



**PLEXIGLAS RESIST®**  
Solid Sheets

# PLEXIGLAS RESIST®

## A Successful Synthesis

PLEXIGLAS RESIST® sheets are high-quality, solid plastics sheets extruded from impact-modified acrylic (PMMA). They combine the excellent product properties of PLEXIGLAS® with the toughness of polycarbonate.

Instead of having to choose between WEATHER-RESISTANT **or** TOUGH, PLEXIGLAS RESIST® offers you a product that is both WEATHER-RESISTANT **and** TOUGH.



tough  
highly transparent  
brilliant  
weather-resistant

# Cost-Cutting Potential Through Custom-Tailored Solutions

## Impact Strength Made to Order

PLEXIGLAS RESIST® 45 offers three times the break resistance of conventional PLEXIGLAS® XT.

Compared to polycarbonate, PLEXIGLAS RESIST® 100 provides the same fracture test results, usually at a more advantageous cost.

For certain applications, the impact strength of PLEXIGLAS RESIST® 65\*\* and PLEXIGLAS RESIST® 75 is quite sufficient: This gives you customized solutions with further cost-cutting potential.

## PLEXIGLAS RESIST®: Customized impact strength and toughness

Impact strength\*



\*) Charpy impact strength



\*\*\*) Example: Protection of spectators in ice hockey stadiums

PLEXIGLAS RESIST® passes the puck resistance test (test certificate 46/901 869/Sm/C, FMPA, University of Stuttgart) **at a thickness of only 6 mm.**

This is an application for which only polycarbonate has so far been used, and then only in a comparable thickness, or non impact-modified acrylic in greater thicknesses.

Apart from the product benefits, all glazing experts will recognize the product advantages this represents, as well as the clear cost advantage (depending on supplier) offered by PLEXIGLAS RESIST® 65.

**It's well worth comparing products and prices!**

# PLEXIGLAS RESIST®

## Applications



### Protective Glazing

of a general nature, such as access protection and protective housings for machines and equipment

- optimum impact strength
- cost-effective
- a real alternative to polycarbonate
- highly transparent
- good chemical resistance
- high surface hardness



### Structural Glazing Outdoors

for bus shelters, bicycle parking areas and canopies

- highly weather-resistant and durable
- cold-curvable and thermoformable
- brilliant and highly transparent
- inexpensive; no additional UV protection needed (for example, for PC or PET-G)



### P.O.P. Displays and Sales Stands

for high-value merchandise

- brilliant and tough
- readily bondable
- thermoformable
- suitable for laser cutting and edge polishing



### Signage

for example, advertising signs, signboards, outdoor advertising pillars and vending machine glazing

- tough and resistant to vandalism
- permanently colorfast
- highly weather-resistant
- good bondability and processability

## Versatility for Professional Applications:

The unique combination of excellent mechanical, thermal and chemical properties makes PLEXIGLAS RESIST® a versatile, absolutely reliable material.



### Glazing for Shop Fittings and Counters

in shopping centers, hotels and catering areas

- safe for food-contact applications (FDA approval)
- brilliant
- good chemical resistance, resistant to most household cleaners
- suitable for laser cutting and edge polishing



### Vehicle Glazing

for utility vehicles such as excavators and forklifts, for motorcycle and motor scooter windshields and interior glazing in buses and trains

- licensed as a material for vehicle construction to DOT/ABG
- thermoformable (without pre-drying)
- low forming temperatures (low energy costs)
- optimum impact strength
- high surface hardness
- maximum weather resistance



### Partitions and Protective Screens

for example, for checkout areas in department stores and supermarkets

- individual impact strength
- high surface hardness
- brilliant
- highly transparent
- cost-effective
- a real alternative to polycarbonate

# PLEXIGLAS RESIST®

## Technical Data/Sales Range

### Property Comparison

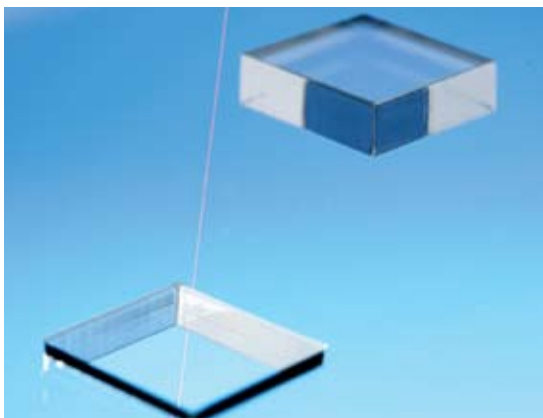
|   | PLEXIGLAS®XT | PLEXIGLAS RESIST® 45 | PLEXIGLAS RESIST® 65 | PLEXIGLAS RESIST® 75 | PLEXIGLAS RESIST® 100 | Polycarbonate | PETG        |
|---|--------------|----------------------|----------------------|----------------------|-----------------------|---------------|-------------|
| Charpy impact strength (kJ/m <sup>2</sup> ) | 15           | 45                   | 65                   | 75                   | no fracture           | no fracture   | no fracture |
| Elastic modulus (MPa)                       | 3300         | 2700                 | 2200                 | 2000                 | 1800                  | 2300          | 2100        |
| Light transmission $\tau_{D65}$ (%)         | 92           | 91                   | 91                   | 91                   | 91                    | 88            | 88          |

Typical values only

### Standard Sales Range/Sheet size: 3050 x 2050 mm

|  | Sheet thicknesses in mm |    |    |    |    |    |
|--|-------------------------|----|----|----|----|----|
|  | 2                       | 3  | 4  | 5  | 6  | 8  |
| <b>Colorless</b>   |                         |    |    |    |    |    |
| PLEXIGLAS RESIST® 45<br>PLEXIGLAS RESIST® 65<br>PLEXIGLAS RESIST® 75<br>Sheets per standard pallet | 40                      | 40 | 30 | 25 | 20 | 15 |
| PLEXIGLAS RESIST® 100<br>Sheets per standard pallet  |                         | 40 | 30 | 25 | 20 | 15 |
| <b>White</b>   |                         |    |    |    |    |    |
| PLEXIGLAS RESIST® 65<br>Sheets per standard pallet   |                         | 40 | 30 | 25 |    |    |

Special range: greater lengths, colors, other sizes, other degrees of impact strength, thicknesses up to 20 mm.



## Processing Advantages

PLEXIGLAS RESIST® can be processed like conventional PLEXIGLAS®. With its array of processing options, it affords substantial advantages over other impact-modified plastics products.

- easy to cut, drill and mill
- lends itself to laser cutting and
- edge polishing
- easy to bond
- thermoformable (without predrying)
- low forming temperatures
- cold-curvable

# Overview of Major Properties

We classify the comparative major properties of relevant plastics as follows:

|  | PLEXIGLAS        |            |            |            | Polycarbonate |                          | PETG                  |                          | PET                   |                          |                       |
|--|------------------|------------|------------|------------|---------------|--------------------------|-----------------------|--------------------------|-----------------------|--------------------------|-----------------------|
|  | PLEXIGLAS®<br>XT | RESIST® 45 | RESIST® 65 | RESIST® 75 | RESIST® 100   | without<br>UV protection | with<br>UV protection | without<br>UV protection | with<br>UV protection | without<br>UV protection | with<br>UV protection |
| Impact strength                                  | ▲                | ▲▲         | ▲▲<br>▲    | ▲▲<br>▲    | ▲▲<br>▲▲      | ▲▲<br>▲▲                 | ▲▲<br>▲▲              | ▲▲<br>▲▲                 | ▲▲<br>▲▲              | ▲▲<br>▲                  | ▲▲<br>▲               |
| Weather resistance                               | ▲▲<br>▲▲         | ▲▲<br>▲▲   | ▲▲<br>▲▲   | ▲▲<br>▲▲   | ▲▲<br>▲▲      | ▲                        | ▲▲<br>▲               | ▲                        | ▲▲                    | ▲                        | ▲▲                    |
| Brilliance                                       | ▲▲<br>▲▲         | ▲▲<br>▲▲   | ▲▲<br>▲▲   | ▲▲<br>▲▲   | ▲▲<br>▲▲      | ▲▲                       | ▲▲                    | ▲▲<br>▲                  | ▲▲                    | ▲▲                       | ▲▲                    |
| Rigidity   | ▲▲<br>▲▲         | ▲▲<br>▲▲   | ▲▲<br>▲    | ▲▲<br>▲    | ▲▲<br>▲       | ▲▲<br>▲                  | ▲▲<br>▲               | ▲▲<br>▲                  | ▲▲<br>▲               | ▲▲<br>▲                  | ▲▲<br>▲               |
| Chemical resistance                              | ▲▲<br>▲          | ▲▲<br>▲    | ▲▲<br>▲    | ▲▲<br>▲    | ▲▲<br>▲       | ▲▲<br>▲                  | ▲▲<br>▲               | ▲▲<br>▲                  | ▲▲<br>▲               | ▲▲<br>▲                  | ▲▲<br>▲               |
| Surface hardness                                 | ▲▲<br>▲▲         | ▲▲<br>▲▲   | ▲▲<br>▲▲   | ▲▲<br>▲    | ▲▲            | ▲▲                       | ▲▲                    | ▲▲                       | ▲▲                    | ▲▲                       | ▲▲                    |
| Suitability for laser cutting (CO <sub>2</sub> ) | ▲▲<br>▲▲         | ▲▲<br>▲▲   | ▲▲<br>▲▲   | ▲▲<br>▲    | ▲▲<br>▲       | -                        | -                     | ▲▲<br>▲                  | ▲▲<br>▲               | -                        | -                     |
| Bonding  | ▲▲<br>▲▲         | ▲▲<br>▲▲   | ▲▲<br>▲▲   | ▲▲<br>▲    | ▲▲<br>▲       | ▲▲<br>▲                  | ▲▲<br>▲               | ▲▲<br>▲                  | ▲▲<br>▲               | ▲                        | ▲                     |
| Thermoforming                                    | ▲▲<br>▲▲         | ▲▲<br>▲▲   | ▲▲<br>▲▲   | ▲▲<br>▲▲   | ▲▲<br>▲▲      | ▲▲                       | ▲▲                    | ▲▲<br>▲▲                 | ▲▲<br>▲▲              | ▲▲<br>▲▲                 | ▲▲<br>▲▲              |
| Food-contact approval                            | ▲▲<br>▲▲         | ▲▲<br>▲▲   | ▲▲<br>▲▲   | ▲▲<br>▲▲   | ▲▲<br>▲▲      | *                        | -                     | ▲▲<br>▲▲                 | ▲▲<br>▲▲              | ▲▲<br>▲▲                 | -                     |
| Price/performance ratio                          | ▲▲<br>▲▲         | ▲▲<br>▲▲   | ▲▲<br>▲▲   | ▲▲<br>▲▲   | ▲▲<br>▲▲      | ▲▲<br>▲                  | ▲▲<br>▲               | ▲▲<br>▲                  | ▲▲<br>▲               | ▲▲                       | ▲                     |

\*only special grade

® = registered trademark

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Certified to DIN EN ISO 9001 (Quality)  
and DIN EN ISO 14001 (Environment)

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