

ABS (acrylonitrile-butadiene-styrene)

ROYALITE®



ABS is a low cost thermoplastic material with outstanding impact resistance, machinability, and thermoforming characteristics. It is an excellent choice for machine housings, retail store fixtures, and point-of-purchase displays where impact resistance is required.

Royalite® R59 is a fire-rated ABS/PVC alloy sheet material, that is often used for transportation, architectural, and electronics applications that require UL certifications.

Royalite® R84/21 is an ABS sheet material with a proprietary weatherable cap layer for improved performance in outdoor environments. The material is an excellent choice for marine, automotive, and recreational vehicle components where good weatherability is required.



KEY CHARACTERISTICS:

- Outstanding impact resistance
- Good machinability
- Easy to thermoform
- Easy to bond with adhesives
- Strong and stiff
- Low cost
- Flame retardant grades available
- Available in a wide variety of colors and textures

APPLICATIONS:

- Machine housings, guards, and covers
- Instrument panels
- Point-of-purchase displays
- Models and prototypes
- Thermoformed trays and tote bins

ABS TYPICAL PROPERTIES:

| | UNITS | ASTM TEST | ABS | ROYALITE® R59 | ROYALITE® R84/21 |
|---|-----------------------------|-----------|---------|---------------|------------------|
| Tensile strength | psi | D-638 | 4,100 | 5,200 | 4,600 |
| Flexural modulus | psi | D-790 | 304,000 | 290,000 | 270,000 |
| Izod impact (notched) | ft-lbs/in of notch | D-256 | 7.7 | 10.0 | 7.0 |
| Heat deflection temperature @264 psi | °F | D-648 | 177 | 170 | 205 |
| Maximum continuous service temperature in air | °F | | 160 | - | - |
| Water absorption (immersion 24 hours) | % | D-570 | 0.30 | - | - |
| Coefficient of linear thermal expansion | in/in/°F x 10 ⁻⁵ | D-696 | 5.6 | 4.6-5.5 | 4.2-5.6 |

Standard Sizes: SHEET: 24"x48" (0.25"-4.0" thick), 48"x96" (0.06"-4.0" thick) ROD: diameter 0.25"-6.0"

Length, width, thickness, and diameter tolerances vary by size and by manufacturer • Custom sizes and colors available upon request • Many of our materials are available as films with thicknesses of 0.029" or less. Values may vary according to brand name. Please ask your Curbell Plastics representative for more specific information about an individual brand.

Curbell Plastics has been supplying plastic sheet, rod, tube, films, adhesives, sealants, and prototyping materials for over 65 years



NATIONWIDE
1.888.CURBELL
www.curbellplastics.com

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