

# Lumicene® mPE

for high quality hygiene film

## Polyethylene

Total Petrochemicals **Lumicene® metallocene polyethylene (mPE)** grades have proven their excellence in blown and cast film components of diapers, feminine hygiene and adult incontinence products, such as back sheet and top sheet films.

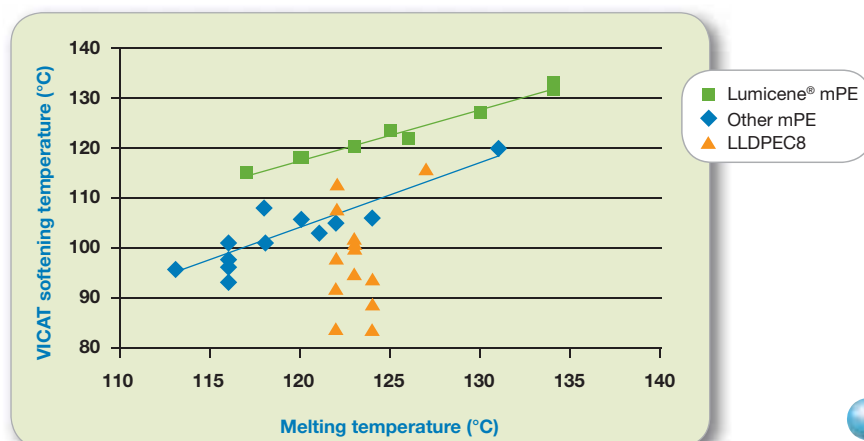


**Lumicene® mPE** provides unmatched film mechanical performance with unique stiffness/softness balance offering the opportunity to significantly down-gauge the film and therefore reduce cost and the impact on the environment.

Thanks to the narrow molecular weight distribution, **Lumicene® mPE** exhibits:

- higher Vicat softening temperature compared to LLC8
- better thermal resistance for hot melt adhesives
- proper adhesion between PE film and nonwoven polypropylene.

**Lumicene® mPE has higher temperature resistance than other mPE or LLC8 grades**



# Superior CaCO<sub>3</sub> compatibility

**Lumicene® mPE** products have a very good compatibility with CaCO<sub>3</sub>. This results in a very homogeneous dispersion of the CaCO<sub>3</sub> particles allowing the production of water vapour permeable breathable back sheets. These back sheets can also be embossed to give the film a nicer touch.

Moreover, **Lumicene® metallocene** resins with higher melt index are well suited as carrier for the production of CaCO<sub>3</sub> compounds and master batches.

## TNPP free

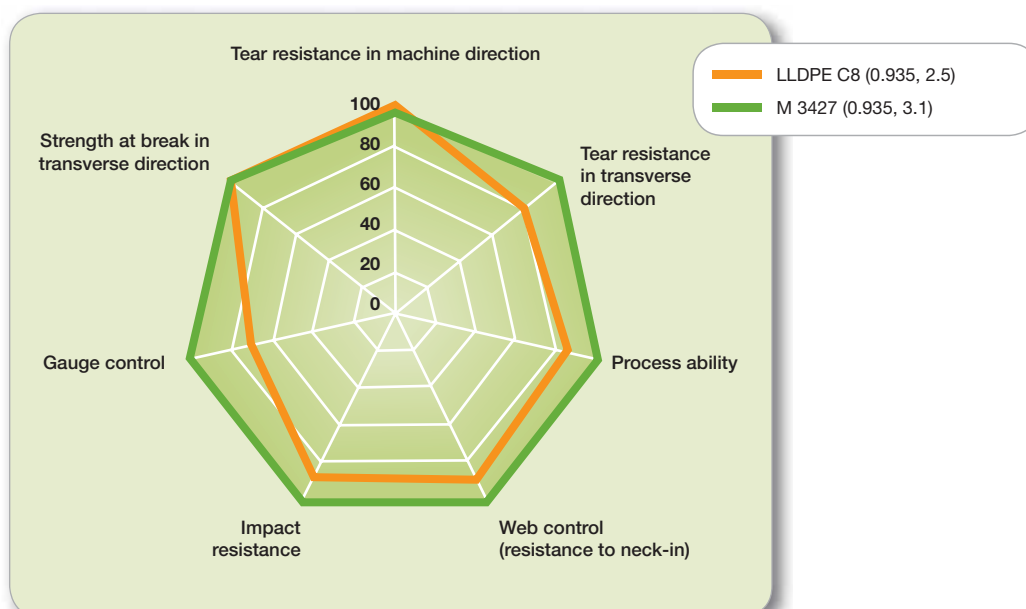
All **Lumicene® mPE** products contain antioxidants (AOX). The antioxidant package has been chosen and dosed with care and does not contain any tris nonylphenyl phosphite (TNPP).

## Product range

The unique **Lumicene® mPE** easy processing on blown and cast extrusion line, offers converters the possibility to reduce its energy consumption well in line with the environmental care or to increase its extruder throughput improving therefore its final cost competitiveness.

| Grade                        | Density (g/cm <sup>3</sup> ) | MFR 190°C - 2.16 kg (g/10 min) |
|------------------------------|------------------------------|--------------------------------|
| <i>lumicene</i> ® M 3410 EP  | 0.934                        | 0.9                            |
| <i>lumicene</i> ® M 4707 EP  | 0.947                        | 0.7                            |
|                              |                              |                                |
| <i>lumicene</i> ® M 3427     | 0.935                        | 3.1                            |
| <i>lumicene</i> ® M 4040     | 0.940                        | 4.0                            |
| <i>lumicene</i> ® M 6040 S01 | 0.960                        | 4.0                            |

### Product performance comparison



## Key benefits in blown film



- 15% less extrusion pressure
- Excellent bubble stability & draw down
- Outstanding blend ability with LDPE and conventional LLDPE
- Improved tear and impact resistance

## Key benefits in cast film

- Very low die deposit
- Low neck-in, excellent draw ability at extreme line speed
- Lower tendency to draw resonance
- Outstanding blend ability with LDPE and conventional LLDPE

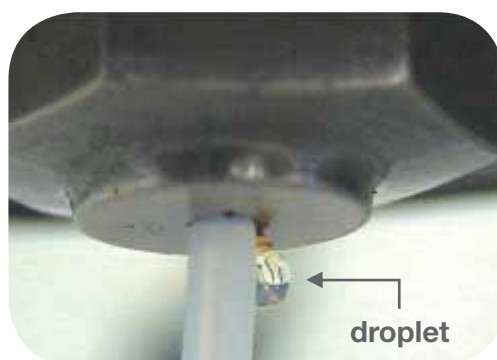


**Lumicene® mPE generates no die build-up and no droplets compared to competition**

**Lumicene® mPE**



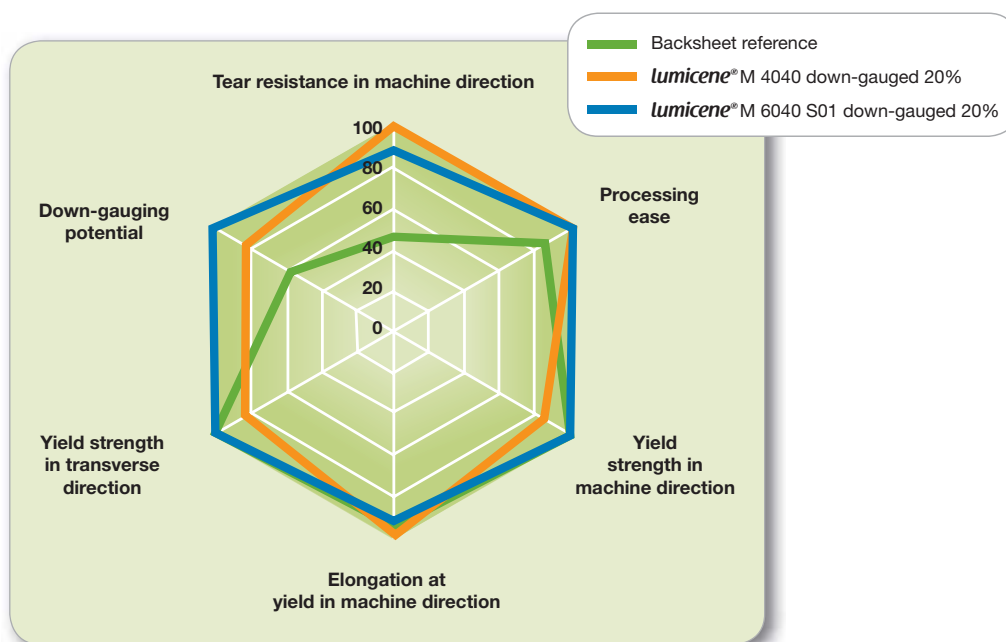
**Competitive mPE**



# Down-gauging with Lumicene® mHDPE

With a broad density range up to 0.960 g/cm<sup>3</sup> and an excellent draw-ability, Total Petrochemicals **Lumicene® metallocene** resins give the opportunity to reduce drastically film thickness. The addition of 10-20% LDPE to Total Petrochemicals **Lumicene® mPE** grades will boost tear resistance without impairing the other properties.

## Down-gauging of embossed hygiene backsheet



## Contact us

If you wish to evaluate the potential of Lumicene® technology, please feel free to contact your regular Total Petrochemicals sales representative or contact us at:

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