# Borcycle™ UF582SA

Unfilled PP Grade with Post-Consumer Recyclate (PCR) for High Gloss Applications

## Background Challenge

The UF582SA builds on the success of HF700SA, the market leader when it comes to high gloss homopolymer PP grades for asthetical applications.
It offers a sustainable replacement solution with high PCR content, allowing customers to reduce their carbon footprint and serves as a suitable replacement in applications where food compliance is not neccessary, such as housing for small appliances or other visible parts. The advanced PCR feedstock technology leads to low odor performance as well as superior purity levels.

## Your Benefits

- Advanced PCR content of 55% - leading to <20% $CO_2$ reduction*
- High gloss, low odor and high purity - ideal for visible applications
- Enhanced stabilization package for the most demanding applications
- Ideal for self-coloring
- Drop in solution - Matching esthetical fossil PP grades, like HF700SA

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# Material Requirements and Characteristics

## Key Material Characteristics

- Density, stiffness and impact properties comparable with fossil based HF700SA (Homo PP)
- High flowability suitable for injection molding
- High heat stabilization
- Easy part demolding
- Available in white (-90) and natural grey (-74) colors

## Product Compliance

| Properties | Compliance |
|---|---|
| REACH | ✓ |
| SVHC | ✓ |
| RoHS | ✓ |

## Key Technical Properties

| Properties | HF700SA | UF582SA | Unit | Method |
|---|---|---|---|---|
| Density | 905 | 905 | kg/m³ | ISO1183 |
| MFR (230 °C / 2.16 kg) | 21 | 15 | g/10 min | ISO1133 |
| Flexural Modulus | 1350 | 1450 | MPa | ISO 178 |
| Tensile Strength | 35 | 32 | MPa | ISO 527-2 |
| Heat Deflection Temperature B (0.45 MPa) | 80 | 100 | °C | ISO 75-2 |
| Charpy notched impact strength +23 °C | 2 | 2 | kJ/m² | ISO179 1eA |
| Gloss Properties (measured on white chips, 60°) | 90 | 83 | GU | ISO2813 |

Values determined on standard injection molded specimens conditioned at 23 °C and 50 % relative humidity after at least 96 hours storage time.

## Well-balanced Material Properties

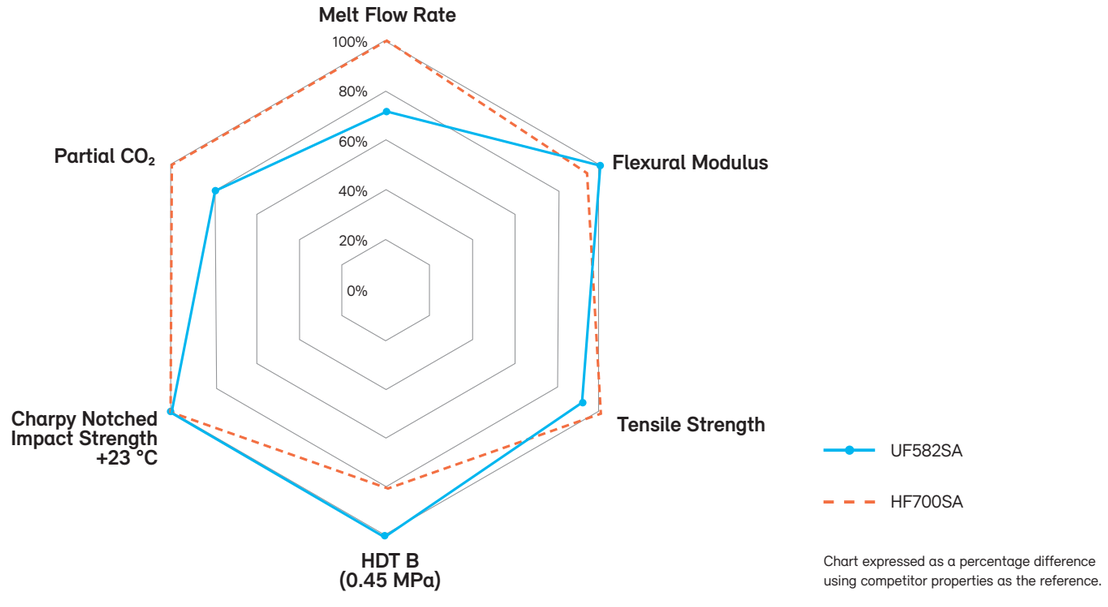


Chart expressed as a percentage difference using competitor properties as the reference.

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* **Disclaimer:** The result was estimated internally using the results from a life cycle assessment for Borealis' virgin fossil polyolefins, conducted in 2022 and a separate life cycle assessment for Borealis' PCR produced at Ecoplast/mtm conducted in 2021. A full life cycle analysis study, as well as other potential environmental impacts, was not conducted in this context. The result is estimated for the production of the pellet, and based on the assumed same functional performance between the conventional virgin solution and solution containing PCR. Other life cycle stages beyond the production of the pellets have not been considered.

**About Borealis** Borealis is one of the world's leading providers of advanced and sustainable polyolefin solutions. In Europe, Borealis is also an innovative leader in polyolefins recycling and a major producer of base chemicals. We leverage our polymer expertise and decades of experience to offer value-adding, innovative and circular material solutions for key industries such as consumer products, energy, healthcare, infrastructure and mobility.

With operations in over 120 countries and head offices in Vienna, Austria, Borealis employs around 6,000 people. In 2022, we generated a net profit of EUR 2.1 billion. OMV, the Austria-based international oil and gas company, owns 75 % of our shares. The Abu Dhabi National Oil Company (ADNOC), based in the United Arab Emirates (UAE), owns the remaining 25 %.

In re-inventing essentials for sustainable living, we build on our commitment to safety, our people, innovation and technology, and performance excellence. We are accelerating the transformation to a circular economy of polyolefins and expanding our geographical footprint to better serve our customers around the globe. Our operations are augmented by two important joint ventures: Borouge (with ADNOC, headquartered in the UAE); and Baystar™ (with TotalEnergies, based in the US).

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