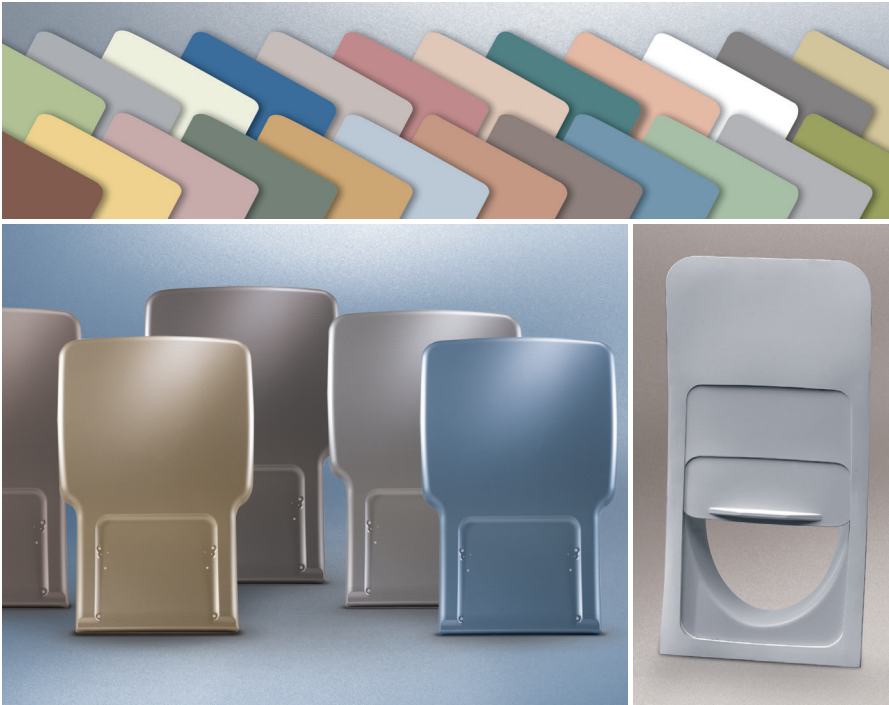


BOLTARON® 9815F

FAR-Rated High Impact Resistant Film and Thin-Gauge Sheet

Thin-gauge companion to Boltaron® 9815E for thermoforming and two- and three-dimensional laminating. Exceptional impact strength and color, texture range.



Identical to extruded Boltaron® 9815E in performance, Boltaron® 9815F is calendered to thinner gauges of 0.010 to 0.035 in. (0.25 to 0.89 mm) for thermoforming and laminating. It meets FAR 25.853(a) and FAR 25.853(d) for smoke density and heat release.

This proprietary thermoplastic alloy sheet has notched Izod impact resistance of 5.0 ft-lb/in. (265 J/m) vs. competitive 65/65 rated products that measure 3.0 ft-lb/in. (159 J/m), improving durability and service life of interior components.

Highly consistent in thermoforming, it maintains wall thickness integrity in deep draws and sharp corners. The consistently uniform quality of the thin-gauge sheet also ensures optimum appearance in flat surfaces and complex formed parts.

Boltaron® 9815F is available in the same wide range of colors and low quantity minimums as 9815E. Two available surface textures match 9815E, and another complements it.

The Boltaron impact resistant FAR 25.853(d) rated product family includes 9815E extruded sheet, 9815M in metallic finishes, 9815D with unlimited decorative patterns, 9815P in the widest range of textures and 9815F film and thin-gauge sheet for two- and three-dimensional laminating, and Boltaron® 9850 with a 50/50 rate of heat release.

Advantages

- Can be laminated to flat or three-dimensional metal, FRP or thermoplastic substrates
- 66% Greater impact resistance than other 65/65 thermoplastic alloy sheet
- Uniform high quality appearance
- Full color range
- Lot-to-lot color consistency

Proven Applications

- Instrument panel housings
- Class dividers
- Bulkhead laminates
- Galley and lavatory components
- Bull noses, gap covers, moldings
- Sidewall and kick panels
- Window reveals
- Seat parts, backs, arm rests
- Tray tables
- Passenger Service Units (PSUs)
- Light housings
- Video monitor shrouds
- Life vest shrouds
- Air ducts

Configurations

- Sheet sizes
 - Lengths to 120 in. (3,048 mm)
 - Widths to 60 in. (1,524 mm)
 - Gauges from 0.010 to 0.040 in. (0.25 to 1.02 mm)
 - Custom sizes, gauges on request
 - Rolls available on request in gauges ≤ 0.040 in. (1.02 mm)
- Colors, textures
 - Full color range
 - 500 lb minimum
 - Surface textures:
 - + Abrasion Resistant (AR) complements 9815E Sand (SA)
 - + Matte/Matte complements 9815E Coarse Matte (CM)



PROPERTIES, FAR RATINGS

PROPERTY	TEST METHOD*	TYPICAL VALUES	
Specific Gravity	ASTM D792	1.490	
Tensile Strength	ASTM D638	5,500 psi	38 MPa
Flexural Strength	ASTM D790	8,700 psi	60 MPa
Flexural Modulus	ASTM D790	410,000 psi	2,827 MPa
Izod Impact (notched) @ 73 °F (23 °C)	ASTM D256	5.0 ft-lb/in.	265 J/m
Hardness Rockwell	ASTM D785	107	
Heat Deflection (annealed)	ASTM D648	170 °F @ 264 psi	77 °C @ 1.8 MPa
Thermal Expansion	ASTM D696	1.67 x 10 ⁻⁵ /°F	3 x 10 ⁻⁵ /°C

FAR RATINGS

Flammability		
Vertical burn, 60 sec	FAR 25.853(a)(i)	PASS
Vertical burn, 12 sec	FAR 25.853(a)(ii)	PASS
OSU Heat Release		
Peak - HRR, kW/m ²	FAR 25.853(d)(Part IV)	<65
2 Min - HRR, KW-min/m ²		<65
NBS Smoke		
Ds @ 1.5 min	FAR 25.853(a)(Part V)	<100
Ds @ 4 min		<200

*Independent lab tests. All tests at 73 °F (22.8 °C) in dry conditions unless otherwise noted.

BOLTARON® FAR RATED SHEET PRODUCTS

Impact resistant FAR 25.853(d) sheet grades - opaque

- Boltaron® 9815E: Extruded, full range of colors, textures
- Boltaron® 9815D: Decorative patterns, textures
- Boltaron® 9815M: Metallic surface finish
- Boltaron® 9815F: Film, thin-gauge sheet
- Boltaron® 9815P: Custom textures
- Boltaron® 9850: 50/50 RHR

Enhanced performance grades

- Boltaron® 4205: Superior temperature resistance
- Boltaron® 4330: Superior impact resistance
- Boltaron® 4800: FAR smoke emissions & flame rated

Translucent grades

- Boltaron® 4350: Custom routed parts
- Boltaron® 9816: Custom routed parts; FAR 25.853(a), (d)
- Boltaron® 9916: Custom routed parts, fully compliant

Window shade grades

- Boltaron® 9200/9200C
- Boltaron® 9250/9250C: Higher temperature

Additional Boltaron FAR-rated grades

- Boltaron® 6800E

THERMOFORMING GUIDELINES

Mold Shrinkage	0.5 - 0.7%	
Forming Temperature	335 - 370 °F	168 - 188 °C
Typical Heater Settings	30 - 50% Top	50 - 70% Bottom
Drying	Not Required	

SIMONA offers the widest product range of PVC sheet and rod – FM 4910 rated sheet – chemical resistant materials from PVC, PP and PE to fluoropolymers – orthotics and prosthetics sheet – Boltaron aircraft sheet – plus proven products for boat building, outdoor furniture and many other industries.

DISCLAIMER AND LIMITATION OF WARRANTY:

All information contained herein is believed by SIMONA AMERICA Inc. to be reliable. Typical properties are based on laboratory tests conducted on material samples in accordance with standard test methodology. SIMONA AMERICA Inc. makes no express or implied warranty that its products will perform in accordance with the data in all conditions and circumstances. To determine suitability for use, users must test applications under actual operating conditions. As a result, ALL EXPRESS OR IMPLIED WARRANTIES IN CONNECTION WITH SIMONA AMERICA INC. and BOLTARON PRODUCTS INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED.

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