



TOTAL

COMMITTED TO BETTER ENERGY



INJECTION FOOD PACKAGING

A world of possibilities with Polypropylene and Polystyrene

A WORLD OF POSSIBILITIES

Polypropylene

In line with market requirements

Total Polypropylene products range are preferred and referenced within most of converters and brand owners looking for **differentiation, food safety and excellent processing.**

Complete product range

We offer a broad product mix **from standard to high fluidities** while improving processing, mechanical properties and **allowing costs reductions** thanks to lightweighting and processing savings possibilities.

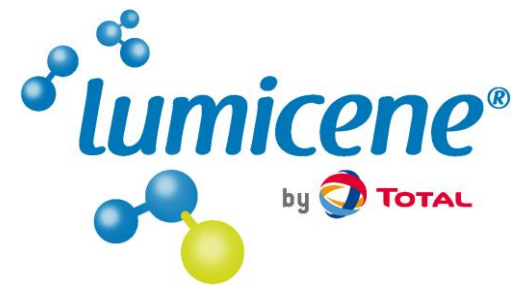
Random Polypropylene

Grade	MFI (2.16 Kg – 230°C) (g/10min)	Flexural Modulus (MPa)	Izod Notched (at 23°C KJ/m ²)	Specific Features
PPR 10232	40	1150	5.0	Clarified & antistatic
PPR 12232	80	1150	5.0	
PPR 12236	80	1150	5.0	Clarified

TOTAL PPR 12236 – odorless and highly transparent solution



BENEFITS OF LUMICENE® TECHNOLOGY



TOTAL POLYPROPYLENE LUMICENE® RANDOM COPOLYMERS

Based on proprietary Metallocene technology, **TOTAL Polypropylene Lumicene® Random copolymers** combine improved properties while allowing significant processing costs reductions.

Superior food compatibility

- Lowest migration
- Excellent organoleptics
- Sterilization and pasteurization allowed
- Phthalate free

Higher rigidity

- Downgauging
- Reduced cooling time

Moulding productivity

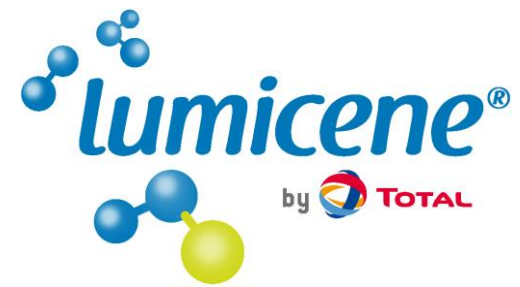
- Ultra high moulding precision and reproducibility
- Longer machine lifetime
- Lower reject rate

Outstanding aesthetics

- Unmatched gloss and transparency



BENEFITS OF LUMICENE® TECHNOLOGY



Food safety & Aesthetics

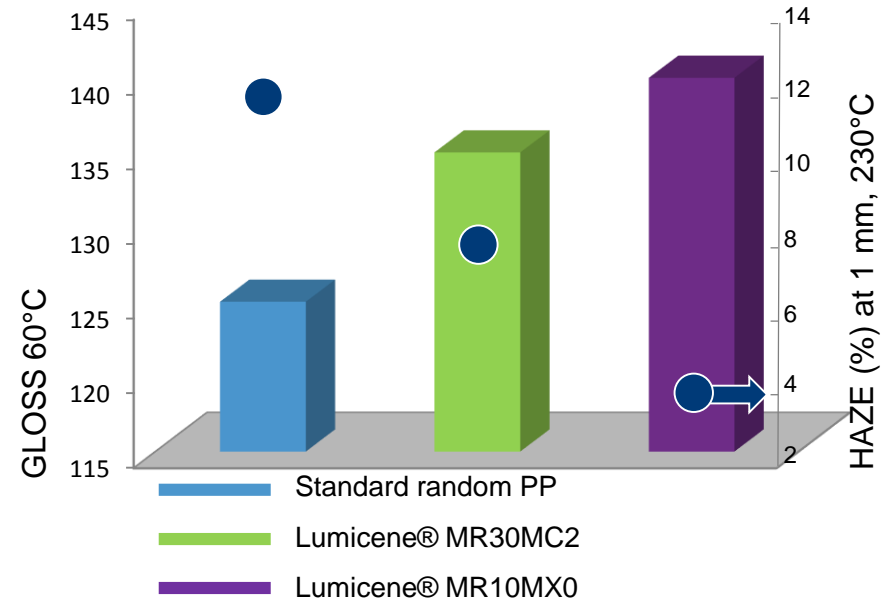
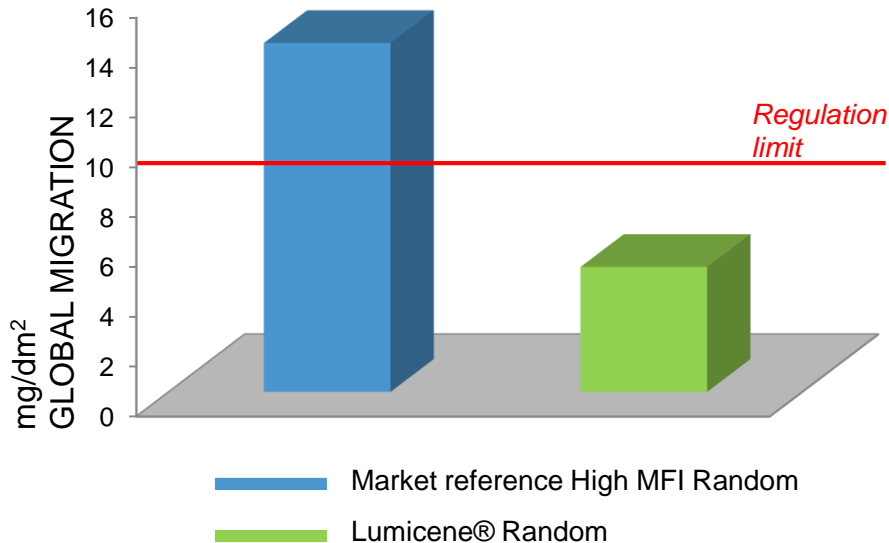
Superior food compatibility

Ultra low extractables and best-in-class organoleptic properties give the TOTAL Polypropylene Lumicene® range the status of universal grade for food packaging from freezer to microwave.

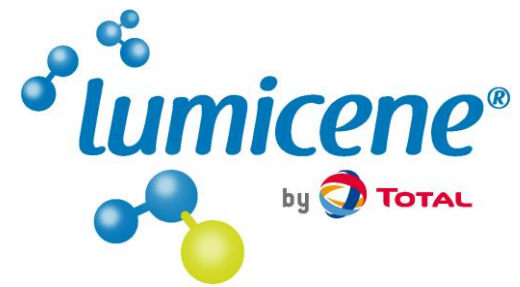
Unmatchable gloss & transparency

TOTAL Polypropylene Lumicene® Random Copolymers are well known for their outstanding aesthetics. This property allows entering in markets like cosmetics, personal care, houseware and food packaging. TOTAL Polypropylene Lumicene® Random Copolymers are outstanding alternatives to glass and technical polymers.

2 hours 100°C, olive oil



TOTAL POLYPROPYLENE LUMICENE® RANDOM COPOLYMERS



Product range


Grade	MFI (2.16 Kg – 230°C) (g/10min)	Flexural Modulus (MPa)	Specific Features	Typical application
MR10MX0	10	1250	Ultra high transparency	Baby bottles, ISBM containers, films
MR30MC2	30	1250	High transparency	Caps and closures, medical devices
MR60MC2	60	1250	High transparency	Housewares and food packaging

**Product range covers a wide range of applications
and add a new dimension to more traditional applications.**

A WORLD OF POSSIBILITIES

Polypropylene

Homopolymer Polypropylene




Grade	MFI (2.16 Kg – 230°C) (g/10min)	Flexural Modulus (MPa)	Izod Notched (at 23°C KJ/m ²)	Specific Features
PPH 7060	12	1450	3.5	Nucleated & antistatic
PPH 10012	42	1500	3.0	
PPH 11012	55	1600	2.5	

TOTAL PPH 11012 – reaching optimized performances

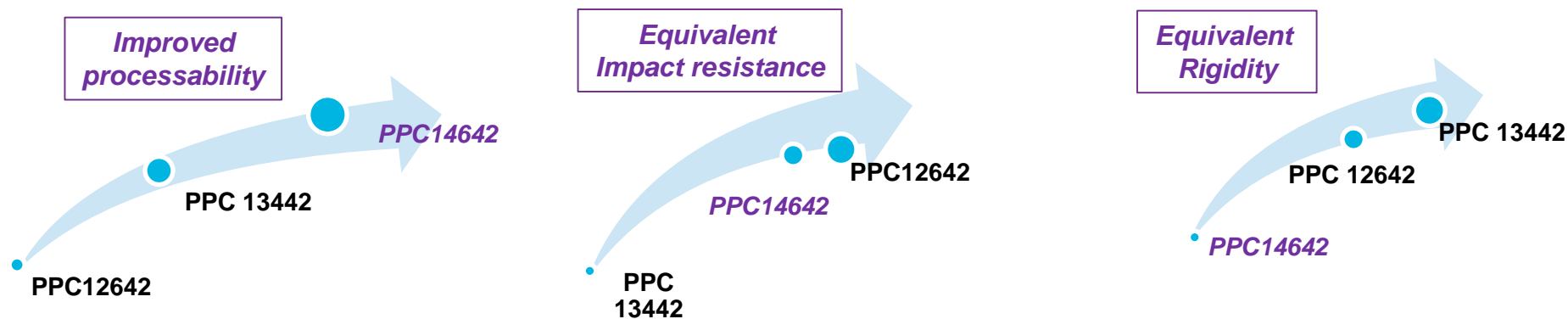
Impact copolymer Polypropylene

Grade	MFI (2.16 Kg – 230°C) (g/10min)	Flexural Modulus (MPa)	Izod Notched (at 23°C KJ/m ²)	Specific Features
PPC 10641	44	1500	7.5	Nucleated & antistatic
PPC 11812	50	1100	13.5	
PPC 12642	70	1500	6.4	
PPC 14642	130	1500	4.5	



TOTAL PPC 11812 & PPC 12642 – leaders in ice cream boxes and fat tubs, respectively

TOTAL PPC 14642



Grade	MFI (2.16 Kg – 230°C) (g/10min)	Flexural Modulus (MPa)	Izod Notched (at 23°C KJ/m ²)	Specific Features
PPC 14642	130	1500	4.5	Antistatic Ex reactor grade

Unique advantages of PPC 14642 in thin wall packaging application

- Provides the necessary improvements in resin processability for injection food packaging
- No pressure limitation in existing equipment
- Cycle time reduction, energy savings, maintenance savings and lower investment



With PPC 14642, Total is pushing further the limits providing the converters with an outperforming grade combining ultimate processability, high impact and good rigidity.

A WORLD OF POSSIBILITIES

Polystyrene

Polystyrene for packaging protection, convenience & aesthetics

Total offer a variety of polystyrene materials suitable to a wide range of packaging applications. Plastic packaging using Total polystyrene resins **reduces weight and cost, provides freshness, convenience, information, and aesthetics**, essential aspects to achieve consumer sales – all while maintaining stringent quality requirements

General Purpose Polystyrene (GPPS)

Grade	MFI (5 Kg – 200°C) (g/10min)	Vicat 5 kg (°C)	Flexural Modulus (MPa)	Specific Features
1540	12	86	2900	
1810	20	85	2900	



High Impact Polystyrene (HIPS)

Grade	MFI (5 Kg – 200°C) (g/10min)	Vicat 5 kg (°C)	Flexural Modulus (MPa)	Specific Features
3450	7	95	2250	High heat resistance
6540	11.5	83	2100	High impact moulding grade