



Spartech Plastics - Extruded Sheet & Rollstock
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ROYALITE®

R24

**FIRE RATED*
ABS SHEET**

<i>PERFORMANCE-AT-A-GLANCE</i>				
	Very High	High	Average	Low
Tensile Strength		◆		
Impact Strength	◆			
High Temperature Performance		◆		
Low Temperature Performance		◆		
Stiffness		◆		

ROYALITE® R24 is proprietary Fire Rated ABS thermoplastic sheet product. R-24 is UL listed 94HB@ .060 and above in all colors. In addition R-24 is in conformance with MVSS 302 at .050 and above.

R24 combines high impact strength and stiffness with excellent formability. It also has an enhanced heat deflection temperature of 210 degrees F. Manufactured utilizing our proprietary cap sheet technology, R24 provides outstanding color and gloss control and superior grain retention after thermoforming.

APPLICATIONS:

The combination of flame rating, toughness and durability makes Royalite® R24 the perfect choice for applications when a ULHB rated material is called for. Its excellent balance of properties makes it suitable for wide variety of applications such as business machine housing, medical equipment, and electronics enclosures. The superior forming characteristics of R24 also make it a great material for the complex configurations.

PROCESSING:

You can process R-24 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. Care must be taken in forming so as not to overheat the sheet. Stock temperatures of approximately 340-390°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 Spartech for data relating to your specific application and equipment.

COLORS & TEXTURES:

Royalite® R24 sheet can be supplied in a variety of colors and over 16 different grain patterns to meet specific aesthetic requirements. This Royalite product is normally capped with calendered film, which provides exceptional color and gloss control, plus outstanding grain retention after forming.

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.

AVAILABILITY:

Royalite® R24 is available in various custom colors, grain textures, gauges, and blank sizes subject to normal product scheduling. Maximum width available is 60". The available gauge range is 0.047" - 0.250". Some restrictions apply to widths greater than 55".

SUMMARY OF PROPERTIES:

Royalite® R24 is a Fire Rated UL 94HB ABS sheet that combines good impact strength, tensile strength and stiffness with excellent formability.

PHYSICAL PROPERTIES (units)	AVERAGE VALUES‡	TEST METHODS
Specific Gravity†	1.08-1.02	ASTM D-792
Tensile Strength, MD (psi)	5000	ASTM D-638
Flexural Strength (psi)	7800	ASTM D-790
Flexural Modules (kpsi)	280	ASTM D-790
Impact Strength @ 73°F		
Notched Izod (ft-lb/in notch)	7.5	ASTM D-256
Impact Strength @ 73°F		ASTM
Gardner Drop Weight (in-lbs)	320	D-5420
Hardness Rockwell Scale R	98	ASTM D-785
Heat Deflection @ 264 psi (°F)	210	ASTM D-648
Temperature (annealed)		
Thermoforming		
Temperature Range (°F)	340 – 395	
Mold Shrinkage (in/in)	0.005-0.007	
Flammability*:		
Underwriters Lab	Listed .060	UL 94HB
Motor Vehicle Standard	Passes	MVSS 302

‡ All values based on 0.125" thickness unless otherwise noted

† Color Dependent

* 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, are the latest available at the time of publication, and are reliable to the best knowledge of Spartech. The properties are listed solely to give general guidance and are not to be construed as a warranty or representation for which Spartech assumes responsibility.

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