

The ideal  
combination  
of **performance**  
and value

## Altuglas® Resins



**Altuglas**®

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The Altuglas® product range of polymethyl methacrylate (PMMA) thermoplastic resins offers **an ideal combination** of performance and value.



Indeed, design flexibility, premium aesthetics and an extremely long service life are Altuglas® PMMA key benefits for manufacturing high added value parts through both injection and extrusion processes.

Altuglas International manufactures and markets its polymers in compliance with REACH.

Moreover, none of the substances listed in the « Candidate List of Substances of Very High Concern» (SVHC) is intentionally added in its production processes.

Compliance statements to European Directives such as as the RoHS (EC/2002/95), the ELV (EC/2000/53), the W3E (EC/2002/96), and many others are available upon request.

Altuglas® acrylic resins are not formulated with plasticizers, Bisphenol A or any other substances likely to migrate. They also comply with the EN/71 part 3.

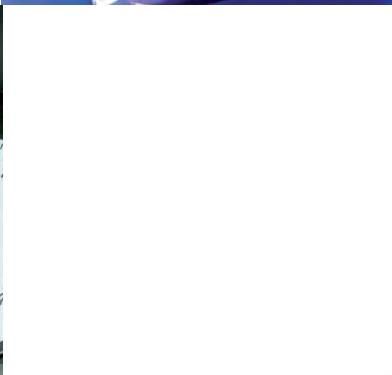
The Altuglas® International Rho (MI, Italy) plant has implemented and maintains an environmental management system in accordance with UNI EN ISO: 9001:2008 and 14001:2004, as well as with the stringent automotive ISO/TS 16949:2002.

Altuglas International manufactures, sells and imports its products, respecting the Reach obligations.





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# Standard Grades

|   |        |        |        | Altuglas® V 046 | Altuglas® V 825T | Altuglas® V 920T | Altuglas® V 920 | Altuglas® VM / VML |
|---|--------|--------|--------|-----------------|------------------|------------------|-----------------|--------------------|
| <b>Thermal properties</b>                                 | ASTM   | DIN    | ISO    |                 |                  |                  |                 |                    |
| Melt flow index<br>(230°C/3.8kg) (g/10 mm)                | D-1238 | 53735  | 1133   | 2               | 2.8              | 6                | 8               | 14.5               |
| Vicat softening temperature (°C)                          | D-1525 | 53460  | 306B50 | 101             | 108              | 103              | 101             | 90                 |
| HDT: 1.80 MPa (°C)  | D-648  | 53461  | 75-2   | 92              | 100              | 95               | 90              | 77                 |
| Coefficient of linear expansion (10 <sup>6</sup> /°K)     | D-696  | 53752A | -      | 65              | 65               | 65               | 70              | 70                 |
| <b>Optical properties</b>                                 |        |        |        |                 |                  |                  |                 |                    |
| Reflective index B  | D-542  | 53491  | R-489  | 1.49            | 1.49             | 1.49             | 1.49            | 1.49               |
| Light Transmittance (%)                                   | D-1003 | 5036   | -      | 92              | 92               | 92               | 92              | 92                 |
| Haze (%)  | D-1003 | 5036   | -      | 0.5             | 0.5              | 0.5              | 0.5             | 0.5                |
| <b>Mechanical Properties</b>                              |        |        |        |                 |                  |                  |                 |                    |
| Impact resistance (Charpy unnotched) (kJ/m <sup>2</sup> ) | -      | 53453  | 179-1  | 11              | 11               | 11               | 11              | 11                 |
| Impact resistance (Charpy notched) (kJ/m <sup>2</sup> )   | -      | 53453  | 179-1  | 2               | 2                | 2                | 2               | 2                  |
| Impact resistance (Izod notched) (kJ/m <sup>2</sup> )     | D-256  | -      | 180/1a | 1.8             | 1.8              | 1.8              | 1.8             | 1.8                |
| Tensile strength (MPa)                                    | D-638  | 53455  | 527-2  | 70              | 70               | 70               | 69              | 65                 |
| Elongation at break (%)                                   | D-638  | 53455  | 527-2  | 6               | 6                | 6                | 6               | 5                  |
| Flexural modulus (MPa)                                    | D-790  | 53452  | 178    | 3300            | 3300             | 3300             | 3300            | 3100               |
| Rockwell hardness   | D-785  | -      | -      | M-96            | M-97             | M-96             | M-95            | M-89               |
| <b>General Properties</b>                                 |        |        |        |                 |                  |                  |                 |                    |
| Density (g/cm <sup>3</sup> )                              | D-792  | 53479  | 1183   | 1.18            | 1.19             | 1.18             | 1.18            | 1.18               |
| Water absorption (%)                                      | D-570  | 53495  | 62     | 0.3             | 0.3              | 0.3              | 0.3             | 0.3                |
| Mould shrinkage (%)                                       | D-955  | -      | -      | 0.2-0.6         | 0.2-0.6          | 0.2-0.6          | 0.2-0.6         | 0.2-0.6            |
| <b>Flammability</b>                                       |        |        |        |                 |                  |                  |                 |                    |
| Fire resistant (Class)                                    | UL/94  | -      | -      | HB              | HB               | HB               | HB              | HB                 |

Data given are average values and should not be used for specification purposes

## Impact Resistant Grades

## Specialty Grades

The information contained in this document is based on trials carried out by our Research Centres and data selected from the literature, but shall in no event be held to constitute or imply any warranty, undertaking, express or implied commitment from our part. Our formal specifications define the limit of our commitment. No liability whatsoever can be accepted by Altuglas International with regard to the handling, processing or use of the product or products concerned which must in all cases be employed in accordance with all relevant laws and/or regulations in force in the country or countries concerned.

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## Welcome to the world of Altuglas International, subsidiary of Arkema group

*Altuglas International, a global integrated leader in PMMA is heavily involved in the technical plastic sector – from MMA monomer to PMMA acrylic glass – creating and manufacturing innovative products to suit customers' needs worldwide.*

*Its 1,300 highly committed staff make their contribution daily in our three businesses (MMA, sheet and PMMA resins).*

*Its five great brand names are references:*

*Altuglas®, Plexiglas® (Americas), Oroglass®, Solarkote®, Tuffak® (PC).*

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