

# **Driven to provide new levels of performance and innovation**

## **Polypropylene for Automotive & Compounding**



**Braskem** 

# Innovation is the tool that drives us in the pursuit of our **long-term commitments with sustainable development**

Our purpose is to improve people's lives by creating sustainable solutions through chemicals and plastics.

In line with the **UN 2030 sustainable development goals**, Braskem took on long-term goals with people and the planet in 2020. Working in three priority and four complementary dimensions, we are looking to achieve these goals through innovation.



**Eliminating plastic waste**



**Mitigating Climate Change**



**Social Responsibility & Human Rights**

An **ecosystem** developed to represent Braskem's products, technologies and initiatives that help drive the circular economy.



A portfolio of products made from sugarcane that captures CO<sub>2</sub> from cradle-to-gate, helping mitigate climate change.



All our polypropylene grades are available with ISCC+ certification, using the mass balance method with bio, circular or bio-circular feedstocks\*, ensuring sustainability and traceability across the supply chain.

## Automotive & Compounding

From bumpers and safety relevant parts to under-the-hood components, **our polypropylene is a versatile material used across a wide range of automotive applications**. As a base resin, it is modified with fillers, colorants, and stabilizers to meet the specific requirements of Tiers and OEMs, delivering cost-effective, innovative design solutions that enhance vehicle safety, durability, and performance.





## High Impact PP Copolymers

Our globally available high impact copolymers enable the production of previously unattainable balance of high toughness and stiffness compounds.

CP396XPD

CP284RD

CP295D

TI8300CD

Key benefits:

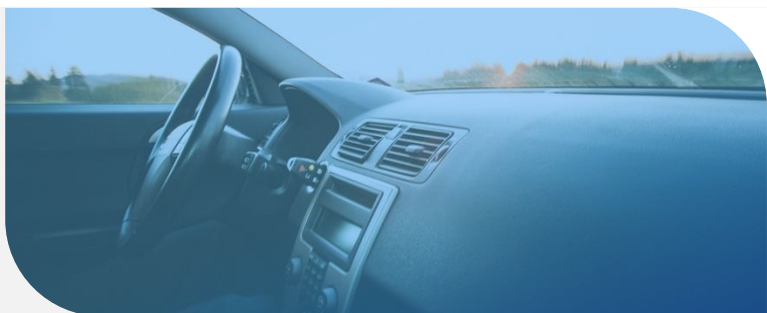
- Improved toughness and flowability
- Improved impact properties for high mineral filled compounds
- Higher toughness for FR compounds

## High Stiffness PP Homopolymers

Developed for the automotive compounding market, our high crystallinity homopolymers provide premium levels of stiffness, flowability, compounding flexibility, and performance.

Key benefits:

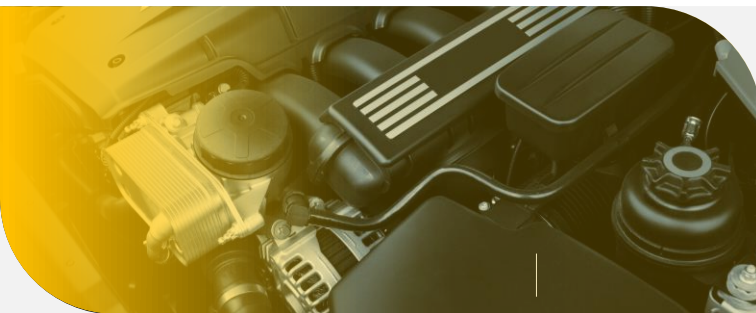
- Wide range of melt flow rates
- Enabling higher HDT performance
- High crystallinity



F030HC

F350HC

F1000HC2



## Low Emission<sup>(1)</sup> & Fogging, High Melt flow PP Copolymers

Low emission impact copolymers meet VDA277 and VDA278 automotive standards. The latest DC705LE.01<sup>(2)</sup> (MFR 44) enables the development of low emission compounds with a broad MFR range for automotive applications.

CG150V

DC705LE.01

Low emission is attainable **without**:

- Specialized compounding lines
- Additional treatment after production
- Adding expensive additives

<sup>(1)</sup> All PP grades are available in low emission variants

<sup>(2)</sup> Grade currently under development. For more information, please contact our technical or commercial team

|           |             | Melt Flow Index<br>(230 °C / 2,16 Kg)   | Flexural<br>Modulus | Notched Charpy<br>Impact<br>Resistance @23 °C | Strength at Yield | Additives * |
|-----------|-------------|---|---------------------|---|-------------------|-------------|
|           | Method      | ISO 1133  | ISO 178             | ISO 179                                       | ISO 527-1         | -           |
|           | Units       | g/10 min  | MPa                 | kJ/m <sup>2</sup>                             | MPa               | -           |
| Extrusion | DP008H.02   | 0,8   | 1500                | 7   | 33                | -           |
|           |             | enhanced process <b>stabilization</b> , high <b>melt strength</b> , excellent <b>rigidity</b>   |                     |   |                   |             |
|           | INSPIRE 215 | 2,1   | 1700                | 5   | 36                | N, AS       |
|           |             | superior <b>stiffness/impact balance</b> , high <b>temperature resistance</b> , excellent <b>optical/organoleptic properties</b>                      |                     |   |                   |             |
| Stiffness | F030HC      | 3,3   | 2150                | 3,5   | 40                | N           |
|           |             | high <b>crystallinity</b> for superior stiffness, high <b>temperature resistance</b> , improved <b>VOC performance</b>                                |                     |   |                   |             |
|           | F350HC      | 35  | 2000                | 2,5   | 40                | N           |
|           |             | high <b>crystallinity</b> for superior stiffness, high <b>temperature resistance</b> , improved <b>VOC performance</b>                                |                     |   |                   |             |
|           | F1000HC2    | 110   | 2200                | 1,5   | 41                | N           |
|           |             | high <b>crystallinity</b> for superior stiffness, high <b>temperature resistance</b> , improved <b>VOC performance</b> , very high <b>flowability</b> |                     |   |                   |             |
| General   | DHSP120.01  | 12  | 1650                | 3,5   | 39                | AS          |
|           |             | balanced <b>physical properties</b> , excellent <b>flowability</b> , short <b>cycle times</b>   |                     |   |                   |             |
|           | HSP165G     | 16,5  | 1500                | 3,5   | 34                | AGF         |
|           |             | high <b>stiffness</b> and heat <b>resistance</b> , <b>anti gas fading</b>   |                     |   |                   |             |
|           | HSP250NA    | 25  | 1650                | 3   | 36                | N, AS       |
|           |             | high <b>stiffness</b> and heat <b>resistance</b> , low <b>warpage</b> and short <b>cycle times</b>  |                     |   |                   |             |
|           | H734-52RNA2 | 52  | 1700                | 2,5   | 35                | N, AS       |
|           |             | balanced <b>physical properties</b> , <b>easy processing</b> , low <b>warpage</b> , thin <b>wall injection molding</b> , short <b>cycle times</b>     |                     |   |                   |             |

\*Additives: N = Nucleated, AS = Antistatic, AGF= Anti-gas fading





|                |             | Melt Flow Index<br>(230 °C / 2,16 Kg)  | Flexural<br>Modulus | Notched Charpy<br>Impact<br>Resistance @23 °C | Notched Charpy<br>Impact<br>Resistance @-20 °C | Additives * |
|----------------|-------------|--|---------------------|---|--|-------------|
| Method         |             | ISO 1133   | ISO 178             | ISO 179                                       | ISO 179  |             |
| Units          |             | g/10 min   | MPa                 | kJ/m²   | kJ/m²  | -           |
| Extrusion      | CSP030N     | 0,3  | 1300                | 70  | 6  | N           |
|                |             | high molecular weight, low melt flow, very high impact resistance              |                     |   |  |             |
|                | INSPIRE 118 | 0,3  | 1750                | 60  | 2,5  | N           |
|                |             | high molecular weight, low melt flow, very high stiffness                      |                     |   |  |             |
|                | INSPIRE 114 | 0,5  | 1500                | 65  | 4,5  | -           |
|                |             | high molecular weight, high melt strength                                      |                     |   |  |             |
| High Impact    | CP396XPD    | 11   | 1000                | 60  | 11   | N           |
|                |             | high stiffness and very high impact resistance, especially at low temperatures |                     |   |  |             |
|                | CP284RD     | 14   | 1150                | 50  | 7  | N, AS       |
|                |             | superior balance of stiffness and toughness, excellent impact strength         |                     |   |  |             |
|                | CP295D      | 20   | 750                 | 60  | 10   | -           |
|                |             | high flow and high impact resistance   |                     |   |  |             |
|                | TI8300CD    | 30   | 950                 | 55  | 9  | N           |
|                |             | high flow and high impact resistance, superior low temperature drop impact     |                     |   |  |             |
| High Stiffness | DCD600NQ.01 | 60   | 700                 | 15  | 7,5  | N           |
|                |             | high flow and superior low temperature drop impact                             |                     |   |  |             |
|                | TI2150C     | 15   | 1620                | 7,2   | 2,9  | N           |
|                |             | high stiffness, suppressing tiger marking                                      |                     |   |  |             |
|                | CG350N      | 35   | 1500                | 7,2   | 3,5  | N           |
|                |             | high flow copolymer with good mold fill ability                                |                     |   |  |             |
|                | TI2900C     | 110  | 1600                | 3,9   | 2,1  | N           |
|                |             | high stiffness, suppressing tiger marking, high flow                           |                     |   |  |             |

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|               |             | Melt Flow Index<br>(230 °C / 2,16 Kg)   | Flexural<br>Modulus | Notched Charpy<br>Impact<br>Resistance @23 °C | Notched Charpy<br>Impact<br>Resistance @-20 °C | Additives * |
|---------------|-------------|---|---------------------|---|--|-------------|
|               | Method      | ISO 1133  | ISO 178             | ISO 179                                       | ISO 179  |             |
|               | Units       | g/10 min  | MPa                 | kJ/m <sup>2</sup>                             | kJ/m <sup>2</sup>                              | -           |
| Low emission  | CG150V      | 15  | 1100                | 11  | 6  | -           |
|               |             | low emissions <b>copolymer</b> (acc. VDA277, 278) for automotive <b>interior applications</b>                             |                     |   |  |             |
|               | DC705LE.01  | 44  | 1450                | 7   | 4  | N, AS       |
|               |             | low emissions <b>copolymer</b> (acc. VDA277, 278) for automotive <b>interior applications</b>                             |                     |   |  |             |
| High Meltflow | CD700NAQ    | 70  | 1200                | 8   | 3,5  | N, AS       |
|               |             | high <b>flowability</b> , high <b>impact strength</b> at low <b>temperature</b> , low <b>shrinkage &amp; warpage</b>      |                     |   |  |             |
|               | CG700NA     | 70  | 1350                | 6   | 3,5  | N, AS       |
|               |             | high <b>flowability</b> , good balance of <b>mechanical properties</b> even at low temperature, good <b>organoleptics</b> |                     |   |  |             |
|               | C7069-100NA | 100   | 1400                | 4   | 2,5  | N, AS       |
|               |             | very high <b>flowability</b> , excellent balance of <b>mechanical properties</b> , short <b>cycle times</b>               |                     |   |  |             |
| General       | C715-12NHP  | 12  | 1450                | 10  | 4,5  | N           |
|               |             | high <b>stiffness</b> and impact <b>strength</b>  |                     |   |  |             |
|               | C765-15NA   | 15  | 1200                | 12  | 6,5  | N, AS       |
|               |             | good balance of <b>stiffness and toughness</b> , very low <b>shrinkage</b> , very high <b>elongation</b> at break         |                     |   |  |             |
|               | C706-21NAHP | 21  | 1450                | 8   | 4,5  | N, AS       |
|               |             | high <b>stiffness</b> and high <b>impact resistance</b> , excellent <b>antistatic properties</b>                          |                     |   |  |             |
|               | C7082-30NA  | 30  | 1300                | 8,5   | 5  | N, AS       |
|               |             | excellent balance of <b>mechanical properties</b> combined with good flow   |                     |   |  |             |
|               | C705-44NAHP | 44  | 1450                | 7   | 4  | N, AS       |
|               |             | high <b>flowability</b> , superior <b>stiffness</b> , good <b>impact performance</b>                                      |                     |   |  |             |

\*Additives: N = Nucleated, AS = Antistatic, AGF= Anti-gas fading



► BATTERY

|                   |           |  | Melt Flow Index<br>(230 °C /<br>2,16 Kg) | Flexural<br>Modulus | Tensile<br>Modulus | Tensile<br>Strength<br>at yield | Notched<br>Charpy<br>Impact<br>Resistance<br>@23 °C | Notched<br>Charpy<br>Impact<br>Resistance<br>@ -20 °C | Vicat<br>(A50) | HDT B<br>(0,45 MPa) | Additives * |
|-------------------|-----------|--|--|---------------------|--------------------|---------------------------------|---|---|----------------|---------------------|-------------|
|                   |           | Method   | ISO 1133                                 | ISO 178             | ISO 527            | ISO 527                         | ISO 179   | ISO 179   | ISO 306        | ISO 75              |             |
|                   |           | Units  | g/10 min                                 | MPa                 | MPa                | MPa                             | kJ/m²   | kJ/m²   | °C             | °C                  | -           |
| Injection Molding | DCSP50.02 | 5,5  |  | 1300                | 1200               | 26                              | 30  | 6,5   | 151            | 88                  | N           |
|                   |           | excellent heat resistance, very high impact resistance   |  |                     |                    |                                 |   |   |                |                     |             |
|                   | CSP70H    | 7  |  | 1450                | 1350               | 28                              | 9   | 4   | 152            | 90                  | -           |
|                   |           | excellent long term heat stabilization, good weldability |  |                     |                    |                                 |   |   |                |                     |             |

\*Additives: N = Nucleated, AS = Antistatic, AGF= Anti-gas fading

# Braskem

## Global Presence

With a **global, human-oriented vision of the future**, Braskem strives every day to improve people's lives by creating sustainable solutions in chemistry and plastics. Braskem is the largest producer of thermoplastic resins in the Americas and a **global leader in the production of biopolymers on an industrial scale**.

Our products are exported to some **70 countries** and we count on 40 Industrial units, located in Brazil, the United States, Germany and Mexico (in partnership with Mexican company Idesa). For more information, visit [www.Braskem.com](http://www.Braskem.com)



Clients in  
more than  
**70**  
countries

More than  
**8.500**  
team  
members

**6<sup>th</sup>**  
largest producer in PE,  
PP and PVC

**#1** producer PE, PP and PVC  
in the Americas

**#1** PP producer in North America

**#1** PE, PP and PVC producer  
in Latin America

**40**  
industrial units:



**29** plants



**4** plants



**5** plants



**2** plants



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