

## BOLTARON® 9815M

### *FAR-Rated High Impact Resistant Metallic-Finish Sheets*

**Advanced technology permanently integrates a durable metallic cap layer and a color-matched substrate for a deeper, richer appearance than metallic-colored monolithic sheet. Higher impact strength improves service life.**



FAR-rated Boltaron® 9815M sheet offers an exceptional combination of design freedom, aesthetics, thermoforming consistency and long service life for aircraft interiors.

This proprietary thermoplastic alloy sheet meets FAR 25.853(a) and FAR 25.853(d) for smoke density and heat release. With Izod impact strength of 5.0 ft-lb/in. (265 J/m), it easily outperforms competitive 65/65 compliant products rated at 3.0 ft-lb/in. (159 J/m).

Unlike monolithic metallic sheet in which opaque color pigments obscure a high percentage of metallic pigments, Boltaron metallic sheet permanently fuses an opaque color substrate with a matching clear grade containing only metallic pigments. The result: a unique and dramatically superior level of depth and reflectivity.

Because the cap film is a “metallized” version of its 9815 substrate color, designers have access to metallic finishes in Boltaron sheet’s exceptionally wide range of colors.

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

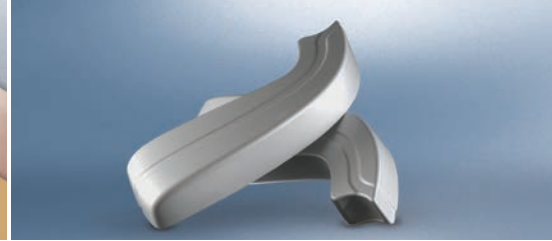
- 66% Greater impact resistance than other 65/65 thermoplastic alloy sheet
- Deeper, richer durable metallic finish
- Uniform high quality appearance
- Wall thickness integrity in deep draw forming
- Full range of metallic colors, finishes
  - Low minimums
- Lot-to-lot color consistency

#### 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: 99 in. or 122 in. (2,514 or 3,099 mm)
  - Widths: 50 in. (1,270 mm)
  - Gauges from 0.040 to 0.250 in. (1.02 to 6.35 mm)
  - Custom blank sizes, gauges on request
- Colors, textures
  - Full range of colors
  - Industry’s widest range of textures
  - 500 lb minimum



**PROPERTIES, RATINGS**

PROPERTY	TEST METHOD*	TYPICAL VALUES	
Specific Gravity	ASTM D792	1.574	
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	197 °F @ 264 psi	91.7 °C @ 1.8 MPa
Thermal Expansion	ASTM D696	1.67 X 10 <sup>-5</sup> /°F	3 X 10 <sup>-5</sup> /°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 <sup>2</sup>	FAR 25.853(d)(Part IV)	<65
2 Min - HRR, kW-min/m <sup>2</sup>		<65
NBS Smoke		
Ds @ 1.5 min	FAR 25.853(d)(Part V)	<100
Ds @ 4 min		<200

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

**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	

**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

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.

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