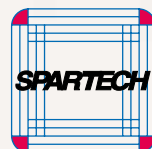


HOW YOU FEEL ABOUT
POLYCAST BULLET-RESISTANT SHEET
DEPENDS ON WHICH SIDE YOU'RE ON.



Spartech Polycast
Cell Cast Acrylic

BULLET-RESISTANT SHEET

HOW TO SEPARATE THE GOOD GUYS FROM THE BAD GUYS.

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 RESISTANCE

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 CLARITY

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.

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.

Polycast is recognized the world over for its commitment to customer service and technical assistance. Please feel free to contact Polycast at any stage, from design and specification to fabrication, installation and care. For assistance, please call 1-800-243-9002.



<u>Protection</u> 9 mm	<u>Thickness</u> 1.25	<u>Weight*</u> 7.7
<u>Optical Properties</u> Transmission: >90% Haze <1%	<u>Polycast SAR™</u> <u>Super Abrasion-Resistant Coating</u> Optional	<u>Sizes</u> 4' x 6' 4' x 8' 5' x 6' 5' x 8' 6' x 6' 6' x 8' 6' x 10'
<u>U.L. Designation</u> 752, Level 1	<u>Available in Tints</u>	

*pounds per square foot

TYPICAL PROPERTIES OF POLYCAST® SAR™MP 1.25 (UL LEVEL 1)

Code ratings and Standards:

Meets the test requirements of Building Code class CC2, ANS, Z97.1-Safety Glazing Material, ANS, Z26.1-Motor Vehicle Safety Glazing Material, Dade County Approval, Federal Specification L-P-391D+ ASTM D 4802.

Maximum Continuous Service Temperature:

170° F

Minimum Continuous Service Temperature:

-26° F (lowest temperature tested for bullet-resistance)

	Value	Test Method
<u>Ballistic Protection</u>	9mm	UL 752
<u>Optical Properties</u>		
Light Transmission	>90%	ASTM D1003
Haze	<1.0%	ASTM D1003
Yellowness Index	<0.7%	ASTM D1925
<u>Mechanical Properties</u>		
Thickness	1.250in.	
Weight	7.7 #/sq.ft.	
Abrasion Resistance(coated)	0.2 to 2.0 (%haze change)	Taber 100 cycles
Abrasion Resistance(uncoated)	14 (%haze change)	Taber 100 cycles
Tensile Strength	9,500 psi	ASTM D638
Tensile Modulus	400,000 psi	ASTM D638
Flex Modulus	400,000 psi	ASTM D790
<u>Flammability</u>		
Burn Rate	1.2in./min	ASTM D635
Smoke Density	Max: 8%; Rating: 5%	ASTM D2843
Auto Ignition Temperature	465° C (870° F)	ASTM D1921

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.

Polycast is recognized the world over for its commitment to customer service and technical assistance. Please feel free to contact Polycast at any stage, from design and specification to fabrication, installation and care. For assistance, please call 1-800-243-9002.



<u>Protection</u> .357 Magnum	<u>Thickness</u> 1.378	<u>Weight*</u> 8.5
<u>Optical Properties</u> Transmission: >90% Haze <1%	<u>Polycast SAR™</u> <u>Super Abrasion-Resistant Coating</u> Standard	<u>Sizes</u> 4' x 6' 4' x 8' 5' x 6' 5' x 8' 6' x 6' 6' x 8' 6' x 10'
<u>U.L. Designation</u> 752, Level 2		

*pounds per square foot also available in 1.750" uncoated

TYPICAL PROPERTIES OF POLYCAST® SAR™ HP 1.25 (UL LEVEL 2)

Code ratings and Standards:

Meets the test requirements of Building Code class CC2, ANS, Z97.1-Safety Glazing Material, ANS, Z26.1-Motor Vehicle Safety Glazing Material, Dade County Approval, Federal Specification L-P-391D+ ASTM D 4802.

Maximum Continuous Service Temperature:

170° F

Minimum Continuous Service Temperature:

-26° F (lowest temperature tested for bullet-resistance)

	Value	Test Method
<u>Ballistic Protection</u>	.357 Magnum	UL 752
<u>Optical Properties</u>		
<u>Light Transmission</u>	>90%	ASTM D1003
<u>Haze</u>	<1.0%	ASTM D1003
<u>Yellowness Index</u>	<0.7%	ASTM D1925
<u>Mechanical Properties</u>		
<u>Thickness</u>	1.378in.	
<u>Weight</u>	8.5#/sq.ft.	
<u>Abrasion Resistance</u>	0.2 to 2.0 (%haze change)	Taber 100 cycles
<u>Tensile Strength</u>	9,500 psi	ASTM D638
<u>Tensile Modulus</u>	400,000 psi	ASTM D638
<u>Flex Modulus</u>	400,000 psi	ASTM D790
<u>Flammability</u>		
<u>Burn Rate</u>	1.2in./min	ASTM D635
<u>Smoke Density</u>	Max: 8%; Rating: 5%	ASTM D2843
<u>Auto Ignition Temperature</u>	465° C (870° F)	ASTM D1921

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.

Polycast is recognized the world over for its commitment to customer service and technical assistance. Please feel free to contact Polycast at any stage, from design and specification to fabrication, installation and care. For assistance, please call 1-800-243-9002.



Protection .44 Magnum	Thickness 1.25"	Weight** 7.7
Optical Properties Transmission: >85% Haze <1.5%	Polycast SAR™ Super Abrasion-Resistant Coating Standard	Sizes 4' x 6' 4' x 8' 5' x 6' 5' x 8'
U.L. Designation 752, Level 3		

*pounds per square foot
Patent Pending

TYPICAL PROPERTIES OF POLYCAST® SAR™ SP 1.25 (UL LEVEL 3)

Code ratings and Standards:

Meets the test requirements of Building Code class CC2, ANS, Z97.1-Safety Glazing Material, ANS, Z26.1-Motor Vehicle Safety Glazing Material, Dade County Approval, Federal Specification L-P-391D+ ASTM D 4802.

Maximum Continuous Service Temperature:

170° F

Minimum Continuous Service Temperature:

-26° F (lowest temperature tested for bullet-resistance)

Acryshield L3™
Bullet-Resistant to Level 3

	Value	Test Method
Ballistic Protection	.44 Magnum	UL 752
Optical Properties		
Light Transmission	>85%	ASTM D1003
Haze	<1.5%	ASTM D1003
Yellowness Index	<1.0%	ASTM D1925
Mechanical Properties		
Thickness	1.250in.	
Weight	7.7 #/sq.ft.	
Abrasion Resistance(coated)	0.2 to 2.0 (%haze change)	Taber 100 cycles
Tensile Strength	9,400 psi	ASTM D638
Tensile Modulus	400,000 psi	ASTM D638
Flex Modulus	400,000 psi	ASTM D790
Flammability		
Burn Rate	.23in./min	ASTM D635
Smoke Density	Max: 65%; Rating: 49%	ASTM D2843
Auto Ignition Temperature	465° C (870° F)	ASTM D1921

EASY INSTALLATION FOR ANY APPLICATION

Polycast is easy and inexpensive to install and provides superior protection anywhere money changes hands or valuables are on display.



Polycast crystal-clarity provides a beautiful environment that makes customers feel safe, not confined.



Polycast also provides high-impact resistance that foils "smash-and-grab" thieves.



Because Polycast sheet can be easily cut, drilled, and curved, it can be formed to almost any shape. Because it's so light, it can be configured as a free-standing wall.

SPARTECH POLYCAST PORTRAIT OF A LEADER

Spartech Polycast, a division of Spartech Corporation, is a leading manufacturer of high-performance, cell-cast acrylic sheet, rods, and tubes used in a variety of specialty and commercial applications. The company and its products have a world-wide reputation for quality and service in the specialty transparency markets. Specialty applications include materials for aerospace canopies and windows, transparent ballistic enclosures, and plastic optical components.



Spartech Polycast
Cell Cast Acrylic

BULLET-RESISTANT SHEET

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

Visit our website at
www.spartech.com

or email us at
polycast.marketing@spartech.com



ISO 9001:2000
FM 76298

Made in the
USA

Important Information
NO WARRANTY OR MERCHANTABILITY OR FITNESS FOR ANY PURPOSE IS EXPRESSLY MADE OR SHOULD BE IMPLIED WITH RESPECT TO THIS PRODUCT. POLYCAST WILL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.
Security is relative. While varying degrees of security can be provided, absolute protection cannot be achieved. The bullet-resistant capability of Polycast cell-cast acrylic, as set forth herein, is based upon data from the specific Underwriters' Laboratories test described. This data is intended to help the security expert determine the degree of security available to him, rather than as an indication that any acrylic or other appropriate material can render absolute protection for people against bullets. Each user of the material should conduct their own tests to determine the suitability of the material for its particular application. Improper procedures during fabrication can result in reduced impact resistance.
Acrylic sheet is a combustible material. The user must observe the same fire precautions when using, storing, or handling acrylics as for wood or other combustible materials.