

**Polypropylene  
for rigid packaging  
applications**



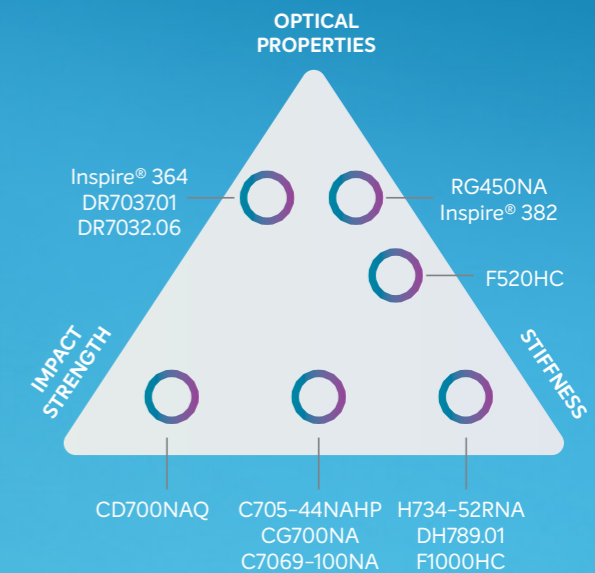


## Continued Trend: Thin Wall Injection Molded Packaging

Some of the potential applications that thin wall packaging can be used for include:

- Pill vials
- Ice cream tubes
- Deli containers
- Ready-made packaged foods
- Butter packaging

*Benefits in these applications are reduced source consumption, shorter cycle times, high clarity, and good organoleptics.*



## Thin Wall Injection Molding

Braskem targets joint development programs with our clients that enable them to meet and exceed stringent market demands.

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

Family	Grade	MFR [g/10 min]	Flexural Modulus[Mpa]	N. Charpy 23 °C [kJ/m²]
ICP	C705-44NAHP	44	1500	7
	CD700NAQ	70	1200	8
	CG700NA	70	1350	6
	C7069-100NA	100	1500	4
RACO	DR7037.01	23	1200	6
	RG450NA	42	1050	5.5
	Inspire® 364	42	1050	5.5
	Inspire® 382	70	1050	5
	DR7032.06	100	1050	4.5
HOMO	F520HC	52	1950	3.0
	DH789.01	50	1700	2.5
	H734-52RNA2	52	1800	2.5
	F1000HC2	110	2290	1.5

# Rigid Packaging Injection Molding

Braskem provides a wide range of products for injection molding applications with good processing features, excellent mechanical and optical properties and high flexibility for innovative designs. The products exhibit high melt flow rates, which enable:

- Optimization of cycle times
- Flexibility for product design
- Lower energy consumption
- Downgauging

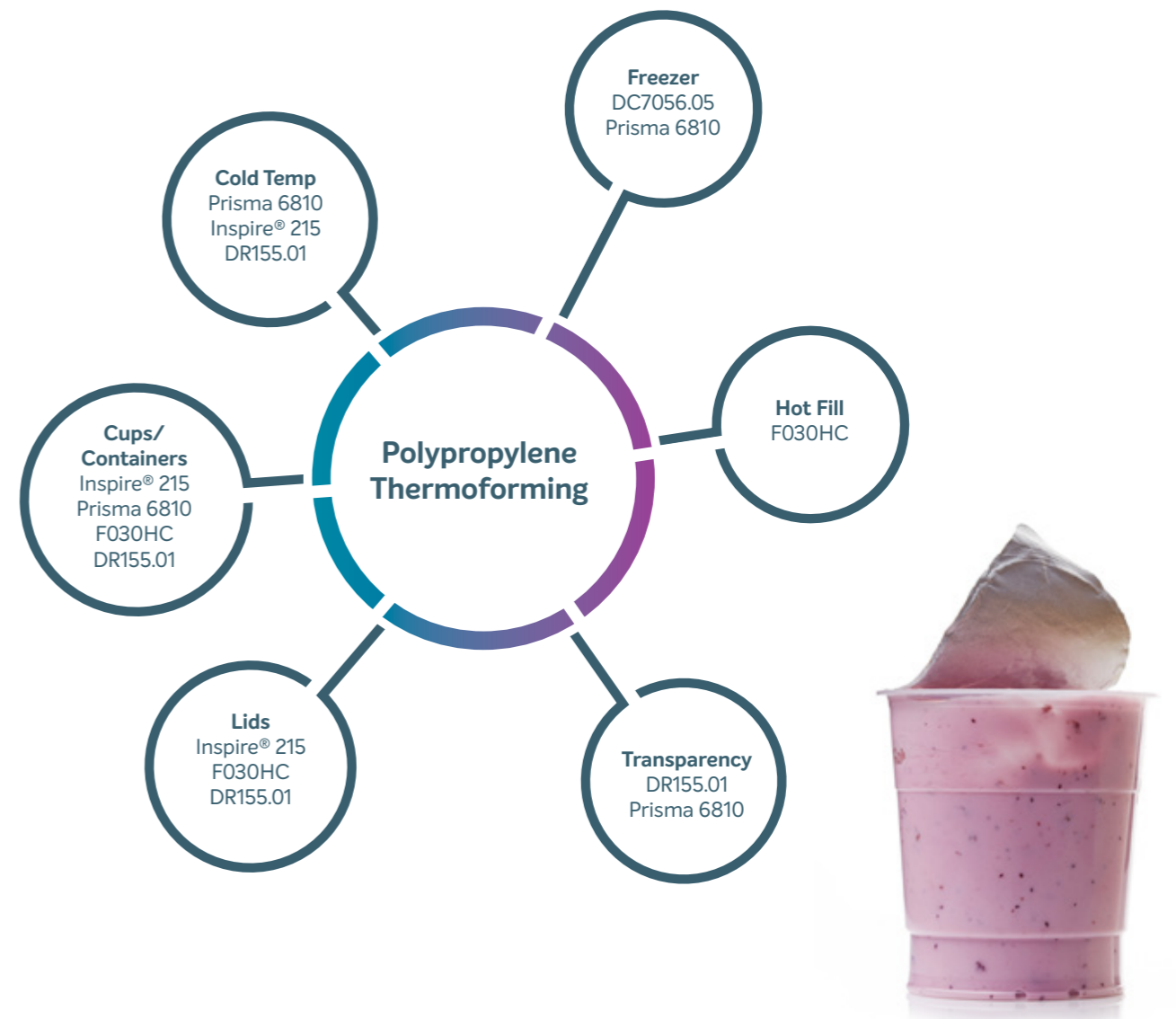


Thermoformed packaging plays a vital role in our daily lives, protecting foods such as dairy, shelf stable, and frozen products.

## ► Thermoforming

Maintaining the quality and flavor of foods, while providing safe, lightweight packaging that offers freezer to microwave ease-of-use and convenience are essential requirements.

Braskem has demonstrated its commitment to the thermoforming market with a wide range of polypropylene resins offering exceptional stiffness, high heat distortion resistance, and lightweighting potential without sacrificing sidewall stiffness.



Family	Product	MFR [g/10 min]	Flexural Modulus [MPa]	N. Charpy 23°C [kJ/m²]
HOMO	Inspire® 215	2.1	1700	6
	F030HC	3.3	2100	4
ICP	Prisma 6810	2.4	1300	43
	DC7056.05	3.5	1050	14
RACO	DR155.01	1.7	900	22

High performance nucleated homopolymer with good optical and physical properties.

High performance, high crystalline homopolymer with exceptional stiffness and good optical properties.

Next generation clear impact copolymer designed for a great balance of stiffness, toughness, and clarity.

Combines very good processability with exceptional impact strength and good stiffness.

High transparency, excellent organoleptic properties and superior drop impact.



# 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<sub>2</sub>** 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**



FOSTERING THE TRANSITION TO A CIRCULAR ECONOMY



## 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**

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.

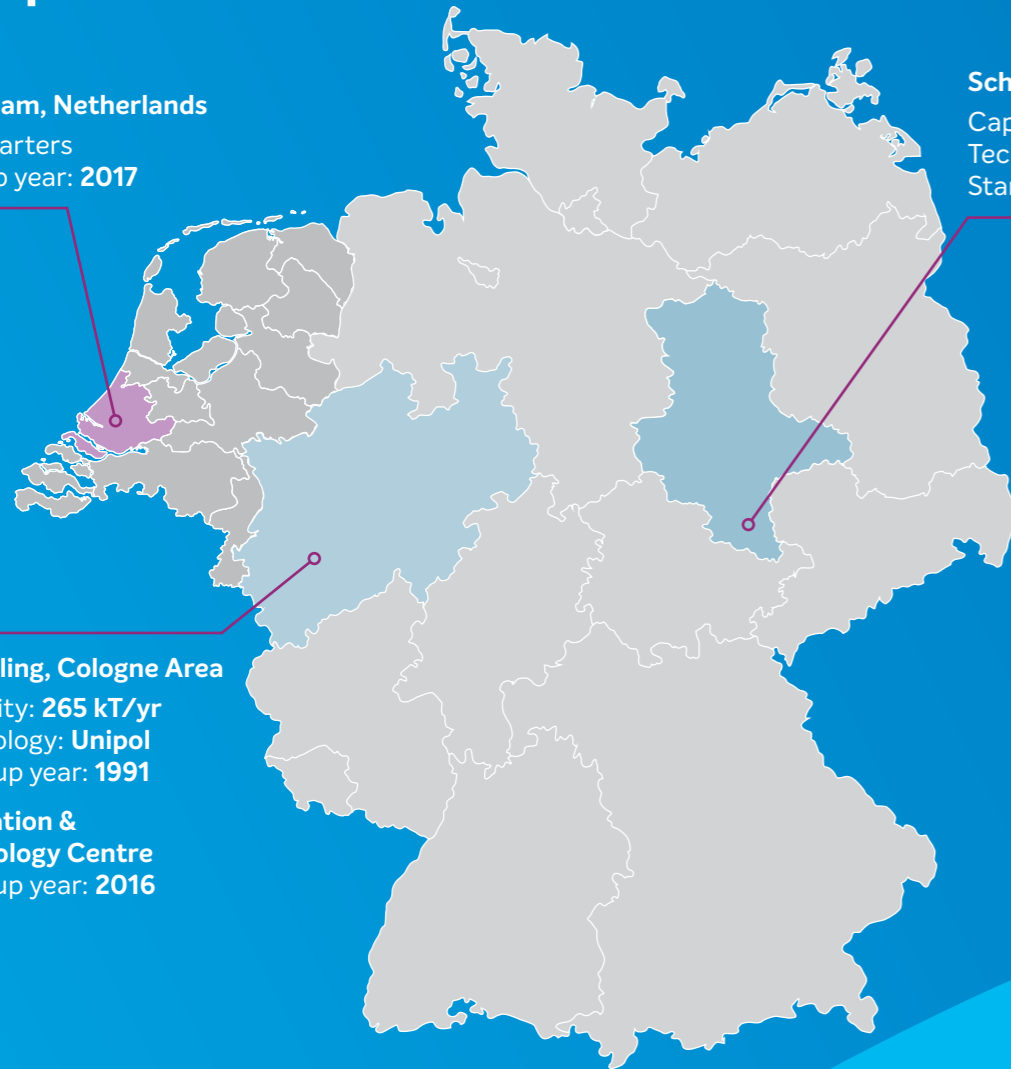
## Europe

**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

**8,353** Team Members

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

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

## 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.



