

Quintium™

Transparent Armor

PROPRIETARY POLYMERS

Q17 Thermoset Castable Armor

Can be used as a transparent, optically clear armor or a reinforced, opaque, castable armor for many various applications.

Key Properties

- Impact resistance and kinetic energy absorption exceeds all other available transparent polymers: Unrivaled multi-hit performance
- Light transmission (clarity) exceeds most industry standards
- **Less Weight:** approximately ½ of ballistic glass, Effective weight reduction of 30% - 40% in transparent ballistic and blast armor systems
- High abrasion resistance
- Unlike most other ballistic-resistant polymers, it is resistant to chemical solvents and aromatic hydrocarbons (e.g. gasoline)
- Polymer re-closes after ballistic penetration, resulting in unrivaled multi-hit performance

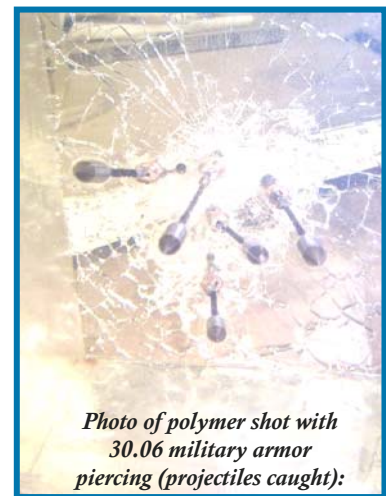


Photo of polymer shot with 30.06 military armor piercing (projectiles caught):



APPLICATIONS INCLUDE:

Bullet-resistant windows for vehicles & building; hurricane windows; forced entry resistant glazings; transparent structures & components; blast-resistant transparencies and personal armor shielding.



RESEARCH ANALYSIS

THE
CLEAR
CHOICE

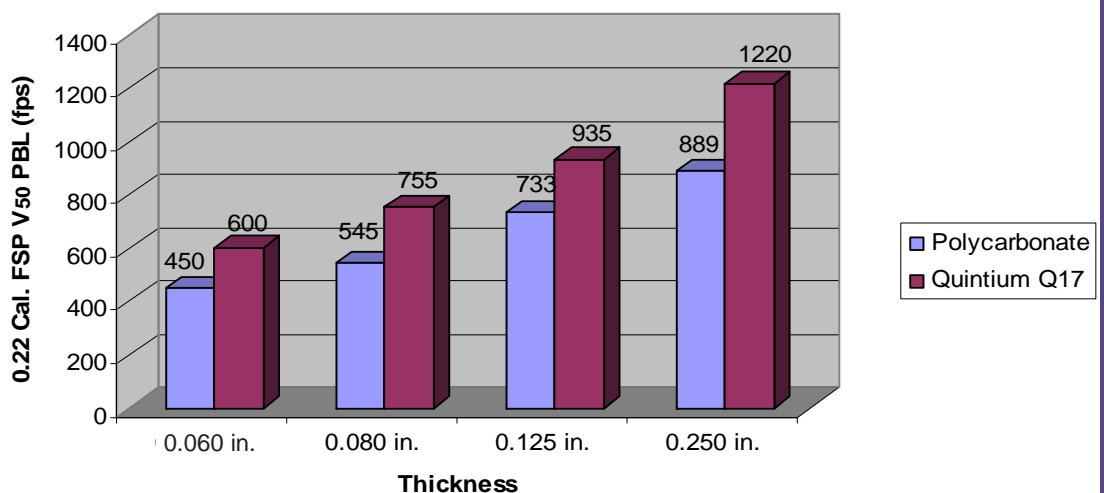
Property	Units	Acrylic As-Cast	Polycarbonate	Quintium Q17
Physical Properties				
Specific Gravity	-	1.2	1.2	1.11
Hardness	D scale	92-93	84-86	81-82
Abrasion, 200 cycles	Δ% Haze	43.2	47.9	14.6
HDT	°F	212	276	275
	°C	100	136	135
Stress Craze Resistance (Isopropyl alcohol)	Psi	3,800	4,000	>7,000
Ballistic Data				
V50, 0.22 Caliber, 17 grain, fragment simulating projectile (FSP, 0.25 inch)	Ft/sec	775	889	1,220
Optical Properties				
Luminous Transmittance	%	91	89	90
Haze	%	1.0	0.8	0.33
Refractive Index	-	1.490	1.586	1.538



Light Weight
Multi Hit Protection

V50 PBL Data

Quintium™ Q17—Ballistic Performance



* Quintium is a trademark of QD Products, LLC

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