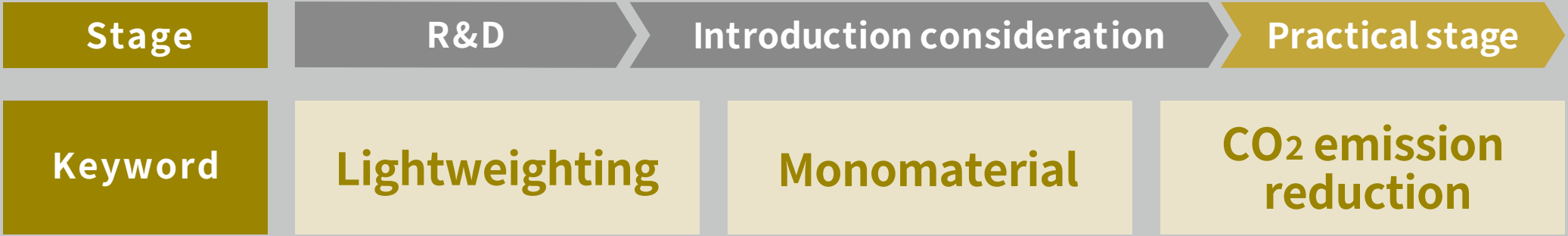




Highly Transparent PP for Injection Blow Molding



Use **Cosmetic Containers / Pharmaceutical Bottles/ Air Freshener Containers / Food Containers**

- Challenge
- Growing demand for monomaterial and recyclable packaging in response to regulations such as PPWR.
 - Increasing pressure to reduce GHG emissions throughout the supply chain.
 - The need to maintain product visibility and shelf appeal while improving environmental performance.
 - Achieving stable production quality in blow molding remains challenging due to the limited molding stability of PP.

Solution

● Transparency

High transparency achieved through our proprietary metallocene catalyst, WINTEC™ (Glass, PET, and other materials have traditionally been the primary choices for transparent containers.)

Material	HAZE (2mm) (%)
MG2TA Standard	30
GNW1092 Highly Transparent Grade for Injection Blow Molding	10

※ Haze is an index used to indicate the degree of cloudiness in transparent materials such as plastics, films, and glass. Lower HAZE values indicate higher transparency.

● Blow Molding Stability

Optimized material design expands the processing temperature window for more stable blow molding.

Material	Processing Temperature Range (°C)
Conventional Injection Stretch Blow Grade	7
Developed Grade GNW1092	25

● Evaluation Method

- Molding evaluation at different temperatures using a thin-wall bottle. (Body Wall Thickness : approx. 0.2–0.3 mm)
- Identification of the temperature range for stable molding.

		Transparent PP	PET
Physical characteristics	Transparency	○	◎
	Heat resistance	○	△
	Chemical resistance	○	△
	Moisture vapor barrier	○	△
	Specific gravity (g/cm³)	0.91	1.30

※ The values shown represent the relative general characteristics of each material.

Benefit

- Enables monomaterial design through all-PP packaging and contributes to weight reduction by replacing PET and glass.
- Leverages the water vapor barrier properties, heat resistance, and chemical resistance of PP, enabling applications that were previously difficult to achieve with conventional transparent PP.