

Royalite[®] R104



Royalite[®] R104 laminate provides a “soft feel” aesthetically appealing material that meets most of the current automotive specifications for rigid thermoplastic sheet. R104 consists of a soft-to-the-touch layer supported by a rigid ABS backing, giving excellent physical characteristics such as impact strength and ductility. It is very easy to process using one-step thermoforming techniques that result in cost-effective manufacturing. Royalite[®] R104 is available in a number of standard colors, and custom colors can be matched subject to minimum order quantities.

FEATURES AND BENEFIT

- Excellent physical characteristics
- High rigidity
- Very high impact strength

TARGET MARKET & APPLICATIONS

Royalite[®] R104 laminate is suited for automotive consoles, recreational vehicle dash panels, truck and RV headliners, boating applications and door panels on heavy-duty vehicles such as fire trucks.

FINISHING

With conventional plastic fabricating tools, it is possible to machine, saw, drill, rout and grind this rigid Royalite[®] laminate. It can be punched or die-cut if it is cut from the “soft-feel” side. Painting should not be necessary because of the designed-in, aesthetically appealing look. As long as proper procedures are followed, the back side of this product can be joined to other materials, or itself, by adhesive bonding, heat or ultrasonic welding and by mechanical fasteners such as screws and rivets. Please contact Royalite for specific recommendations.

COLORS & TEXTURES

Royalite[®] R104 sheet is offered in a tremendous range of colors with a multitude of textures.

AVAILABILITY

Royalite[®] R104 is available in a wide variety of standard and custom colors, gauge and blank sizes subject to normal production scheduling.

Sheets Size – maximum width 54”

Gauges – 0.080” – 0.250”

* 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.

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Royalite[®] R104



PROCESSING

Royalite[®] R104 can be processed on high volume rotary or single-station equipment. It is necessary to have forming equipment with adjustable two-sided heating, and depending on the part configuration, it is normally desirable to form from an upper platen. Most types of molds from temperature-controlled aluminum to wood molds are suitable. Stock temperatures of 280°F-340°F back side 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.

SUMMARY OF PROPERTIES

Surface: Royalite[®] R104 is backed with a rigid ABS substrate that has very high impact strength, good tensile strength, excellent ductility and good formability.

TYPICAL PROPERTIES

PROPERTY	TEST METHOD	UNITS	DATA
Specific Gravity	ASTM D-792		1.03-1.08†
Tensile Strength, machine direction	ASTM D-638	(psi)	5000
Flexural Strength	ASTM D-790	(psi)	8300
Flexural Modulus @ 1% secant	ASTM D-790	(10 ⁵ psi)	2.7
Impact Strength @ 72°F Notched Izod	ASTM D-256	(ft. lb/in notch)	7.0
Hardness	ASTM D-785	Rockwell Scale R	96
Heat Deflection Temp (annealed) @ 264 psi	ASTM D-648	264 psi fiber stress (°F)	200

"Soft-Feel" Layer: The top layer offers the right look and feel to "dress-up" automotive, recreational vehicle, boating and heavy-duty vehicle applications at an economical price.

LAMINATE

R104

Material	PVC Skin/PVC Foam
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TYPICAL PROPERTIES

PROPERTY	TEST METHOD	UNITS	DATA
Weight		(oz/yd ²)	41-46
Thickness		(inches)	0.077-0.093
Elongation	ASTM D-638	(%)	190
Maximum Stretch Ratio			2.5:1.0

† Color dependent

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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. We cannot anticipate all conditions under which this information and our products, or the products of other manufacturers in combination with our products, may be used. We accept no responsibility for results obtained by the application of this information or the safety and suitability of our products, either alone or in combination with other products. Users are advised to make their own test to determine the safety and suitability of each such product or product combination for their own purposes. We sell the products without warranty. Buyers and users assume all responsibility and liability for loss or damage arising from the handling and use of our products, whether used alone or in combination with other products.

CONTACT INFORMATION

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For additional information, please contact Spartech Corporation at (888) 721-4242 or visit our web site at www.spartech.com.

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