

High Transparency Polypropylene and Transparent Cold-Resistant Polypropylene for Extrusion Sheet

Stage

R&D

Introduction consideration

Practical stage

Keyword

Lightweighting

Monomaterial

CO₂ emission
reduction

Use

Food Containers / Beverage Containers

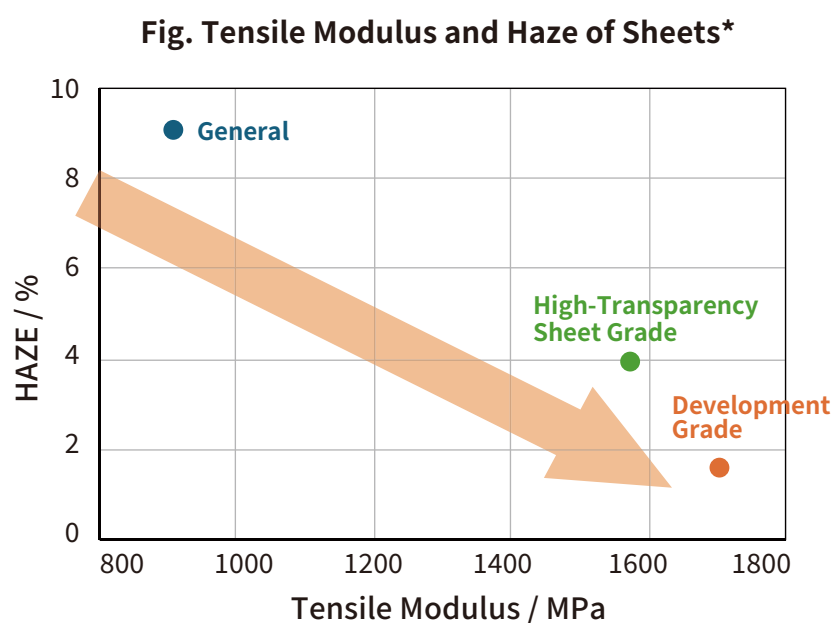
Challenge

- Packaging designs that support mono-material structures and resource circularity are increasingly required to comply with regulations such as the PPWR.
- Reducing GHG emissions across the entire supply chain is becoming an increasingly important requirement.
- There is a need to improve environmental performance while maintaining product visibility and consumer appeal.

Solution

● High Transparency Type :

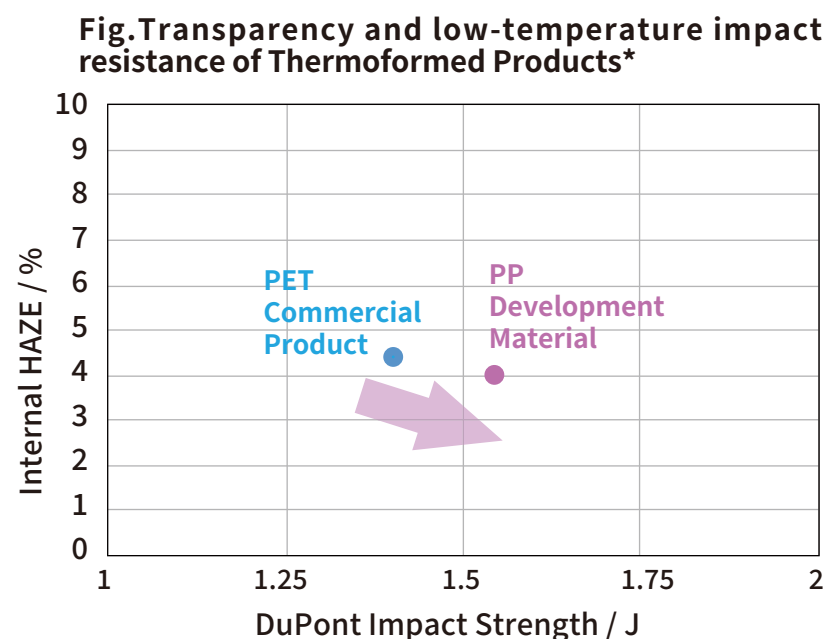
Developed a material with high transparency, low haze, and excellent thermoformability.



* Note: Haze is an indicator of the cloudiness of a transparent material. A lower haze value indicates higher transparency.
Measured using samples taken from thermoformed sheets (thickness: approx. 0.35 mm).

● Transparent Cold-Resistant Type :

Developed a material that offers an excellent balance of transparency and low-temperature impact resistance.



*Measured on samples taken from the sidewall of the thermoformed products. (Thickness : approx. 0.2 mm)

Benefit

- Enables mono-material packaging design while maintaining product visibility through the combination of PP containers and transparent PP lids.
- Provides a potential alternative to PET-G and other materials in applications requiring transparency and low-temperature impact resistance, expanding the range of mono-material PP packaging solutions.
- Contributes to lightweighting and reduced transportation-related CO₂ emissions by replacing PET and PS. (Approx. 30% lighter than PET, 15% lighter than PS, and 65% lighter than glass bottles, based on material density.)

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