

ROYALITE® R26 thermoplastic sheet is a special ABS product that provides an unusual combination of very high tensile strength, impact strength and stiffness, coupled with outstanding formability. Upon request, this Royalite sheet can be formulated to comply with current FDA and NSF requirements for food handling equipment and devices. Combining these special features with the wide range of colors and finishes available gives the greatest possible freedom in meeting application requirements.

APPLICATIONS:

In addition to the properties mentioned previously, ROYALITE® R26 sheet features high hardness. Together, these qualities have made ROYALITE® R26 sheet the product of choice in a wide range of severe-service applications including luggage, auditorium seating, food handling trays and boxes, and motorcycle fairings.

ROYALITE® R26

RIGID ABS SHEET

PROCESSING:

ROYALITE® R26 thermoplastic sheet can be processed on virtually all thermoforming equipment from high volume, multi-station rotary machines to hand-operated presses. It is readily hand-formed for prototyping. It is also suitable for use with aluminum and epoxy molds and fine grain wood molds such as mahogany. Care must be taken in forming so as not to overheat the sheet. Stock temperatures of approximately 340°F-390°F 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® R26 is offered in a tremendous range of colors with a multitude of textures ranging from smooth to deep-textured. This Royalite product is normally capped with calendered film, which gives 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® R26 is available from our warehouse with standard dimensions of 54" x 94" in a medium grey color in either a Smooth or Saddle #2 texture in gauges ranging from 0.125" to 0.250". Specific blank sizes can be cut to order for an extra charge. For a specific listing of our warehouse offerings, please contact us or our nearest distributor. Warehouse material can normally ship within 72 hours of receipt of the order.

Other standard and custom colors, grain textures, gauges and blank sizes are available subject to normal production scheduling. Maximum capped width available is 54". Maximum uncapped width available is 88". Maximum gauge is 0.375". Widths and gauges outside the standard are available with some restrictions.

SUMMARY OF PROPERTIES:

ROYALITE® R26 ABS sheet combines very high tensile strength, impact strength, stiffness and hardness with outstanding formability.

		AVERAGE	TEST
PHYSICAL PROPERTIES (units)	1	VALUES	METHODS
Specific Gravity		1.02-1.08 †	ASTM D-792
Tensile Strength, machine direction	(psi)	5200	ASTM D-638
Flexural Strength	(psi)	8500	ASTM D-790
Flexural Modulus	(10 ⁵ psi)	2.9	ASTM D-790
Impact Strength @ 72°F Notched Izod @ -20°F	(ft-lb/in notch) (ft-lb/in notch)	7.5 3.5	ASTM D-256
Hardness	Rockwell Scale R	96	ASTM D-785
Heat Deflection @ 264 psi Temperature (annealed)	(°F)	210	ASTM D-648
Thermal Conductivity	(BTU/in/hr/ft²/°F)	1.7-2.1	ASTM C-177
Coefficient of Thermal Expansion	(in/in/°F/x10 ⁻⁵)	4.2-5.6	ASTM D-696
Thermoforming Temperature Range	Low (°F) High (°F)	340 390	Machine
Mold Shrinkage	(in/in)	0.005-0.007	
Flammability Rating*: Motor Vehicle Standard		Passes	FMVSS 302

[†] Color Dependent

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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^{*} 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 situations.