



The Rhein-Neckar-Arena

A white cloud in the blue sky over Sinsheim



Project: Rhein-Neckar-Arena

Client: Hans Börner GmbH & Co. KG

Location: Sinsheim

Market segment: Construction

Product: Makrolon® multi UV 3/16-16 FR 1090

Architects: HBM Stadien- und Sportstättenbau GmbH

Building contractor: Hans Börner GmbH & Co. KG



makrolon®

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Something's afoot between Mannheim and Heilbronn! The town of Sinsheim has a new attraction to offer. The official opening of the Rhein-Neckar-Arena opposite the Auto- und Technikmuseum (Automobile and Technology Museum) took place in January 2009. It is located next to the A6 highway, perfectly integrated in the rolling hills of the Kraichgau region. The aspiring football club TSG 1899 Hoffenheim plays its home games here and some games in the women's World Championships will also be held here in 2011. The arena holds around 30,000 spectators who can follow the events in the stadium protected from snow and rain thanks to the roof made of Makrolon® multi wall sheets.

Combined strengths are a winner

As they say in the world of football: it is not just that the individual is a star, the whole team must work together in harmony and perfect synergy. It is the interplay of different strengths that achieves the goal. The same applies to the roof of the Rhein-Neckar-Arena which is composed of a white steel construction, a thin outer membrane made of plastic and a ring of Makrolon® multi wall sheets 16 mm thick to form a perfect whole.

A roof to remember

The roof of the Sinsheim stadium may weigh 3,500 metric tons but the impression is one of weightlessness. The idea of the architect was to design the roof as an architectural reflection of the surrounding hills. It was to be something special, not just the appearance but the construction itself. And in fact the roof looks like a cloud, hovering lightly above the stadium.

Makrolon® leads the way in weightlessness

A ring of polycarbonate multi wall sheets spans the stands. The roof area covers around 8,500 m² composed of Makrolon® multi UV 3/16-16 FR 1090 sheets; the material had previously proved its worth in the Rhein-Energie Stadium in Cologne and in the Commerzbank Arena in Frankfurt. A substructure made of special aluminium supports 80 x 80 mm provides the base for Makrolon® multi wall sheets sized 2100 x 15000 mm with a special doublelayer profile. With a length of 15 m the multi wall sheets from Bayer MaterialScience can only be handled and installed directly in the substructure due to their very low area weight of 2.8 kg/m².

Fun and games under cover

The high light transmission of the sheets sheds a pleasant, uniform light over the steep tiers and spectators have a clear view of the pitch without being dazzled. The spectators are protected securely against wind and weather due to the excellent weather resistance of Makrolon® multi UV and so can enjoy watching the game in comfort. The safety of the blue and white fans is also ensured by the extremely high impact strength of the Makrolon® multi wall sheets which also comply with the important fire protection classification B1 "drips without burning" in accordance with the German standard DIN 4102.



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