 16 hr.	< 4 hr.	> 16 hr.
Methyl methacrylate (1)		> 16 hr.	< 10 min.	> 16 hr.

IMPACT RESISTANCE      ASTM D0256

Notched Izod, ft. lb./in.	0.3	0.3	0.1
Falling steel ball 0.25 lbs. Breakage drop height, ft.	36	36	2.5

OTHER TESTS

TENSILE STRENGTH 73 F, P.S.I.	ASTM D0638	10.500	
FLEXURAL STRENGTH 73 F, P.S.I.	ASTM D0790	16.000	
FLEXURAL MODULUS 73 F, P.S.I.	ASTM D0638	450.000	
HARDNESS, ROCKWELL D	ASTM D0785	M-102	
SPECIFIC GRAVITY	ASTM D0792	1.19	
<u>COEFFICIENT OF THERMAL</u>			
<u>EXPANSION, IN./IN. F.</u>	ASTM E0228	0.00004	0.00004
<u>SHRINKAGE MAX. %</u>	FED SPEC.	2.5	2.5
	LB39LD;4.3.9		
SPECTRAL TRANSMITTANCE*	FED. SPEC.	5	
AT 330 NM BAND - MAX %	LP391D;4.3.7		

\* Denotes clarity equivalent to glass.

- (1) Uncoated **NUVACOR™** is readily attacked by these solvents. Take care to avoid their use both during their fabrication and or on finished surfaces.
- (2) In layman terms these numbers denote superior **non staining** features. **Common food stains such as mustard, ketchup, tea, coffee, red wine will have no effect on NUVACOR™**, unlike the effects they have on most marbles, woods and High Pressure Laminates.

Coefficient of Thermal Expansion -30 to 30°C	ASTM D-696	in/(in-°F) x 10-s	3.0
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