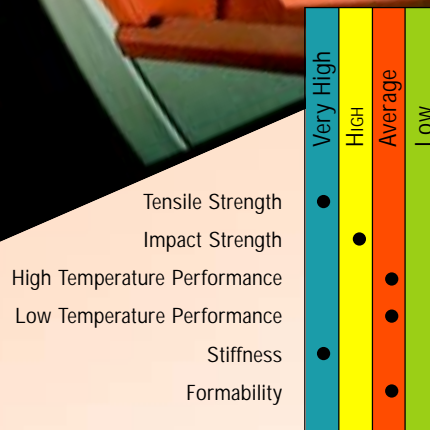


ROYALITE[®]

R60-LS

(R61)

SMOKE-RATED*
FIRE-RATED*
RIGID
PVC/ACRYLIC
SHEET



ROYALITE[®] R60-LS (R61) thermoplastic sheet is formulated to meet the smoke and fire specifications recommended by the Federal Transit Administration (formerly UMTA.) It consistently meets FTA guidelines for flammability* and smoke emission* as measured by ASTM E-162 and ASTM E-662 respectively, at thicknesses of 0.090" and greater. This fact should be carefully considered when designing parts, as end use compliance may be based on the thickness of the part when it is installed.

APPLICATIONS:

The combination of properties provided by ROYALITE[®] R60-LS (R61) sheet makes it the product of choice for a wide range of applications. It is ideally suited for applications in mass transportation i.e. seat backs, overhead storage bins, trays, side panels, window surrounds, etc. Potential applications include office equipment, interior building facades and industrial equipment where reduced smoke generation is desirable.

ROYALITE® R60-LS (R61)

RIGID
SMOKE-RATED*
FIRE-RATED*
PVC/ACRYLIC SHEET

PROCESSING:

ROYALITE® R60-LS (R61) thermoplastic sheet can be processed on most standard thermoforming equipment using conventional forming methods. For some complex shapes and deep draw parts, it may be necessary to use predraw boxes and/or plug assists. It is suitable for use with aluminum and epoxy molds and fine-grain wood molds such as mahogany. Temperature-controlled molds are recommended with the temperature maintained between 140°F-155°F. Care must be taken in forming so as not to overheat the sheet since ROYALITE® R60-LS (R61) is a PVC/acrylic alloy. Stock temperatures of approximately 330°F-380°F (infrared measured) are recommended for proper forming. As with any thermoplastic material, care should be taken to account for the coefficient of thermal expansion when considering design parameters. Please contact Royalite for data relating to a specific application or equipment.

COLORS & TEXTURES:

ROYALITE® R60-LS (R61) is offered in a tremendous range of colors with a multitude of textures ranging from smooth to deep-textured. This Royalite product is capped with calendered film, which provides exceptional color and gloss control, plus outstanding grain retention after forming.

FINISHING:

With conventional plastic fabricating tools, it is possible to machine, saw, drill, rout and grind this rigid Royalite sheet. It can be punched and die-cut, and paints can be applied by spray, silk screen or roller coating. For optimum performance, paints formulated for plastics must be used. As long as proper procedures are followed, this material can be joined to other materials, or itself, by adhesive bonding, ultrasonic welding and by mechanical fasteners such as screws and rivets. Please contact Royalite for specific recommendations.

AVAILABILITY:

ROYALITE® R60-LS (R61) is available in various custom colors, grain textures, gauges and blank sizes subject to normal production scheduling. Maximum width available is 60". The available gauge range is 0.090"-0.250". Widths and gauges outside the standard are available with some restrictions.

CLEANABILITY:

As with all plastics, extreme care should be taken when selecting a cleaning agent. Mild soap and water are recommended. Any other solution should be used with extreme caution as it may cause discoloration or degrade the material. Contact Royalite for suggested

guidelines.

SUMMARY OF PROPERTIES:

ROYALITE® R60-LS (R61) thermoplastic sheet is a rigid, smoke and fire-rated* PVC/acrylic product that combines high impact strength, abrasion resistance, stiffness and hardness with good formability and good stain resistance.

PHYSICAL PROPERTIES (units)	AVERAGE VALUES	TEST METHODS
Specific Gravity	1.35-1.40 †	ASTM D-792
Tensile Strength, machine direction	(psi) 5900	ASTM D-638
Flexural Strength	(psi) 9700	ASTM D-790
Flexural Modulus	(10 ⁵ psi) 3.3	ASTM D-790
Impact Strength @ 72°F	(ft-lb/in notch) 3.0	ASTM D-256 Notched Izod
Hardness	Rockwell Scale R 103	ASTM D-785
Heat Deflection Temperature (annealed)	@ 264 psi (°F) 175	ASTM D-648
Taber Abrasion	grams 0.05	C _s -10, 1000g, 1000 cycles
Thermoforming Temperature Range	Low (°F) 330 High (°F) 380	Machine
Flammability Rating*:		
Motor Vehicle Standard	Passes	FMVSS 302
Underwriters Lab	Passes ⁽¹⁾	UL 94 V-0
Radiant Panel (Flame Spread Index)	10 ⁽²⁾	ASTM E-162
Smoke Density*	Ds @ 90 sec. <100 ⁽³⁾	ASTM E-662 & NFPA-258
	Ds @ 4 min. <200 ⁽³⁾	(using 0.090" sheet in NBS smoke chamber)

† Color Dependent

¹ At 0.031" (0.78mm)

² At 0.090" (2.29mm)

³ At 0.060" (1.52mm)

* This term and any corresponding data refer to typical performance in the specific tests indicated and should not be construed to imply this material's behavior under actual fire conditions.

NOTE: The data listed herein reflect typical sheet properties. They are the latest available at the time of publication and are reliable to the best knowledge of Royalite. The properties are listed solely to give general guidance and are not to be construed as a warranty or representation for which Royalite assumes responsibility.

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