

PolyOne

Industry Bulletin

Cell Cast Acrylic



**POLYCAST™ Cell Cast Acrylic
Bullet Resistant**

Ballistics protection with superior
optical clarity

70 Carlisle Place
Stamford, CT 06902
1-800-243-9002 • 203-327-6010
Fax: 1-800-631-4005 • Int'l. Fax: 203-323-2925

www.dss.polyone.com/polycast
polycast.marketing@polyone.com

Level #1
MP 1.25

MP 1.25 is one of our thinnest and lightest bullet resisting products. It protects against handguns of medium power, such as the 9 mm and Super 38 Automatic — any handgun with a muzzle energy of 380 to 460 foot-pounds. It is offered with and without Polycast SAR Super Abrasion-Resistant coating.



Protection - 9 mm

Optical Properties - Transmission: >90%; Haze <1%

U.L. Designation - 752, Level 1

Thickness - 1.25"

Polycast SAR™ Coating - Optional

Available in Tints

Weight* - 7.7

Sizes

4' x 6'

4' x 8'

5' x 6'

5' x 8'

6' x 6'

6' x 8'

6' x 10'

Level #2
HP 1.25

For thin, light, crystal-clear protection against high-power handguns, it's tough to beat HP 1.25. It protects against handguns such as the .357 magnum and others with a muzzle energy of 548 to 663 foot-pounds. Polycast SAR Super Abrasion-Resistant coating is standard.



Protection - .357 Magnum

Optical Properties - Transmission: >90%; Haze <1%

U.L. Designation - 752, Level 2

Thickness - 1.378"

Polycast SAR™ Coating - Standard

Weight* - 8.5

Sizes

4' x 6'

4' x 8'

5' x 6'

5' x 8'

6' x 6'

6' x 8'

6' x 10'

*pounds per square foot in 1.750" uncoated

Level #3 SP 1.25

Polycast also offers ballistics protection and superior optical clarity against virtually all handguns, including those of super power, such as the .44 magnum. An abrasion resistant coating is standard and the sparkling clarity after machining and polishing outshines all products in it's class. Our unique design for Polycast SP 1.25 has proven to have ballistic protective capability which exceeds the criteria set forth in U.L. Level 3 requirements. If your specifications require protection from higher caliber and velocity, please feel free to contact Polycast.



Protection - .44 Magnum

Optical Properties - Transmission: >85%; Haze <1.5%

U.L. Designation - 752, Level 3

Thickness - 1.25

Polycast SAR™ Coating - Standard

Weight* - 7.7

Sizes

4' x 6'

4' x 8'

5' x 6'

5' x 8'

Level #6 SMG 1.25

Polycast also offers ballistics protection and superior optical clarity against multiple shots from a submachine gun, such as a 9mm Uzi. An abrasion resistant coating is standard and the sparkling clarity after machining and polishing outshines all products in its class. Our unique design for Polycast SMG 1.25 has proven to have ballistic protective capability which exceeds the criteria set forth in U.L. Level 6 requirements. If your specifications require protection from higher caliber and velocity, please feel free to contact Polycast.



Protection - Submachine-gun / Uzi

Optical Properties - Transmission: >85%; Haze <1.5%

U.L. Designation - 752, Level 6

Thickness - 1.25"

Polycast SAR™ Coating - Standard

Not Available in Tints

Weight* - 7.7

Sizes

4' x 6'

4' x 8'

The PolyOne Difference

PolyOne Designed Structures and Solutions is a premier supplier of specialized sheet solutions and has been manufacturing Polycast cast acrylic sheet for more than 30 years. Our standards consistently surpass the quality levels required by Military Material Specifications, and Polycast's optical clarity and sheet cleanliness are unmatched in the industry. Our team of engineers, technicians, sales members and customer service representatives are dedicated to meeting the present and future needs of both our customers and the demanding aerospace industry.

What Is "Bullet-Resistant" Sheet?

Underwriters' Laboratories (U.L.) defines "bullet-resisting" as: "protection against complete penetration, passage of fragments of projectiles, or (fragmentation) of the protective material to the degree that injury would be caused to a person standing directly behind the... barrier."

The Only Proven Deterrent

Of all the modern security devices used by banks—including silent alarms, cameras, dye packs—bullet-resisting barriers have been proven to be the only measure that deters crime before it happens.

Why You Need Protection - Now

There were 136 times as many armed bank robberies in the United States than there were approximately 50 years ago. 31% of all robberies left the victim injured. This year, there will be one convenience-store robbery for every two convenience stores in the country. This year, liability lawsuits resulting from employees injured in robberies will total in the tens of millions of dollars. This year, get Polycast — before you, your business, or one of your employees become a part of next year's statistics.

Why You Need Polycast

When choosing a bullet-resistant sheet, the four characteristics most often considered are: adequate protection, weight, optical clarity, and cost. When all those factors are considered together, Polycast is far superior to any other bullet-resistant material available. When you choose any product from the Polycast line, you're getting the best.

Abrasion Resistant

Polycast bullet resistant sheet is also available with a super abrasion resistant coating. Polycast SAR maintains 45 times the abrasion resistance of uncoated acrylic.

Lighter Weight

Polycast weighs 48% less than glass with the same U.L. rating, and slightly less than polycarbonate offering the same protection.

Superior Optical Quality

Crystal-clear, Polycast transmits significantly more light than bullet-resistant glass or polycarbonate. It is attractive in any environment, and will maintain its beauty over time.

More Design Flexibility

Polycast will not turn yellow, haze, degrade or turn brittle when exposed to the elements. And it can be cut to any size using standard tools without chipping or cracking. It can also be formed into curved shapes, and the edges can be polished to a beautiful clear luster, unlike polycarbonate, where edges turn black when polished. It is for these reasons that Polycast bullet resistant sheet is the clear favorite when it comes to machining and polishing.

MODERNplastics

"Setting the Standards in Plastics Distribution"[™]

ISO 9001:2008 and ISO 13485:2003 Certified

88 Long Hill Cross Road,
Shelton, Connecticut
06484 USA

ModernPlastics.com

sales@modernplastics.com

National Toll-Free: 800.243.9696

Phone: 203.333.3128

Fax: 203.333.4625

Copyright © 2014, PolyOne Corporation. PolyOne makes no representations, guarantees, or warranties of any kind with respect to the information contained in this document about its accuracy, suitability for particular applications, or the results obtained or obtainable using the information. Some of the information arises from laboratory work with small-scale equipment which may not provide a reliable indication of performance or properties obtained or obtainable on larger-scale equipment. Values reported as "typical" or stated without a range do not state minimum or maximum properties; consult your sales representative for property ranges and min/max specifications. Processing conditions can cause material properties to shift from the values stated in the information. PolyOne makes no warranties or guarantees respecting suitability of either PolyOne's products or the information for your process or end-use application. You have the responsibility to conduct full-scale end-product performance testing to determine suitability in your application, and you assume all risk and liability arising from your use of the information and/or use or handling of any product. POLYONE MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, either with respect to the information or products reflected by the information. This data sheet shall NOT operate as permission, recommendation, or inducement to practice any patented invention without permission of the patent owner.