

# Royalite® R52

## Fire-rated sheet

### Product Description

Royalite® R52 thermoplastic sheet provides a fire-rated\*, rigid PVC/acrylic product that combines very high impact strength, tensile strength, stiffness and hardness with excellent formability. It is recognized under the component program of Underwriters Laboratories, Inc. with a classification of UL94V-0 at 0.027" gauge and UL94-5VA at 0.051" gauge. Royalite® R52 sheet has excellent chemical and stain resistance.

\* 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.

### Technical Properties

| Property  | Test Method      | Value*                              |
|---|------------------|-------------------------------------|
| Specific Gravity (color dependent)                | ASTM D-792       | 1.35                                |
| Tensile Strength                                  | ASTM D-638       | 5,800 psi                           |
| Flexural Strength                                 | ASTM D-790       | 9,500 psi                           |
| Flexural Modulus                                  | ASTM D-790       | 320,000 psi                         |
| Izod Impact (Notched) 72°F                        | ASTM D-256       | 15.0 ft-lbs/in                      |
| Izod Impact (Notched) -40°F                       | ASTM D-256       | 0.8 ft-lbs/in                       |
| Rockwell Hardness (R Scale)                       | ASTM D-785       | 100                                 |
| Heat Deflection Temperature (@264 psi - annealed) | ASTM D-648       | 159°F                               |
| Thermal Conductivity                              | ASTM C-177       | 1.01 BTU/in/hr/ft <sup>2</sup> /°F  |
| Coefficient of Linear Thermal Expansion           | ASTM D-696       | 4.0 - 6.0x10 <sup>-5</sup> in/in/°F |
| Motor Vehicle Safety Standard                     | FMVSS 302        | Passes                              |
| Flammability                                      | UL 94 V-0        | Listed @ 0.027"                     |
| Flammability                                      | UL 94-5VA        | Listed @ 0.051"                     |
| Flammability                                      | UL 94-5VB        | Listed @ 0.031"                     |
| Flame Spread Index                                | ASTM E-162       | <6                                  |
| Flammability - Vertical Burn - 60 second          | FAR 25.853a (i)  | Passes @ 0.028"                     |
| Flammability - Vertical Burn - 12 second          | FAR 25.853a (ii) | Passes @ 0.028"                     |

\*All values based on 0.125" unless otherwise stated and no use of customer regrind

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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