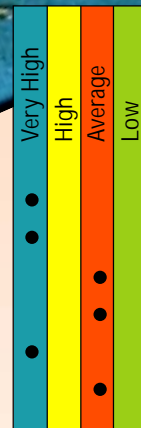
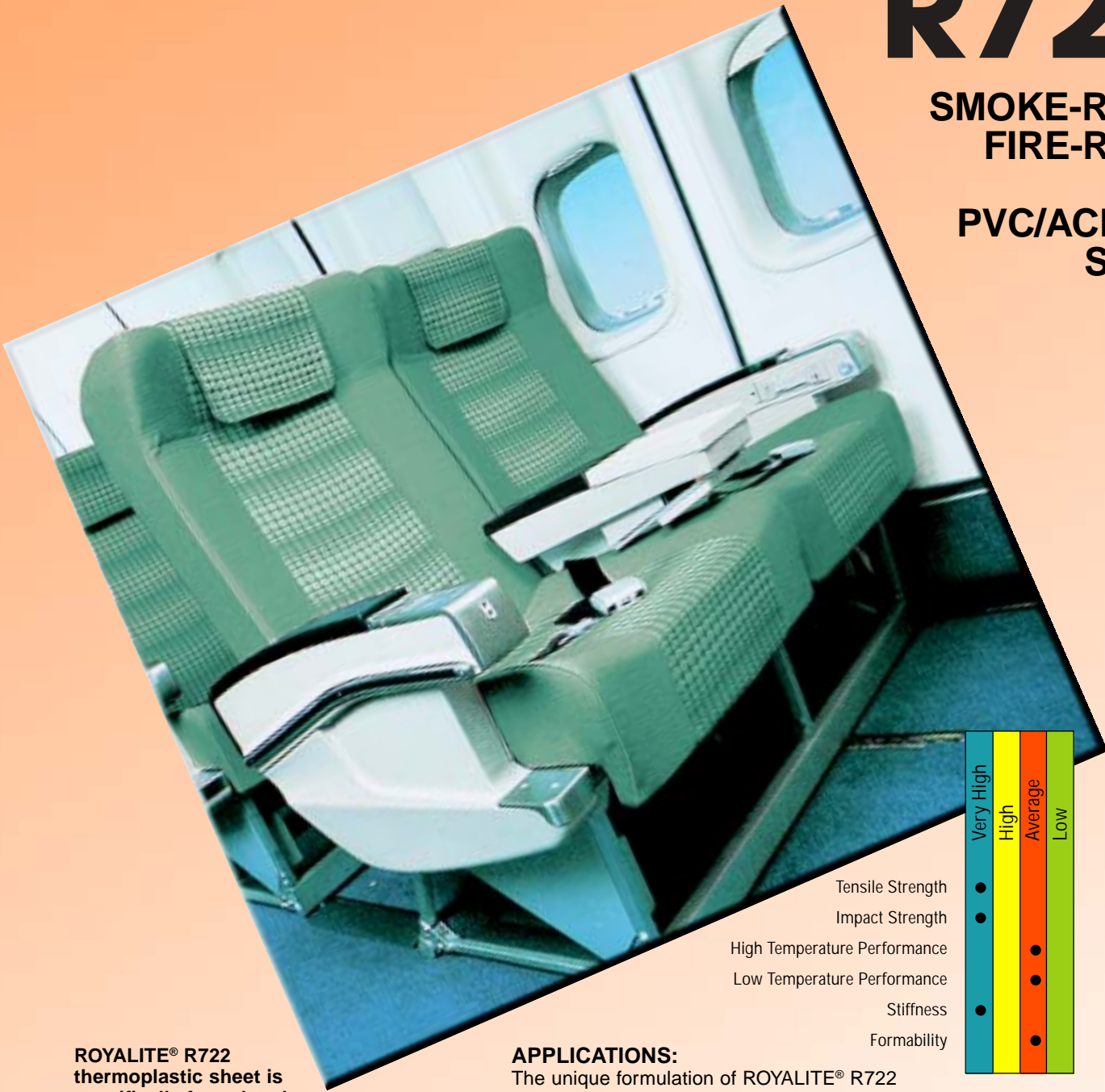


ROYALITE®

R722

SMOKE-RATED*
FIRE-RATED*
RIGID
PVC/ACRYLIC
SHEET



Tensile Strength
 Impact Strength
 High Temperature Performance
 Low Temperature Performance
 Stiffness
 Formability

ROYALITE® R722 thermoplastic sheet is specifically formulated to meet the stringent requirements of FAR Part 25, Appendix F as it relates to plastics used in the interior of aircraft. It consistently meets FAA guidelines for flammability*, heat release* and smoke density* using methods set forth in FAR Part 25, Appendix F, Parts I, IV, and V, respectively, at thicknesses down to 0.040".

APPLICATIONS:

The unique formulation of ROYALITE® R722 not only allows it to meet the FAA guidelines, but gives specifiers, engineers and thermoformers a material that surpasses all others in its class in processability and durability. This material offers a superior range of physical and mechanical properties over other related materials, and its ease in thermoforming and machining make it the new material of choice for such aircraft components as interior walls, window surrounds, seats, trays, partitions, galley and lavatory panels. Its high rigidity and toughness allows for weight reduction by supporting thinner-walled parts.

ROYALITE®

R722

SMOKE-RATED*
FIRE-RATED*
RIGID
PVC/ACRYLIC SHEET

PROCESSING:

ROYALITE® R722 thermoplastic sheet can be processed on most standard thermoforming equipment using conventional forming methods. For some complex shapes and deep draw parts, it may be necessary to use pre-draw boxes and/or plug assists. It is suitable for use with aluminum and epoxy molds and fine-grain wood molds such as mahogany. Temperature-controlled molds are recommended with the temperature maintained between 140°F-160°F. Care must be taken in forming so as not to overheat the sheet because ROYALITE® R722 is a PVC/acrylic alloy. Stock temperatures of approximately 325°F-355°F (IR measured) are recommended for proper forming. Best results are achieved by "soaking" the sheet with heat, utilizing lower power settings and longer cycle times. 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.

COLORS & TEXTURES:

ROYALITE® R722 is offered in a tremendous range of colors with a multitude of textures ranging from smooth to deep-textured. This Royalite product is 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, sanded and polished easily. 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.

CHEMICAL & STAIN RESISTANCE, CLEANABILITY:

ROYALITE® R722 is resistant to a wide range of concentrated chemicals, including aqueous acids and bases, alcohols, lubricating oils and greases and motor fuels. It also exhibits very good stain resistance to common staining agents. Therefore, it is easily and safely cleaned with mild detergents or multi-purpose cleansers such as Fantastic® or Formula 409®. As with all plastics, extreme care should be taken when selecting a cleaning agent; some solutions may leave a residue or discolor the material. Contact Royalite for suggested guidelines.

AVAILABILITY:

ROYALITE® R722 is available in various custom colors, grain textures, gauges and blank sizes subject to normal production scheduling. Maximum width available is 58". The available gauge range is 0.040"-0.250". Widths and gauges outside the standard are available with some restrictions.

SUMMARY OF PROPERTIES:

ROYALITE® R722 thermoplastic sheet is a rigid, smoke-rated*, fire-rated* PVC/acrylic product designed to meet all specifications set forth in FAR Part 25, Appendix F, as it relates to plastic materials for internal aircraft use.

PHYSICAL PROPERTIES (units)	AVERAGE VALUES	TEST METHODS
Specific Gravity	1.49-1.55 †	ASTM D-792
Tensile Strength, machine direction	(psi) 6000	ASTM D-638
Flexural Strength	(psi) 10000	ASTM D-790
Flexural Modulus	(10 ⁶ psi) 3.9	ASTM D-790
Impact Strength @ 72°F	(ft-lb/in notch) 8.0	ASTM D-256 Notched Izod
Hardness	Rockwell Scale R 105	ASTM D-785
Heat Deflection Temperature (annealed) @ 264 psi	(°F) 165	ASTM D-648
Taber Abrasion	(grams) 0.03	Cs-10, 1000g, 1000 cycles
Flammability Rating*:		
Federal Aviation	Passes @ 0.040"	FAR 25.853a ¹
Federal Aviation	Passes @ 0.040"	FAR 25.853b ²
Smoke Density*	Ds @ 4min. 100 @ 0.125" 135 @ 0.040"	ASTM F 814 ³
OSU Heat Release*		
Peak (kW/m ²) (0.125")	50	ASTM E-906
Peak (kW/m ²) (0.040")	35	
2 min total (kW-min/m ²) (0.125")	45	
2 min total (kW-min/m ²) (0.040")	50	

† Color Dependent

¹ FAR Part 25, Appendix F, Part I, Section (a)(1)(i)

² FAR Part 25, Appendix F, Part I, Section (a)(1)(ii)

³ Currently ASTM E-662

* 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.

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