



# AEROSPACE-RATED THERMOPLASTIC SHEET

From seats, trays, bulkheads and window shades to lavatory parts, galley carts and flooring, there are a lot of essential parts that go into the interior of an aircraft. Spartech meets all these design challenges with RoyalAero™ aerospace-rated thermoplastic sheet.





# Plastics help innovative ideas take off.

## RoyalAero™ key characteristics

- High tensile strength and stiffness for superior impact resistance
- Excellent formability, hot tear strength, ductility and ability to maintain uniform wall thickness
- Resists staining, fading, cracking and crazing caused by harsh cleansers
- Meets heat deflection temperature requirements
- Available in 0.028"– 0.375" thickness
- Recyclable (can be designed with up to 100% recycled content)
- Available in standard and custom colors, thicknesses and sizes. Standard and custom colors are only available on the top "A" side of the extruded sheet.  
*(Substrate would be made of a range of recycled colors: black, white, beige or gray)*



## Fire-rated and other specialty sheet solutions.

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### **The highest quality, fire rated materials engineered specifically for commercial aircraft interiors.**

With aerospace customer relationships that date back 30+ years, Spartech has the proven expertise to create safe and secure environments for both passengers and crew – all while using recyclable materials and pursuing new environmentally conscious production processes.



### **RoyalAero™ solution benefits:**

- Broadest range of performance engineered materials
- A full palette of custom colors and wide array of textures
- Material and formulation expertise
- Ability to customize and advance new product solutions
- Understanding of applications and end use markets
- Trim buyback program reduces landfill waste and recycles material into RoyalAero™ products
- Products can be designed to contain recycled content, achieving the highest and best use of trim material
- Broad range of fire-rated, regulatory-compliant products for aircraft interior components

## Prepackaged warehouse sheet for interior aircraft cabin and seat components

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RoyalAero™ thermoplastic sheet provides a fire-rated, rigid acrylic/PVC solution that combines very high impact strength, tensile strength, stiffness and hardness with excellent formability. RoyalAero™ has unique characteristics such as outstanding chemical resistance and deep-draw formability. These are some of the many reasons it's the perfect application choice for interior aircraft cabins and seat components.





ROYALAERO™ THERMOPLASTIC SHEET			
PRODUCT	MATERIAL	DESCRIPTION/APPLICATIONS	SPECIFICATIONS
R12	ABS	High temperature <b>Applications:</b> Interior thermoformed parts for military aircraft and helicopters where a high HDT is required.	All-purpose thermoforming grade
R20	ABS	High impact, low temperature <b>Applications:</b> Interior thermoformed parts for military aircraft and helicopters where cold temperature high impact is required	Notched Izod Impact (ft-lb/in) @ 70° F = 8.0 @ -30° F = 5.0
R52	PVC/Acrylic	Fire-rated PVC/Acrylic rigid sheet <b>Applications:</b> Aircraft cabin and seat components	Listed: UL 94 V-0 @ 0.027" Listed: UL 94-5VA @ 0.051" Passes: FAR 25.853 (a)(i) @ 0.040" Class A: ASTM E84 @ 0.028", bonded
R57	PVC/ABS	Fire-rated PVC/ABS rigid sheet <b>Applications:</b> Aircraft cabin and seat components	Passes: FAR 25.853 (a)(ii) @ 0.047"
R503	TPR	Fire-rated TPR flexible sheet <b>Applications:</b> Aircraft interior, aircraft flooring	Passes: FAR 25.853 (a)(ii) @ 0.120"
R60	PVC/Acrylic	Fire-rated PVC/Acrylic rigid sheet <b>Applications:</b> Aircraft cabin and seat components	Passes: FAR 25.853 (a)(i) @ 0.040"
R105	PVC/Acrylic	Soft vinyl foam laminated to PVC/Acrylic <b>Applications:</b> Aircraft seat components	Passes: FAR 25.853(a)(i) & FAR 25.853(a)(ii)
R552	PVC/Acrylic	100% Recycled option fire-rated PVC/Acrylic <b>Applications:</b> Aircraft cabin and seat components	Listed: UL 94 V-0 @ 0.031" Listed: UL 94 5VA @ 0.094" Passes: FAR 25.853 (a)(i) @ 0.040"
R557	PVC/ABS	100% Recycled option for Fire-rated PVC/ABS Benefits are lighter weight and higher HDT <b>Applications:</b> Aircraft cabin and seat components	Passes: FAR 25.853 (a)(ii) @ 0.047"
R755	PVC/Acrylic	Fire-rated PVC/Acrylic rigid sheet <b>Application:</b> Aircraft cabin and interior parts	Passes: FAR 25.853(d) part (V) & (IV)



# Engineered for aircraft project success

RoyalAero™ offers aircraft manufacturers a complete range of FAA-compliant sheet products. These materials deliver superior stiffness, high impact strength, and tensile strength. RoyalAero™ is also engineered to meet your exact formability and ductility specifications.

In addition, RoyalAero™ is a lightweight material. This reduction in weight allows for lower overall production costs for aircraft manufacturers and reduced operating costs and fuel consumption for aircraft operators.

## Seven Key Applications

### SEAT BACKS

Provides high tensile strength and stiffness for superior impact resistance.



### WINDOW SHROUDS

Excellent formability, hot tear strength, and ductility.



## TRAY TABLES



Resists staining, fading, cracking, and crazing that may be caused by harsh cleansers.

## ARM RESTS

Ability to maintain uniform wall thickness and available in 0.028" - 0.375" thickness.



## WALL PANELS



Choose from a variety of surface textures, colors, and printed patterns.

## LAVATORY COMPONENTS

Antimicrobial protection options available.



## GALLEY AND FLOORING COMPONENTS

Delivers the required durability, abrasion resistance, and sound abatement.



## One mission: To make it better.

Partner with Spartech means working with experienced team of aerospace material engineers, technicians and service representatives —all aligned in their commitment to determine the best solution for your needs.

Our reliable supply chain, 90,000 sq. ft. innovation center, and prototyping capabilities make us a “one

stop shop” for production, testing, and innovation. We have systems in place to manage the increased compliance requirements for the aerospace industry and provide materials that align with your sustainability mission. At Spartech, we have one mission: To make it better.



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We are a leading thermoplastic solutions manufacturer that leverages our knowledge of materials, processing, and application development to deliver the highest level of value to our customers.