

# Royalite® R59

Fire-rated sheet

## Product Description

Royalite® R59 thermoplastic sheet provides a unique PVC/ABS 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.

## Technical Properties

Property	Test Method	Value*
Specific Gravity (color dependent)	ASTM D-792	1.18 - 1.25
Tensile Strength	ASTM D-638	5,000 psi
Flexural Strength	ASTM D-790	7,800 psi
Flexural Modulus	ASTM D-790	280,000 psi
Izod Impact (Notched) 72°F	ASTM D-256	8.0 ft-lbs/in
Izod Impact (Notched) -40°C	ASTM D-256	1.8 ft-lbs/in
Rockwell Hardness (R Scale)	ASTM D-785	93
Heat Deflection Temperature (@264 psi - annealed)	ASTM D-648	175°F
Coefficient of Linear Thermal Expansion	ASTM D-696	4.6 - 5.5x10 <sup>-5</sup> in/in/°F
Mold Shrinkage	Internal	0.005 - 0.007 in/in
Motor Vehicle Safety Standard	FMVSS 302	Passes
Flammability	UL 94 V-0	Listed @ 0.085"
Flammability	UL 94-5VA	Listed @ 0.085"
Radiant Panel (Flame Spread Index)	UL 94	RP50
Relative Thermal Index (Electrical)	UL 746	85°C at ≥ 0.086"
Relative Thermal Index (Mech. w/impact)	UL 746	70°C ≥ 0.086"
Relative Thermal Index (Mech. w/o impact)	UL 746	85°C ≥ 0.086"
Ball Pressure Test (72°C, 3.00 mm)	IEC 60695-10-2	Passes

\*All values based on 0.125" unless otherwise stated

For additional information, please contact Spartech at 800-677-4338 (800-67-SHEET), e-mail [info@spartech.com](mailto:info@spartech.com) or visit our website at [www.spartech.com](http://www.spartech.com)

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