

Royalite[®] R522



Royalite[®] R522 is a fire rated proprietary thermoplastic sheet product that is engineered to meet the requirements of the FAR 25.853a flammability test. R522 combines very high impact strength and stiffness with excellent formability. It has a high resistance to normal food and environmental stains and its cleanability with common cleaners is outstanding. Manufactured utilizing our proprietary cap sheet technology, R522 provides outstanding color and gloss control and superior grain retention after thermoforming.

FEATURES AND BENEFIT

- Very high formability
- High impact strength
- Very high impact strength
- Excellent formability

TARGET MARKET & APPLICATIONS

The combination of toughness, durability, and fire retardancy* makes Royalite[®] R522 the perfect choice for a wide variety of aircraft cabin applications. Its excellent chemical and abrasion resistance makes it suitable for all seating components, such as tray tables, end bays, and arm rests. The superior forming characteristics of R522 also make it a great material for the complex configurations of galley structures and lavatory interiors.

FINISHING

You can machine, saw, drill, rout and grind this rigid sheet with conventional plastics fabricating equipment. It can be punched and die-cut, sanded and polished easily. So long as proper procedures are followed, you can join it to itself, or other materials, by adhesive bonding, ultrasonic welding, and by mechanical fasteners. Please contact Spartech for specific recommendations.

COLORS & TEXTURES

Royalite[®] R522 sheet can be supplied in a variety of colors and over 24 different grain patterns to meet specific aesthetic requirements. This Royalite product is normally capped with calendared film, which provides exceptional color and gloss control, plus outstanding grain retention after forming.

AVAILABILITY

Royalite[®] R522 is available in various custom colors, grain textures, gauges, and blank sizes subject to normal product scheduling.

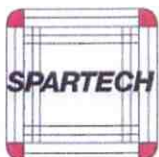
Sheets Size – maximum width 60"

Gauges – 0.031" – 0.375"

* 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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FORMING A SUSTAINABLE FUTURE

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PROCESSING

You can process this rigid thermoplastic sheet on virtually all thermoforming equipment from high-volume, multi-station rotary machines to hand-operated presses. It is readily hand formed for prototyping, and is suitable for use with aluminum and epoxy molds and fine-grain wood molds such as mahogany. Because Royalite[®] R522 is a PVC alloy; care must be taken in forming so as not to overheat the sheet. Stock temperatures of approximately 320-390°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.

SUMMARY OF PROPERTIES

Surface: Royalite[®] R522 thermoplastic sheet is a rigid, flame retardant* alloy that meets FAR 25.853a. R522 combines very high impact strength, tensile strength and stiffness with excellent formability.

TYPICAL PROPERTIES

PROPERTY	TEST METHOD	UNITS	DATA
Specific Gravity	ASTM D-792		1.27-1.30
Tensile Strength, machine direction	ASTM D-638	(psi)	5900
Flexural Strength	ASTM D-790	(psi)	9600
Flexural Modulus	ASTM D-790	(kpsi)	360
Impact Strength @ 73°F	ASTM D-256	(ft. lb/in notch)	15.0
Notched Izod			
Impact Strength @73°F	ASTM D-5420	(in-lbs)	320
Hardness	ASTM D-785	Rockwell Scale R	100
Heat Deflection @264 psi (°F) Temperature (annealed)	ASTM D-648		167
Thermoforming		(F°)	320-390
Mold Shrinkage		(in/in)	0.005-0.007
Flammability*: FAR/JAR 60s Vertical Burn	FAR/JAR Appendix F		Passes

† 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.

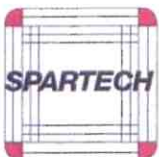
CONTACT INFORMATION

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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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