

# MAKROSOUND®

**EXTRUDED SOLID TRANSPARENT  
POLYCARBONATE SHEET  
THAT HAS SUPERIOR  
IMPACT STRENGTH  
AT A LOWER WEIGHT**

MAKROSOUND® product range from Arla Plast is designed primarily for applications in sound protection and sound barriers. The product has outstanding clarity and is now regularly replacing glass, GRP and PMMA.

MAKROSOUND® is especially replacing glass where impact resistance is required and PMMA where fire performance is needed. The product availability coupled with flexibility and commitment of Arla Plast is well known in the industry. We take pride in ensuring that our customers receive the best service and support too.

## ARLA PLAST MAKROSOUND® BECAUSE...

- **Flexibility & Availability** - for standard and special sizes also in coloured and/or abrasion resistant versions of tinted products known as COLORADO™ from Arla Plast portfolio
- **Solutions** - Quick answers to your inquiries, superior service options and reliable technical support
- **Trust** - We care about your needs; our commitment extends to the end customer
- **Good sound reducing properties, complying with EU requirements for sound walls**
- **Thickness up to 15 mm**

## QUALITY

MAKROSOUND® has outstanding high optical clarity and surface quality, making it the best choice for replacing other transparent plastics and glass. The constant high quality level also helps to improve machining, glazing and soundwall applications.

## FIRE PERFORMANCE

In case of a fire, a MAKROSOUND® sheet will melt and create a passage where heat and smoke can be vented or will be let out. It will have no contribution to the growth of a fire through flame spread. Complying requirements to EN 1794.

## IMPACT STRENGTH

MAKROSOUND® has more than 10 times the impact strength of high impact PMMA and more than twice the impact strength of PETG, yet is very easy to thermoform or cold bend and shape into complex shapes.

## APPLICATION AREAS

The superior mechanical properties of MAKROSOUND® makes it a perfect solution for machine protection, safety glazing, ice hockey rinks, vandal protection, soundwalls, soundwall barriers etc.

## ALSO AVAILABLE

MAKROLIFE® (UV protected), COLORADO™ (coloured), SAPHIR™ SPD (screen printed)



# MAKRO SOUND®

DELIVERY PROGRAM	MAKRO SOUND®
Max. width uncut edges	2140 mm
Max. length	7500 mm
Thickness range	8 - 15 mm
Texture	smooth

Property <sup>a)</sup>	Unit	Value	Standard
<b>Physical Properties</b>			
Density	g/cm <sup>3</sup>	1,20	ISO 1183
Light transmission (Light source D65, thickness 1 mm)	%	88	DIN 5036, T.3
Refractive index		1,586	ISO 489
Moisture absorption 24 hours, 23°C, 50% RH	%	0,15	
<b>Mechanical Properties</b>			
Tensile strength at yield (at break)	N/mm <sup>2</sup>	63 (70)	ISO 527
Elongation at yield (at break)	%	6 (110)	ISO 527
Elastic modulus	N/mm <sup>2</sup>	2300	ISO 527
Flexural modulus	N/mm <sup>2</sup>	2300	ISO 178
Charpy unnotched impact strength +23°C	kJ/m <sup>2</sup>	no break	ISO 179/2D
Charpy unnotched impact strength -40 °C	kJ/m <sup>2</sup>	no break	ISO 179/2D
Izod notched impact strength +23°C	kJ/m <sup>2</sup>	65	ISO 180/1A
Izod notched impact strength -30 °C	kJ/m <sup>2</sup>	10	ISO 180/1A
Rockwell Hardness		M70	ISO 2039-2
<b>Thermal Properties</b>			
Linear coefficient of thermal expansion (23-80 °C)	10 <sup>-4</sup> x K <sup>-1</sup>	0,70	
Heat deflection temperature, HDT A (1,8 N/mm <sup>2</sup> )	°C	132	ISO 75
Heat deflection temperature, HDT B (0,45 N/mm <sup>2</sup> )	°C	142	ISO 75
Vicat temperature VST/B 120	°C	149	ISO 306
Vicat temperature VST/B 50	°C	148	ISO 306
Specific heat capacity, Cp	kJ/kg, K	1,17	
Thermal conductivity	W/m, K	0,21	DIN 52612
<b>Electrical Properties</b>			
Volume resistivity, dry	x cm	10 <sup>16</sup>	IEC 60093
Surface resistivity, dry		10 <sup>16</sup>	IEC 60093
Dielectric strength, dry 1 mm	kV/mm	30	IEC 60243
Dielectric constant, dry, 50 MHz		3,0	IEC 60250
1 MHz		2,9	
Dissipation factor (tan δ), dry, 50 MHz		0,001	IEC 60250
1 MHz		0,010	

a) Properties reported here are typical polycarbonate values.

Arla Plast makes no representation that the material in any particular shipment will conform exactly to the values give.

The above information is based upon experience and given in good faith. Due to many factors which are outside our knowledge and control, no warranty is given or is to be implied with respect to such information.

Detailed product specification and technical manual/information is available on request.

Please note: Minimum quantities vary by the width requirements and product options. Special thicknesses and sizes are available upon request. Please contact the local area office for more information.