Polypropylene for Houseware

Innovative design through excellent mechanical and optical properties

Braskem

Nomenclature HOMO = HOMOPOLYMER RACO = RANDOM COPOLYMER ICP = IMPACT COPOLYMER

Braskem provides a wide range of products for houseware applications with good processing, excellent mechanical and optical properties and high flexibility for innovative designs.

Our products feature high melt flow rates, which provide:

- Faster cycle times
- Greater flexibility in product design
- Lower energy consumption
- Downgauging

In addition, transparent products are better suited for food storage containers and organizers. Braskem's polypropylene also provides good mechanical properties, ensuring the useful life of finished items.

Polypropylene Impact Copolymers

Braskem PP Impact Copolymers have a balanced stiffness/ toughness ratio combined with a high meltflow. All grades contain nucleator and antistatic additives to provide you a good processing. They can be used for fridge applications as well as garden articles.

Product	Melt Flow Rate [g/10 min]	Flexural Modulus [MPA]	Charpy Notched at 23 °C [kJ/m²]
ISO METHOD	ISO 1133	ISO 178	ISO 179-1/1EA
Impact Copolymers - Injection			
C765-15NA	15	1200	12
C706-21NAHP	21	1500	8
C705-44NAHP	44	1500	7
CG700NA	70	1350	6
CD700NAQ	70	1200	8
C7069-100NA	100	1500	4

Polypropylene **Homopolymers**

Braskem PP Homopolymers provide good flow, stiffness and a glossy surface. All PP Homopolymer grades contain nucleator and antistatic additives to provide a good processing.

Product	Melt Flow Rate [g/10 min]	Flexural Modulus [MPa]	Charpy Notched at 23 °C [kJ/m²]	Haze 1 mm
ISO METHOD	ISO 1133	ISO 178	ISO 179-1/1EA	ASTM D1003
High Crystallinity Homopolymers				
F350HC	35	2100	2,3	-
F520HC	52	1950	3.0	10
F1000HC2	110	2200	1.5	-
Homopolymers				
HSP250NA	25	1650	3	-
DH789.01	50	1700	2.5	-
H734-52RNA2	52	1800	2.5	-

Transparent applications

Inspire® 364 | RG450NA | Inspire® 382

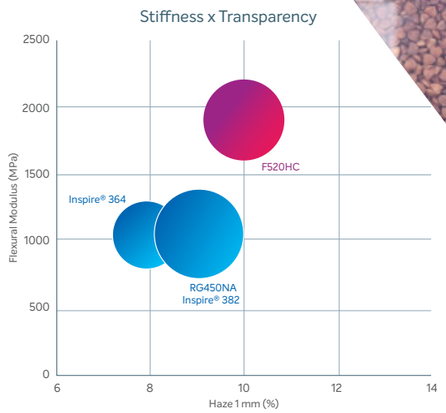
Excellent Transparency

Product	Melt Flow Rate [g/10 min]	Flexural Modulus [MPa]	Haze [%] 1 mm
ISO METHOD	ISO 1133	ISO 178	ASTM D1003
Inspire® 364	42	1050	8
RG450NA	42	1050	9
Inspire® 382	70	1050	9

F520HC

High Stiffness & High Transparency

Product	Melt Flow Rate [g/10 min]	Flexural Modulus [MPa]	Haze [%] 1 mm
ISO METHOD	ISO 1133	ISO 178	ASTM D1003
F520HC	52	1950	10



Polypropylene **Random Copolymers**

Braskem PP Random Copolymers provide competitive transparency with excellent optical properties and high flow rates. All products contain antistatic properties for best possible processing.

Product	Melt Flow Rate [g/10 min]	Flexural Modulus [MPa]	Charpy Notched at 23 °C [kJ/m²]	Haze 1 mm
ISO METHOD	ISO 1133	ISO 178	ISO 179-1/1EA	ASTM D1003
Random Copolymers				
DR7051.01	10	1200	6	8
DR7037.01	23	1200	6	8
Inspire® 364	42	1050	5.5	8
RG450NA	42	1050	5.5	9
Inspire® 382	70	1050	5	9
DR7032.06	100	1050	4.5	9

Sustainable solutions for you

Braskem offers a huge variety of sustainable products for compounds. Our portfolio ranges from grades made of bio-based material to recycled material. The material is certified and we offer a service to provide you with a life cycle analysis.

Our commercial team will support you in finding the right sustainable material for your needs.

BIO-BASED RAW MATERIAL

- HDPE, LDPE, LLDPE and EVA
- Blow molding, injection molding & extrusion
- Can be in **contact with food***
- Measurable **bio-based content**
- **Captures CO_2** from the environment
- Tackling **climate change**

MASS BALANCE CERTIFIED BIO-ATTRIBUTED

- PP
- Blow molding, injection molding & extrusion
- Can be in **contact with food***
- **ISCC** mass balance certified bio-based
- Contributes to reduce **dependance on fossil feedstock**
- **Reduced carbon footprint**

RECYCLED RESINS

- rHDPE, rLDPE, rPP
- Blow molding, injection molding & extrusion
- Made from **post-consumer recycled plastic**

MASS BALANCE CERTIFIED RECYCLED

- PE, HPP, RPP and ICP
- Blow molding, injection molding & extrusion
- Can be in **contact with food***
- **ISCC** mass balance certified recycled

LOW CARBON SOLUTIONS

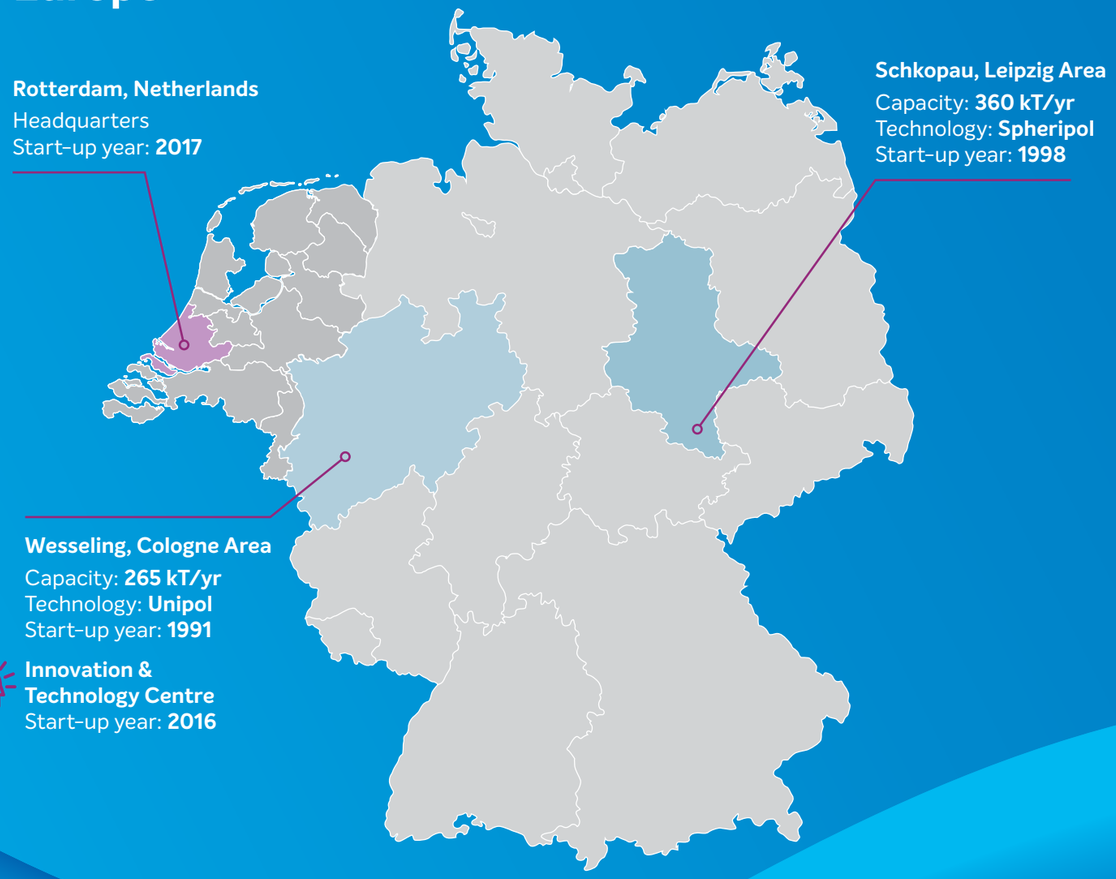
- rHDPE, rPP
- Blow molding, injection molding & extrusion
- Measurable **bio-based content**

FOSTERING THE TRANSITION TO A CIRCULAR ECONOMY

Braskem can offer all PP products with an ISCC PLUS certificate.

*These applications are merely exemplary. The possibility of using this product for a specific purpose may vary according to the jurisdiction and should be analyzed by the interested party. Braskem does not warrant the suitability of the product for the intended use when combined with other substances. Please check the RIS or contact Braskem for specific regulatory information.

Europe



Rotterdam, Netherlands
Headquarters
Start-up year: **2017**

Schkopau, Leipzig Area
Capacity: **360 kT/yr**
Technology: **Spheripol**
Start-up year: **1998**

Wesseling, Cologne Area
Capacity: **265 kT/yr**
Technology: **Unipol**
Start-up year: **1991**

Innovation & Technology Centre
Start-up year: **2016**

Braskem in **numbers**

Warehouses
Europe

Antwerp | **Belgium**
Murcia | **Spain**
Bologna | **Italy**
Rotterdam | **The Netherlands**

350 Team Members

2 Industrial Units:
Wesseling and
Schkopau (Germany)

PRODUCTION CAPACITY OF
625 KT/Y
of **PP**

Global presence

With a global vision of the future, oriented toward people and sustainability, Braskem is engaged in contributing to the value chain in order to strengthen the Circular Economy. Its more than 8.000 team members are dedicated to improving people's lives through sustainable solutions in chemicals and plastics. With its corporate DNA rooted in innovation, Braskem offers a comprehensive portfolio of plastic resins and chemical products for diverse industries, such as food packaging, construction, manufacturing, automotive, agribusiness, health and hygiene, and more. Braskem is globally headquartered in Brazil and EMEA head office is based in Rotterdam – NL. In total, there are more than 40 industrial units in Brazil, the United States, Mexico, and Germany, exporting its products to clients in over 80 countries.

PRODUCTION OF OVER **20** MM TONS/YEAR
of thermoplastic resins & other chemicals products

8,353 Team Members

40 industrial units:
29 plants in Brazil
5 plants in the United States
2 plants in Germany
4 plants in Mexico

Braskem