



ISOLAR
MULTIPACT®



**LAMINATED SAFETY
GLAZING FOR
CRYSTAL CLEAR
SECURITY**

**ISOLAR®
GLAS**

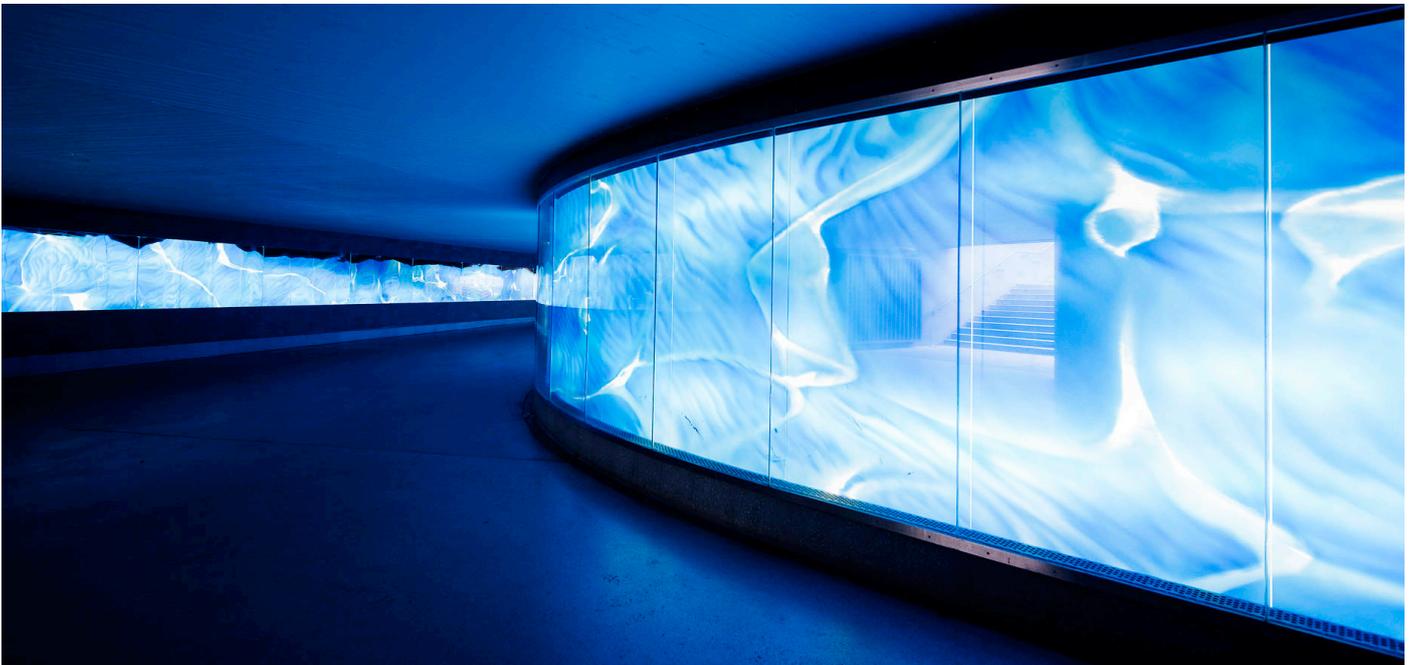
MEHR AUS GLAS

UNVITED GUESTS OR UNWANTED CRASHES – WHATEVER YOU WANT TO PROTECT YOURSELF FROM OUR MULTIPACT® SAFETY GLAZING PROVIDES YOU THE SECURITY YOU NEED TO LIVE AND WORK WITH GREATER PEACE OF MIND.

■ THE RIGHT GLASS TO SUIT EVERY NEED

Safety glazing protects people and animals when using properties with special safety requirements. Our MULTIPACT® laminated safety glass protects you in a variety of applications: whether they are standard applications, such as overhead glazing, glass floors and partitions, or are requirements for fall protection and attack resistance that need to be met. MULTIPACT® makes your home, store or office building safer – regardless of whether it is processed as an insulating glass unit or a monolithic glazing.

Our laminated safety glass consists of two or more layers of glass, which are bonded together with one or more elastic intermediate layers. This is usually a polyvinyl butyral (PVB) film. Depending on the requirements, the materials of the film differ: For example, there are softer films with sound-absorbing properties and particularly tear-resistant films for attack-resistant glazing. In addition, coloured films can be used to meet architectural preferences.



MULTIPACT® in an underpass in Wiesbaden, Germany.

■ STANDARD APPLICATIONS OF MULTIPACT®

Our MULTIPACT® laminated safety glazing can be used to realise partition walls, floors, stairs or roofs made of glass. One of the many ways in which our glass provides protection is by ensuring that in the event of glass breakage, no large glass elements fall onto the traffic areas below it.

For every construction project, safety starts with the planning. Out-fitting glass and window areas with safety glass can always be an important part of the overall design. In such a comprehensive security concept, the requirements for glass and window surfaces to provide protection against injury, falls, break-ins and attacks must be integrated in a sensible way.



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■ FALL PROTECTION GLAZING

In Germany, the requirements for fall protection glazing are defined in a standard. A fall is the unintentional falling down from or falling off through one surface onto another. People should therefore be protected from falling by appropriate vertical or horizontal glazing. Areas of application can be, for example, balcony parapet walls or floor-to-ceiling glazing above the ground floor. The fall protection function is only achieved through the combined action of glass, frame and the proper attachment to the building structure. According to DIN 18008-4, fall-protection glazing is divided into categories A, B and C, which differ in terms of their areas of application, the types of glass and glass structures that can be used, and additional requirements. Detailed information is available on request or as a download on our website.



■ ATTACK-RESISTANT GLAZING

MULTIPACT® insulating glass with impact-resistant or break-through resistant properties makes it more difficult for burglars and violent criminals to break through the glass and windows. The effort and time required for the attack are increased. Thus the “object of desire” already becomes uninteresting for the perpetrator. After damage by projectiles, striking tools or even after explosions or gunfires, the MULTIPACT® glazings, which have been tested to standards, still exhibit considerable stability. This too provides the required protection to persons and property. The test of attack-resistant properties is carried out in accordance with the European standards EN 356 (impact and penetration resistance) and EN 1063 (ballistic security).

The attack-resistant properties of MULTIPACT® are divided into the following four categories:

- MULTIPACT® PA
with impact resistant properties
- MULTIPACT® PB
with penetration resistant properties
- MULTIPACT® BR/SG
with bullet resistant properties
- MULTIPACT® ER
with blast resistant properties



MULTIPACT® at the Police Headquarters, Mönchengladbach, Germany.

SAFETY GLASS – THE KEY BENEFITS

- Reduction of the risk of injury
- High residual load bearing capacity for overhead application
- Improved sound insulation by the lamination film
- Protection of life and limb, possessions and property

TECHNICAL DETAILS AT A GLANCE

Product name	Glass construction Outer/Cavity/Mid/Cavity/Inner	EN 673	EN 410					Resistance class according to			Thick-ness mm	Weight kg/m ²
		U _g -Value W/(m ² K)	Light Transmission %	g-Value %	Light Reflection external %	Light Reflection internal %	Colour Rendering Index R _a	EN 356	EN 1063	EN 1522		
	MULTIPACT® / 8 P2A	44.2	5,5	89	79	8	8	98	P2A	-	-	8
MULTIPACT® / 9 P4A	44.4	5,4	89	78	8	8	98	P4A	-	RC 2	9	20
MULTIPACT® / 10 P5A	44.6	5,3	89	77	8	8	98	P5A	-	RC 3	10	20
MULTIPACT® / 12 P5A	55.6	5,3	88	76	8	8	98	P5A	-	RC 3	12	25
MULTIPACT® advance // 28 P2A	4 : / 16 / 44.2	1,1	80	61	12	11	97	P2A	-	-	28	30
MULTIPACT® advance // 29 P4A	4 : / 16 / 44.4	1,1	80	61	12	11	97	P4A	-	RC 2	29	30
MULTIPACT® advance // 30 P5A	4 : / 16 / 44.6	1,1	80	61	12	11	97	P5A	-	RC 3	30	30
MULTIPACT® advance // 32 P5A	4 : / 16 / 55.6	1,1	80	60	12	11	97	P5A	-	RC 3	32	35
MULTIPACT® / 15 P6B	15	5,1	87	74	8	8	98	P6B	-	RC 4	15	30
MULTIPACT® / 20 P7B	20	4,9	86	71	8	8	97	P7B	-	RC 5	20	38
MULTIPACT® / 25 P8B	25	4,7	85	68	8	8	96	P8B	-	RC 6	25	50
MULTIPACT® advance // 37 P6B	6 : / 16 / 15	1,1	78	59	11	11	96	P6B	-	RC 4	37	45
MULTIPACT® advance // 42 P7B	6 : / 16 / 20	1,1	77	59	11	11	95	P7B	-	RC 5	42	53
MULTIPACT® advance // 47 P8B	6 : / 16 / 25	1,1	76	59	11	11	94	P8B	-	RC 6	47	65
MULTIPACT® / 41 BR5-S	41	4,4	79	60	7	7	93	-	BR5-S	FB 5	41	94
MULTIPACT® advance // 69 BR5-NS	69	1,2	69	44	10	11	90	-	BR5-NS	FB 5	69	132

The following applies to the entire MULTIPACT® product range: In thicker glass packs, the intrinsic colour of glass becomes increasingly noticeable, which is why the design with glass products of particularly low intrinsic colour is particularly suitable for such applications. All MULTIPACT® types are also available as triple safety glass.

Product name	Glass construction Outer/Cavity/Mid/Cavity/Inner	EN 673	EN 410					DIN 18008	Thick-ness mm	Weight kg/m ²
		U _g -Value W/(m ² K)	Light Transmission %	g-Value %	Light Reflection external %	Light Reflection internal %	Colour Rendering Index R _a	Fall protection according to DIN 18008-4		
	MULTIPACT® advance // 1,1 ¹⁾	6 ESG / 16 / :44.2	1,1	80	63	11	11	97	A, C2, C3	31
MULTIPACT® advance // 1,1 ¹⁾	8 ESG / 16 / :55.2	1,1	79	61	11	11	96	A, C2, C3	35	45
MULTIPACT® advance // 1,1 ¹⁾	44.2 / 16 / :6 ESG	1,1	80	59	11	11	97	A, C2, C3	31	35
MULTIPACT® advance // 1,1 ¹⁾	44.2 / 16 / :8 ESG	1,1	79	59	11	11	97	A, C2, C3	35	40
MULTIPACT® advance // 1,1 ¹⁾	33.1 / 16 / :44.2	1,1	80	60	12	11	97	A, C2, C3	31	35
MULTIPACT® advance // 1,1 ¹⁾	44.1 / 16 / :44.2	1,1	79	59	11	11	97	A, C2, C3	33	40
MULTIPACT® advance // 1,1 ¹⁾	8 ESG / 16 / :66.2	1,1	78	61	11	11	96	A, C2, C3	37	50
MULTIPACT® advance /// 0,7 ¹⁾	44.2 : /12 / 4 / 12 / :6	0,7	72	49	14	14	96	A, C2, C3	47	45

1) Refer to AbP P-2020-3094 for permissible dimensions for each category.

AVAILABILITY AND COMBINATIONS:

- Available based on float glass, tempered safety glass and heat strengthened glass
- All assemblies available as alarm glass
- Can be combined as desired with decorative

CLEAR BENEFITIS WITH ISOLAR®

ISOLAR® is one of the largest associations of independent insulating glass manufacturers in Europe with members from twelve countries. Thanks to the close cooperation within the group, our products are constantly optimised and new developments are driven forward. You will find an ISOLAR® partner in your area as well, who will support you as an experienced full-range supplier with comprehensive consulting expertise and who will supply you with high-quality functional glass for windows and façades.



Heat insulation



Solar control



Bird protection



Design



Fire protection



Radio transparency



Sound insulation



Attack resistance



Safety glass



Fall protection

WE'RE HERE TO HELP.

ISOLAR Glas Beratung GmbH is your competent partner when it comes to glass. We turn your wishes into clear solutions. Ask us.

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www.isolar.de/en

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