



Enabling cementitious waterproofing membranes with reduced carbon footprint

Global cement manufacturing is responsible for about 8% of the world's total CO₂ emissions¹. Replacing Ordinary Portland Cement (OPC) with Ground Granulated Blast Furnace Slag (GGBS) can help reduce the carbon footprint of construction materials. Cement and latex are key components in cementitious waterproofing membranes. **LIPATON™ SB 33Y50**, long used in waterproofing membranes based on traditional OPC systems, has also demonstrated excellent waterproofing performance in GGBS/OPC formulations.

LIPATON™ SB 33Y50 is an XSBR dispersion designed to support durable cementitious waterproofing membranes. It provides low water uptake, good crack-bridging performance, and strong adhesion, including under wet and alkaline conditions. Its excellent saponification resistance supports long-term performance, while its flexibility and cement compatibility make it well suited for both OPC and GGBS/OPC systems. Formulations based on **LIPATON™ SB 33Y50** can be designed to comply with AS/NZS 4858 and EN14891.

XSBR dispersion technology can also offer a lower carbon footprint compared with acrylic alternatives. Compared with an OPC and pure acrylic formulation, a GGBS/OPC and XSBR formulation can reduce product carbon footprint by 46%². In addition, **LIPATON™ SB 33Y50** has low VOC content and is free from organic solvents and plasticizers, offering a practical solution for reducing the carbon footprint of cementitious waterproofing membranes.

Property

LIPATON™ SB 33Y50

Chemistry	Carboxylated Styrene Butadiene
Solids 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

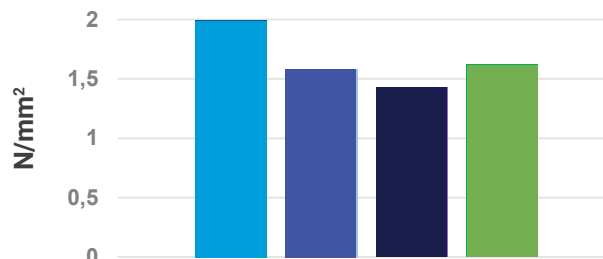
¹ Source: World Economic Forum

² Based on OPC with PLEXTOL™ D 324F (pure acrylic) and GGBS (80%) / OPC (20%) with LIPATON™ SB 33Y50 (XSBR)

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)

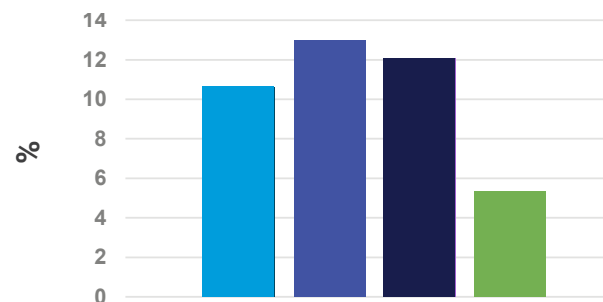
Tension at Break



■ OPC+PA ■ OPC+XSBR ■ GGBS/OPC+PA ■ GGBS/OPC+XSBR

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

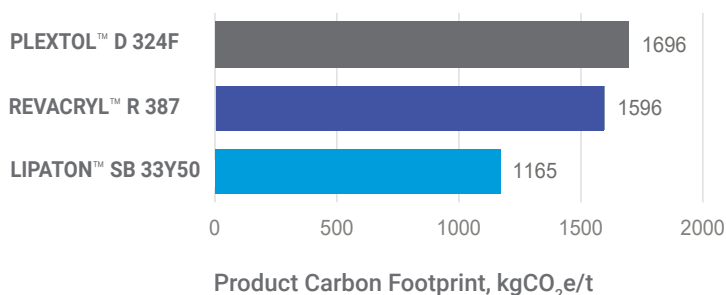
Water uptake 14d



■ OPC+PA ■ OPC+XSBR ■ GGBS/OPC+PA ■ GGBS/OPC+XSBR

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.