

Royalite R59

Acrylonitrile Butadiene Styrene + PVC

Spartech Plastics

Message:

ROYALITE® R59 thermoplastic sheet provides a unique ABS/PVC product that meets many industry flammability standards. It is recognized under the component program of Underwriters Laboratories, Inc. with a classification of 94V-1 at 0.058", 94V-0 at 0.085" and 94- 5VA at 0.085". It combines very high impact strength with excellent ductility and formability.

APPLICATIONS:

Because of its fire rating*, ROYALITE® R59 sheet has won acceptance in a variety of applications from rapid transit vehicle interiors to computer and electronic data processing terminals. High rigidity in thin gauges coupled with consistent high quality color, texture and gloss makes ROYALITE® R59 sheet ideal for such varied applications as computer side panels and airport seating.

PROCESSING:

ROYALITE® R59 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 and is suitable for use with aluminum and epoxy molds and fine-grain wood molds such as mahogany. This material is also excellent for pressure forming applications. Care must be taken in forming so as not to overheat the sheet since ROYALITE® R59 is an ABS/PVC alloy. Stock temperatures of approximately 325°F-400°F are recommended for proper forming. Please contact Royalite for data relating to a specific application or equipment.

COLORS & TEXTURES:

ROYALITE® R59 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 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:

A range of standard colors of ROYALITE® R59 ABS/PVC sheet, is available from our warehouse, with a Level Haircell grain in a 54" x 94" blank size in gauges ranging from 0.062" 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 width available is 54". Gauges range from 0.031" to 0.312". Widths and gauges outside the standard are available with some restrictions.

General Information			
UL YellowCard	E52355-242610	E103564-101884229	E103564-100140599
	E103564-314868	E103564-485695	E103564-485696
	E103564-485697		
Features	Ultrasonic weldable		
	High tensile strength		
	Impact resistance, high		
	Workability, good		
	Sprayable		
	Machinable		
	Adhesiveness		
	Good adhesion		
	Low temperature resistance		
	Heat resistance, medium		
	ductility		
	Flame retardancy		

Uses	Computer components		
	Application in Automobile Field		
Appearance	Available colors		
Forms	Sheet		
Processing Method	Thermoforming		
Physical	Nominal Value	Unit	Test Method
Specific Gravity ¹	1.18 - 1.25	g/cm ³	ASTM D792
Molding Shrinkage - Flow	0.50 - 0.70	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	93		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength - Flow (Yield)	34.5	MPa	ASTM D638
Flexural Modulus	1930	MPa	ASTM D790
Flexural Strength	53.8	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-29°C	96	J/m	ASTM D256
23°C	430	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	79.4	°C	ASTM D648
CLTE - Flow	8.3E-5 - 9.9E-5	cm/cm/°C	ASTM D696
RTI Elec	85.0	°C	UL 746
RTI Imp	75.0	°C	UL 746
RTI	85.0	°C	UL 746
Flammability	Nominal Value		Test Method
	V-0		
Flame Rating (2.16 mm)	5VA		UL 94
Radiant Panel Flame Spread Index	RP-50		UL 94
Flammability	Passes		FMVSS 302
Thermoforming Molding Temperature - Machine	163 - 204	°C	
NOTE			
1.	Color dependent		

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Recommended distributors for this material

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