



**SAPHIR<sup>®</sup>**  
CLEARLY DIFFERENT

GULD







Soundwall application, Motala, Sweden.

# SAPHIR® – the quality selection

SAPHIR® is the name of coated polycarbonate (PC) sheets from Arla Plast. We have many years of experience in sheet extrusion. This knowledge enables us to optimize the sheet properties to fit different needs and various applications.

We choose selected raw materials for the sheet core and surface layer depending on the intended application. The sheet quality and properties will vary during production runs, which allows us to select sheets depending on quality needs. There are several coatings available for instance to achieve maximum surface hardness or to allow certain flexibility for drape forming.

To help and choose what quality best fits your needs, we divide our SAPHIR® products in three main application areas: **General purpose**, **Security** and **Lamination**.

	General purpose			Security			Lamination	
Information	PC can offer full view during operation of an industrial machine. At the same time the operator is being protected from being injured. Other applications offer protection against impact, wind and noise.			Using SAPHIR® is an easy way to protect windows from being smashed. This is useful in environments where theft or vandalism are a problem. Crowd separation glazing with clear view is another example of sport arena applications.			PC is used in BRG – Bullet Resistant Glazing - where glass layers are laminated together with PC. Here a combination of optical clarity, optical distortion level and sheet elasticity properties are important.	
Product \ Application	Soundwalls/ Ice hockey rinks	Machine guards	Gently curved applications	Bank/shop glazing	Train/bus/ rally car/ windows	Visors	Laminated glass /Side windows	Front windows
SAPHIR® LG <sup>1</sup> Lamination Grade							• • •	•
SAPHIR® FLEX <sup>1,2</sup> Flexible Coating			• • •			•		
SAPHIR® SPD <sup>1,2</sup> Screen printed	• • •				• • •			
SAPHIR® FC <sup>1,2</sup> Formable coating						• • •		
SAPHIR® AF <sup>1,2</sup> Antifog			• •			• • •		
SAPHIR® AS <sup>2</sup> Antistatic		• • •						
MAKROCLEAR™ HC <sup>1,2</sup> HardCoat	• •	• •						

1 = One side coating    2 = Two side coating    • = Application suitability    SAPHIR® AS: Electrostatic discharge material

SAPHIR® is our most popular coated product suitable for applications with high dioptry demands. SAPHIR® LG is the one side coated version of SAPHIR® for lamination purposes. For applications only needing a scratch resistant surface without high optical demands, we offer MAKRO-CLEAR™ HARDCOAT.

## Polycarbonate – a very tough material



### Chemical resistance

The hard surface offers an efficient barrier towards most chemicals that otherwise could weaken the sheet properties.



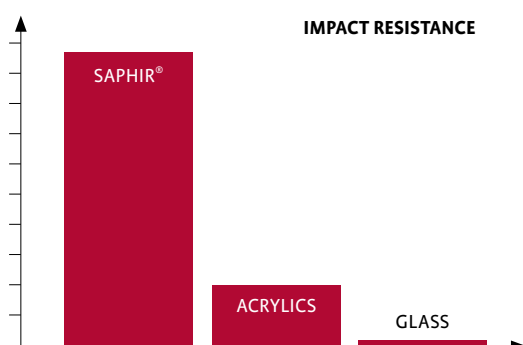
### Fire properties

Being an auto-extinguishable material, polycarbonate is a good choice when it comes to applications with fire risk issues.

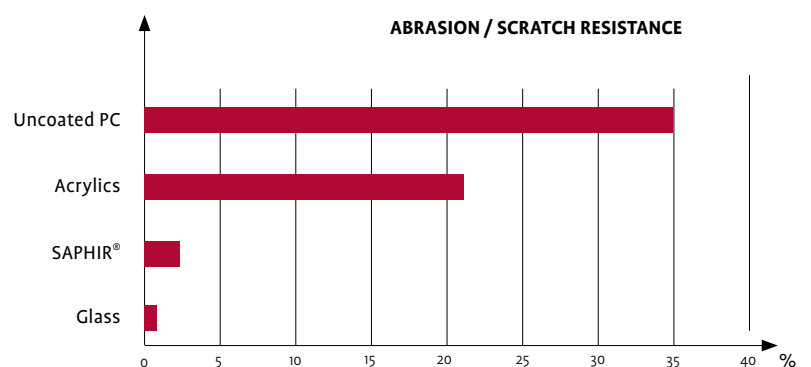


### Transparency

Polycarbonate almost has the same transparency as glass, which enables excellent view through the sheets.



Polycarbonate has 300 times higher impact resistance than glass.



The abrasion test shows the decrease in transparency after abrasion. SAPHIR® has glass-like properties thanks to the protecting hard coat.

# No shortcuts to quality



## 1 Selected resin:

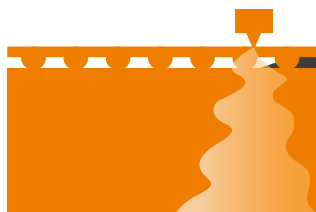
We only buy resin from top quality suppliers. The incoming raw-materials are being controlled in our labs before the extrusion process.

## 2 Sheet extrusion:

Our experienced operators use the latest extrusion technology to extrude the sheets. A camera inspection system helps the operator to define the quality level and finding unexpected process problems. The dioptries and level of inclusions are being checked and documented in our light lab. Moreover impact strength and optical properties are being controlled too.

## 3 Hard layer coating:

The fully automated coating process starts with a thorough sheet inspection. A thin layer of liquid silicon based hard coat is being applied to the sheet. The layer thickness is being measured continuously.



## 4 Packaging and transport:

The SAPHIR® sheets are carefully packed according to your needs. Arla Plast is flexible when it comes to pallet sizes, way of packaging and means of transport.

## 5 Arrival at customer:

The SAPHIR® sheets arrive at customer, ready for the application ahead.



**Service** Flexibility and service are corner stones at Arla Plast. Being a small family owned company we try to fulfil any customer demand within our ability. We have experienced support-technicians that understand both the sheets and most application areas in order to give a problem solving service. Arla Plast can only be successful as long as our customers succeed.



**Speed / Availability** We understand the importance of speed. Our logistic partners enable us to reach any destination in Europe within a few days. Overseas container shipments will reach Middle East or North/ South America within 4 weeks. We keep standard items in stock to enable prompt delivery and can offer additional services such as cutting or routing on demand to save time and cost in later operations.

