

# Royalite<sup>®</sup> R26



Royalite<sup>®</sup> R26 thermoplastic sheet is a special ABS product that provides an unusual combination of very high tensile strength, impact strength and stiffness, coupled with outstanding formability. Upon request, this Royalite sheet can be formulated to comply with current FDA and NSF requirements for food handling equipment and devices. Combining these special features with the wide range of colors and finishes available gives the greatest possible freedom in meeting application requirements.

## TARGET MARKETS & APPLICATIONS

In addition to the properties mentioned previously, Royalite<sup>®</sup> R26 sheet features high hardness. Together, these qualities have made Royalite<sup>®</sup> R26 sheet the product of choice in a wide range of severe-service applications including luggage, auditorium seating, food handling trays and boxes, and motorcycle fairings.

## 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.

## COLORS AND TEXTURES

Royalite<sup>®</sup> R26 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.

## AVAILABILITY

Royalite<sup>®</sup> R26 is available from our warehouse with standard dimensions of 54" x 94" in a medium grey color in either a Smooth or Saddle #2 texture in gauges ranging from 0.125" 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. Widths and gauges outside the standard are available with some restrictions.

Sheet Size – maximum width is 54", uncapped 88"

Gauge – maximum is 0.375





## PROCESSING

**Royalite<sup>®</sup> R26** 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. Care must be taken in forming so as not to overheat the sheet. Stock temperatures of approximately 340°F-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 Royalite for data relating to a specific application or equipment.

## TYPICAL PROPERTIES

| PROPERTY   | TEST METHOD | UNITS                                  | DATA          |
|--|-------------|--|---------------|
| Specific Gravity                                   | D-792       |  | 1.02 – 01.08† |
| Tensile Strength,<br>machine direction             | D-638       | (psi)                                  | 5,200         |
| Flexural Strength                                  | D-790       | (psi)                                  | 8,500         |
| Flexural Modulus                                   | D-790       | (10 <sup>5</sup> psi)                  | 2.9           |
| Impact Strength @72°F<br>Notched Izod @ -20°F      | D-256       | (ft-lbs/in notch)<br>(ft-lbs/in notch) | 7.5<br>3.5    |
| Hardness   | D-785       | Rockwell Scale R                       | 96            |
| Heat Deflection @264 psi<br>Temperature (annealed) | D-648       | (°F)                                   | 210           |
| Thermal Conductivity                               | C-177       | (BTU/in/hr/ft <sup>2</sup> /°F)        | 1.7 – 2.1     |
| Coefficient of<br>Thermal Expansion                | D-696       | (in/in/°F/x10 <sup>-5</sup> )          | 4.2 – 5.6     |
| Thermoforming<br>Temperature Range                 | Machine     | Low (°F)<br>High (°F)                  | 340<br>390    |
| Mold Shrinkage                                     |             | (in/in)                                | 0.005 – 0.007 |

## FLAMMABILITY RATING\*

|                        |           |        |
|------------------------|-----------|--------|
| Motor Vehicle Standard | FMVSS 302 | Passes |
|------------------------|-----------|--------|

† 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. 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.

For additional information, please contact Spartech Corporation at (888) 721-4242 or visit our web site at [www.spartech.com](http://www.spartech.com).

Page 2 of 2

Use and conditions and applicable laws may differ from jurisdiction to jurisdiction, and may be subject to change at any time. Customers are responsible for determining whether products and information are appropriate for their use. Spartech Corporation and its subsidiaries assume no liability for the accuracy or completeness of information contained herein, and all information is subject to change without notice. No freedom from infringement of any patent, trademark, or copyright owned by Spartech or any of its subsidiaries is to be inferred. **NO WARRANTIES, EXPRESS OR IMPLIED, ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.**

