LIPATON™ SB 33Y50

Sell Sheet

Enabling cementitious waterproofing membranes with reduced carbon footprint

Global cement manufacturing is responsible for about 8% of the world's total CO_2 emissions[1]. Replacing Ordinary Portland Cement (OPC) with ground granulated blast furnace Slag (GGBS) helps reduce CO_2 emissions from construction. Cement and latex together form the core components of an effective cementitious waterproofing membrane.
LIPATON™ SB 33Y50, which has been used in waterproof membranes with traditional OPC for a long time, has now been found to provide exceptional waterproofing performance in the GGBS and OPC mixture.

LIPATON™ SB 33Y50 is an XSBR dispersion with several outstanding features. It ensures low water uptake, providing enhanced durability. It excels in crack-bridging performance, effectively handling structural movements without compromising integrity. The product boasts good adhesive strength, especially in wet conditions and maintains its effectiveness under alkaline conditions due to its excellent saponification resistance. Therefore, the dispersion has high flexibility, good cement compatibility, and offers excellent waterproofing performance.

LIPATON™ SB 33Y50 utilizes XSBR dispersion technology, which has a lower carbon footprint compared to acrylic alternatives. Compared with OPC and pure acrylic formulations, GGBS/OPC and XSBR formation reduces the product carbon footprint by 46%[2]. This reduction benefits the entire cementitious system, resulting in an overall decrease in environmental impact.
Additionally, **LIPATON™ SB 33Y50** features low VOC content and is free from organic solvents and plasticizers, offering the construction industry a solution to reduce the carbon footprint cementitious waterproofing membranes.

Property	LIPATON™ SB 33Y50
Chemistry	Carboxylated Styrene Butadiene
Solid Content in %	51.5
pH value	9.5
Viscosity in mPa·s	110
Tg in °C	-12.0

Features

- Low water uptake
- Good crack bridging performance
- Good adhesive strength in standard, wet and heat conditions
- Good saponification resistance
- Free of organic solvents and plasticizers

Applications

- 2K Cementitious Membranes
- Suitable for pure OPC and GGBS mixture cement applications

[1] Source: World Economic Forum
[2] Based on OPC with PLEXTOL™ D 324F (pure acrylic) and GGBS (80%) / OPC (20%) with LIPATON™ SB 33Y50 (XSBR)

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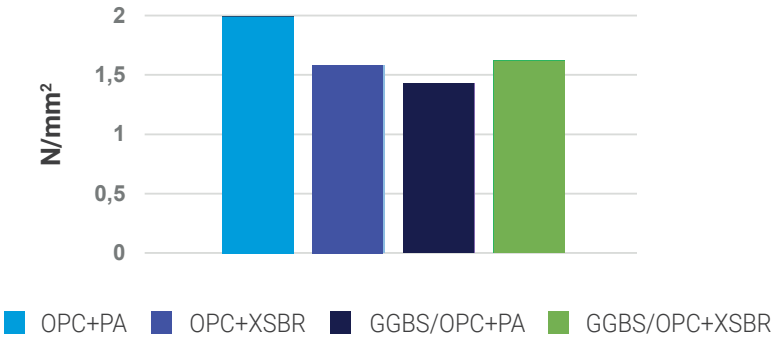
Performance Comparison

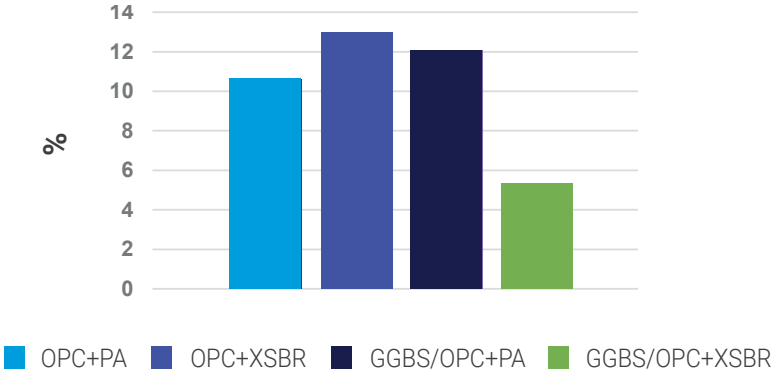
- OPC+PA = OPC (100%) and PLEXTOL™ D 324F (pure acrylic)
- OPC+XSBR = OPC (100%) and LIPATON™ SB 33Y50 (XSBR)
- GGBS/OPC+PA = GGBS (80%) / OPC (20%) and PLEXTOL™ D 324F (pure acrylic)
- GGBS/OPC+XSBR = GGBS (80%) / OPC (20%) and LIPATON™ SB 33Y50 (XSBR)

Tension at Break



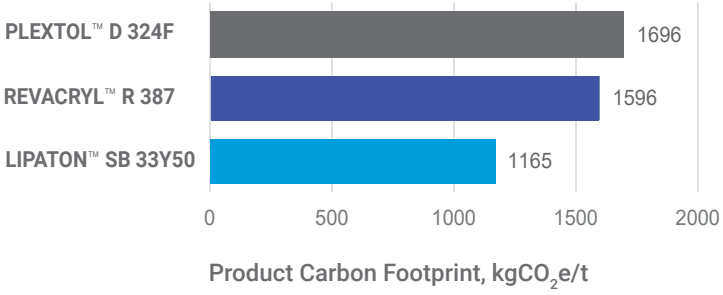
LIPATON™ SB 33Y50 showcases outstanding tensile strength performance with the GGBS (80%) and OPC (20%) mix.

Water uptake 14d



LIPATON™ SB 33Y50 has significantly lower water uptake among other formulations.

Product Carbon Footprint [1]



[1] Product Carbon Footprint is based on ISO 14067:2018 and Together for Sustainability (TfS) guidelines

LIPATON™ SB 33Y50 uses XSBR technology which has 31% and 27% less product carbon footprint than pure acrylic polymer PLEXTOL™ D 324F and styrene acrylic polymer REVACRYL™ R 387 respectively.

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