



Product News

Soft Random Heterophasic PP

NEW: SB330CF

Keep Discovering

 **BOREALIS**

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BACKGROUND

Polypropylene (PP) families can be divided into homopolymer PP (only propylene is polymerized), random PP (in one phase, propylene and some ethylene is polymerized, leading to improved optical performance), block or heterophasic copolymers (propylene and some ethylene is polymerized in separated phases, leading to improved impact performance), and random heterophasic copolymers (a combination of random and heterophasic PP). The latter can be manufactured as flexible products with low flex-modulus while retaining high thermal stability.

CHALLENGE

Until now, there have been limited options in the market for higher flexibility (lower flex-modulus) random heterophasic PP's. Such soft materials are used in a large variety of applications, e.g. TPO (thermoplastic olefin) compounds for flexible membranes for roofing, waterproofing and automotive applications. Depending on the specific application, the softness of the PP needs to be adapted to a level suitable for the end use. Often, very soft polymer modifiers like polyolefin plastomers and elastomers are blended with PP to achieve the required level of softness for these applications. The stiffer the PP used, the more polymer modifier needs to be used.

SOLUTION

The range of soft random heterophasic PP from Borealis helps you tailor the flexibility of your TPO more effectively. Compared to conventional PP materials, our new SB330CF with a flex modulus of only 330 MPa, needs less polymer modifier to reach flex-modulus values required for flexible membranes. Borealis soft PP's – and in particular SB330CF – are excellent starting materials for TPO compounds aimed at roofing, waterproofing and automotive membranes – but not limited to these applications! The possibility of easily modifying these materials in your own mixing process and with your own recipes allows you to tailor them freely to your needs.

BENEFITS

- Broad portfolio of softer PP's ranging from flex-modulus 550 to 330 MPa and MFR (230 °C/2,16 kg) from 0,8 to 7 g/10min
- Enables benchmark TPO production for automotive and construction industries
- Outstanding low temperature behaviour combined with high heat resistance
- Excellent starting resins for flexible TPO compounds for flexible membranes
- Provides customers with an alternative option when sourcing soft PP

Product name	MFR (230 °C/2.16 kg) [g/10 min]	Flexural modulus [MPa]	Charpy NIS @ 23 °C [kJ/m ²]	Melting point [°C]	Additives*	Features
Bormed™ SC820CF	3,9	550	26	141	AO	Good softness, optical properties and toughness
SA233CF	0,8	500	58	140	AO	Good softness, outstanding mechanical properties
SD233CF	7	500	11	140	AO/CR	Good softness, excellent heat seal properties, high toughness
Bormed™ SB815MO	1,5	425	80	145	AO	Very good softness and optics
Bormed™ SC876CF	3,8	330	77	149	AO/CR	Superior softness with good optics and high toughness
SB330CF	1,5	330	80	150	AO	New copolymer with superior softness, excellent heat seal properties

* AO: Anti-Oxidant, CR: Controlled Rheology

About Borealis Borealis is one of the world's leading providers of advanced and circular polyolefin solutions and a European market leader in base chemicals, fertilizers and the mechanical recycling of plastics. We leverage our polymers expertise and decades of experience to offer value adding, innovative and circular material solutions for key industries. In re-inventing for more sustainable living, we build on our commitment to safety, our people and excellence as we accelerate the transformation to a circular economy and expand our geographical footprint.

With head offices in Vienna, Austria, Borealis employs 6,900 employees and operates in over 120 countries. In 2020, Borealis generated EUR 6.8 billion in sales revenue and a net profit of EUR 589 million. OMV, the Austria-based international oil and gas company, owns 75% of Borealis, while the remaining 25% is owned by a holding company of the Abu-Dhabi based Mubadala. We supply services and products to customers around the globe through Borealis and two important joint ventures: Borouge (with the Abu Dhabi National Oil Company, or ADNOC, based in UAE); and Baystar™ (with TotalEnergies, based in the US).

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