



Makrolon® Hygard
Lightweight solution. Perfect protection. Great selection.



makrolon®
Hygard

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What is Makrolon® Hygard?

This name stands for transparent, multilayer laminated polycarbonate or polycarbonate/acrylic sheets. They afford excellent protection against forced entry and firearms, and offer clear economic and functional advantages over bullet-proof glass.

What are the benefits of Makrolon® Hygard?

Makrolon® Hygard sheets are:

- highly resistant. Even when exposed to violent impact, they form no dangerous slivers or “spider webs”.
- a real alternative to bullet-proof glass, owing to their low weight and good price/performance ratio.
- extremely durable. They are characterised by superior abrasion resistance, resistance to extreme temperatures and outstanding UV protection.
- equivalent transparency and light transmission to bullet-proof glass.

Where is Makrolon® Hygard used?

Makrolon® Hygard is employed wherever special protection is required for persons and/or objects. These include high-level security areas such as banks, jeweller's shops, prisons, court buildings or night desks. Other fields are possible targets for vandalism, e.g. museums or buildings with large glazed sections.

What special properties do the different grades offer?

Makrolon® Hygard is available in two basic grades: Containment Glazing (CG) and Bullet Resistant (BR and MS). Both grades are subdivided into different variants.

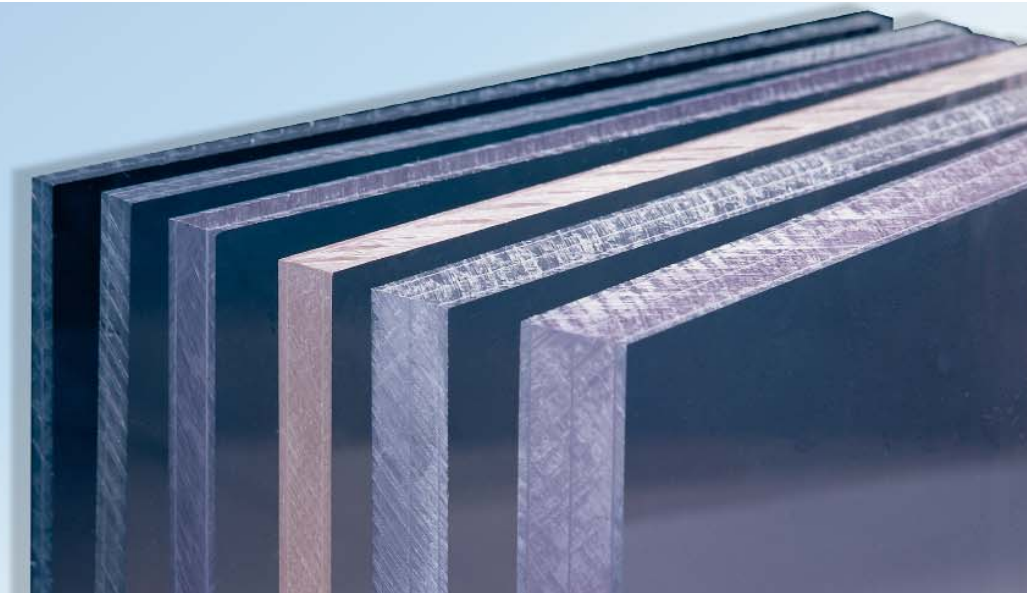
Makrolon® Hygard CG grades:

- Sheets specially developed to protect against forced entry. The sheets retain their stability even when exposed to attempted entry with heavy tools such as sledge hammers and axes.

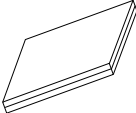
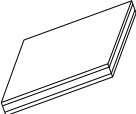
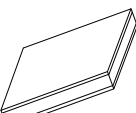
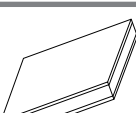
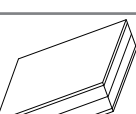


Makrolon® Hygard BR and MS grades:

- Sheets specially designed to protect against firearms. The BR and MS grades even withstand sustained fire from heavy automatic firearms, which means they meet the most stringent requirements for personal protection.





Makrolon® Hygard Safety all along the line – at a glance.

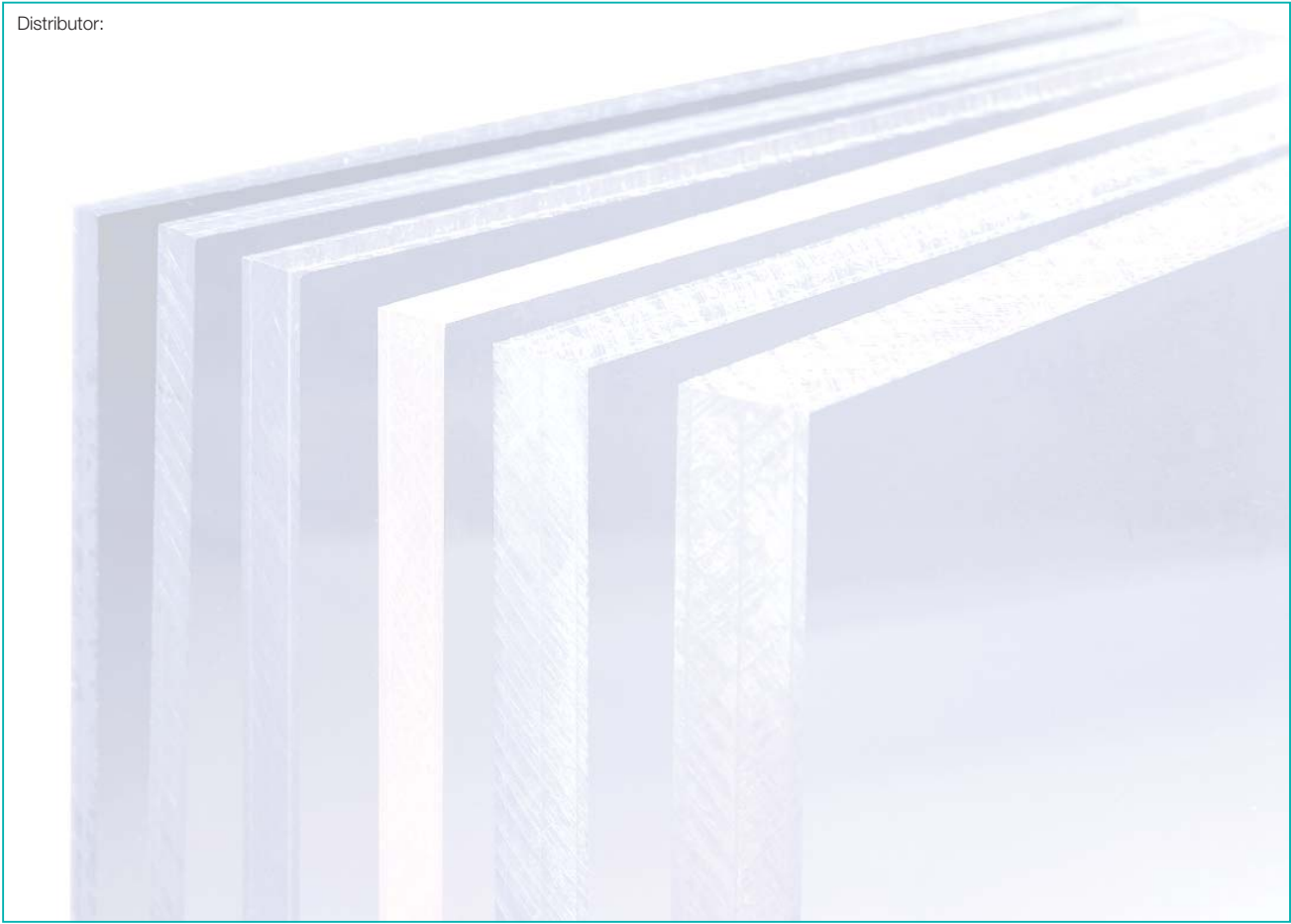
Profile	Name	Function	Thickness in mm	Weight in kg/m ²	Light transmission in %	Test results*
	CG 375	Protection against forced entry	10	12	86	<ul style="list-style-type: none"> • ASTM F1233 Class II, Step 12 • HPW TP 0500.02 Level A Ballistics (.38 special) • HPW Level II Step 11 • ASTM F1915-03 Grade 3
	CG 500	Protection against forced entry	13,5	16,2	83	<ul style="list-style-type: none"> • ASTM F1233 Class II, Step 15 • HPW TP 0500.02 Level A Ballistics (.38 special) • HPW Level II Step 12 • ASTM F1915-03 Grade 2
	CG 750	Protection against forced entry	20	24	77	<ul style="list-style-type: none"> • ASTM F1233 Class III, Step 26 • HPW TP 0500.02 Level B Ballistics 9 MM • HPW Level IV Step 31 • ASTM F1915-03 Grade 1
	BR 750	Protection against ballistic impact	20	24	88	<ul style="list-style-type: none"> • HPW TP 0500.02 Level B Ballistics 9 mm • UL Level 1 Ballistic
	BR 1000	Protection against ballistic impact	27	32,4	72	<ul style="list-style-type: none"> • HPW TP 0500.02 9 mm Level B Ballistics • UL Level 2 Ballistic • HPW Level V Step 42 • ASTM F1233 Class V
	BR 1250	Protection against ballistic impact	33	39,6	67	<ul style="list-style-type: none"> • HPW TP 0500.02 Level C Ballistics 44 Magnum • UL Level 3 Ballistic • ASTM F1915-03 Grade 1
	MS 1250	Protection against ballistic impact	33	39,6	75	<ul style="list-style-type: none"> • UL Level 6 Ballistic • EN 1063, Level BR4

*UL – Underwriters Laboratories Inc. (American insurance companies' test lab, which also awards labels for operational safety).

The values for forced entry and ballistic impact tests are listed in all Makrolon® Hygard product data sheets, which you can download at www.bayersheeteurope.com.

For further information on Makrolon® Hygard or other Bayer Sheet Europe products:

Distributor:



ideas, innovative, intelligent, interesting...

Bayer Sheet Europe i-line represents the next generation of quality products. This seal guarantees innovative and intelligent first-class solutions at all times for a multitude of requirements.



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