AXILAT™ PSB 155

Sell Sheet

Unique SB-RDP with fine particle size, low VOC level, supporting low-carbon dry mix formulation

Construction chemical manufacturers face increasing pressure to deliver durable, moisture-resistant formulations while reducing product carbon footprint. In applications such as tile adhesives and self-levelling underlayments, preventing water ingress and maintaining long-term bond integrity are essential. At the same time, the industry is accelerating the replacement of Ordinary Portland Cement (OPC) with supplementary cementitious materials (SCMs) to lower embodied carbon—often creating new formulation challenges and performance trade-offs.

AXILAT™ PSB 155 is a next-generation **SB-RDP** built on XSBR technology, bringing the proven hydrophobic benefits of XSBR latex into dry mix formulations. **AXILAT™ PSB 155** delivers superior water resistance while maintaining outstanding compatibility with both cement and SCM-based systems. This innovative technology enables formulators to break beyond the limits of traditional RDPs, achieving enhanced performance and greater formulation efficiency in low-OPC cementitious applications.

Engineered with advanced XSBR chemistry, **AXILAT™ PSB 155** provides excellent water and saponification resistance, low water uptake, ultra-low VOC emissions, and strong binding power within cementitious matrices. The RDP incorporates with a unique PVOH-free redispersing system, delivering outstanding redispersibility, helping reduce water sensitivity and supporting lower water-to-cement ratios.

Laboratory evaluations demonstrate that **AXILAT™ PSB 155** delivers exceptional adhesion strength, even outperforming premium market references under wet conditions. Its strong compatibility with SCM-rich formulations can enable a product carbon footprint reduction of up to 48%[1]. Ideal for tile adhesives, self-levelling underlayment, and gypsum-based applications.

Typical Applications

- Ceramic tile adhesives (CTA)
- Self-levelling underlayment (SLU)
- Other mortar modification
- SCMs based formulation
- Gypsum-based formulation

Features

- Water resistance
- Saponification resistance
- Low water uptake
- Ultra-low VOC emission
- Superior wet adhesion

Property	AXILAT™ PSB 155
Chemistry	Carboxylated Styrene Butadiene
Solids Content in %	99.0
Mean Particle Size in µm	85
Tg in °C	15
MFFT in °C	8

[1] Based on replacing 50% OPC by GGBS in an internal CTA formulation.

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XSBR Polymer Design

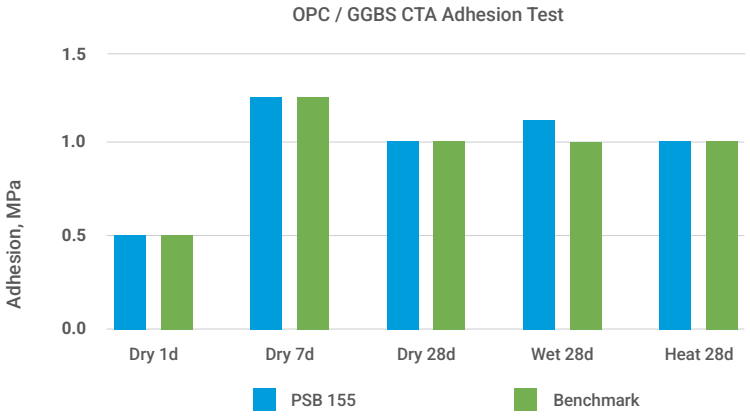
Water resistant

Saponification resistant

Small Particle size

The inherent XSBR properties resulted in **low water uptake, ultra-low VOC,** and **very good binding power** to the cementitious mixture.

Superior performance with low OPC formulation



Based on internal formulation, OPC/GGBS ratio 50/50.
Source of test data: Ecocem and Synthomer

AXILAT™ PSB 155 provides best-in-class performance in adhesion strength and even outperforms current market reference under wet conditions.

Outstanding redispersibility without PVOH

VAE-RDP Benchmark

AXILAT™ PSB 155

10 Minutes after RDP was mixed with water

Without PVOH, **AXILAT™ PSB 155** helps to protect the cementitious mixture from water sensitivity and **reduces the water/cement ratio.**

AXILAT™ PSB 155 enables formulators to break beyond the limits of traditional RDPs, delivering enhanced performance and formulation efficiency on SCM based cement through a next-generation SB-RDP technology platform. Sampling contact: construction@synthomer.com

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