



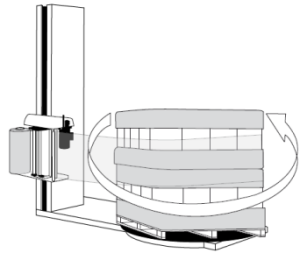
TOTAL
COMMITTED TO BETTER ENERGY



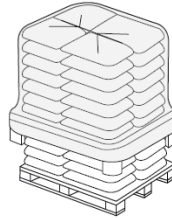
PALLET WRAP

Stretch wrap – stretch hood – shrink hood

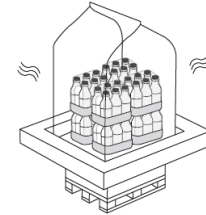
PALLET WRAP



stretch wrap



stretch hood



shrink hood

Opportunities & Challenges

The major challenge for pallet wrap solutions is to ensure **load security** during manipulation, transport and warehousing in order to **reduce** goods **waste** while being pushed to the limit to reduce packaging (**downgauging** – improved stretching).

Total's offer



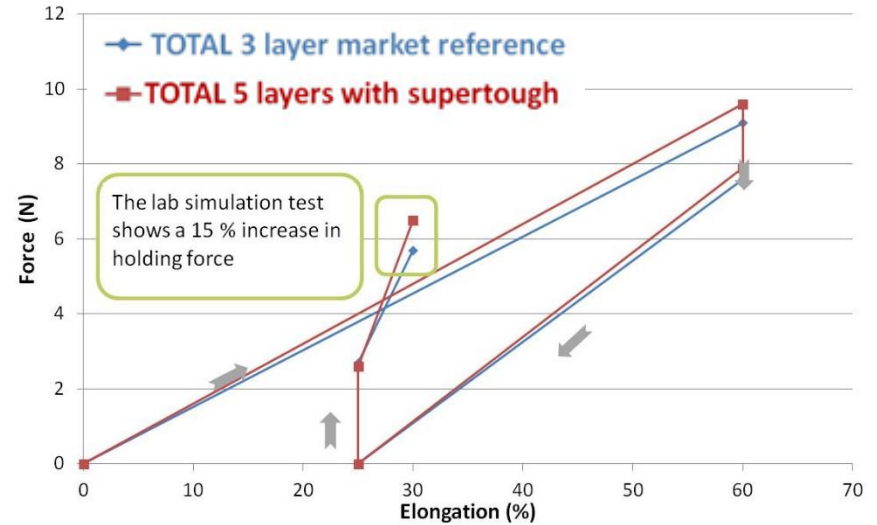
Reducing the environmental impact by **using less material** while maintaining the same performance (→ **puncture force, retention force, ultimate stretch, ...**) or even improve it, is a “must” in a context where plastics and their sustainability are more and more questioned. Thanks to **Lumicene®** and **Lumicene Supertough®**, Total is able to help you do just that.

CASE STUDY – STRETCH HOOD

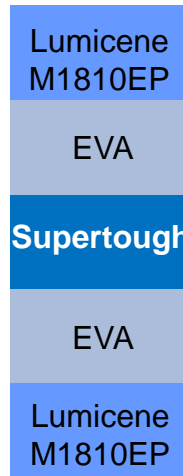
Improvement thanks to 5-layers technology



Stretch hood simulation
TOTAL internal method



reference
3-layers



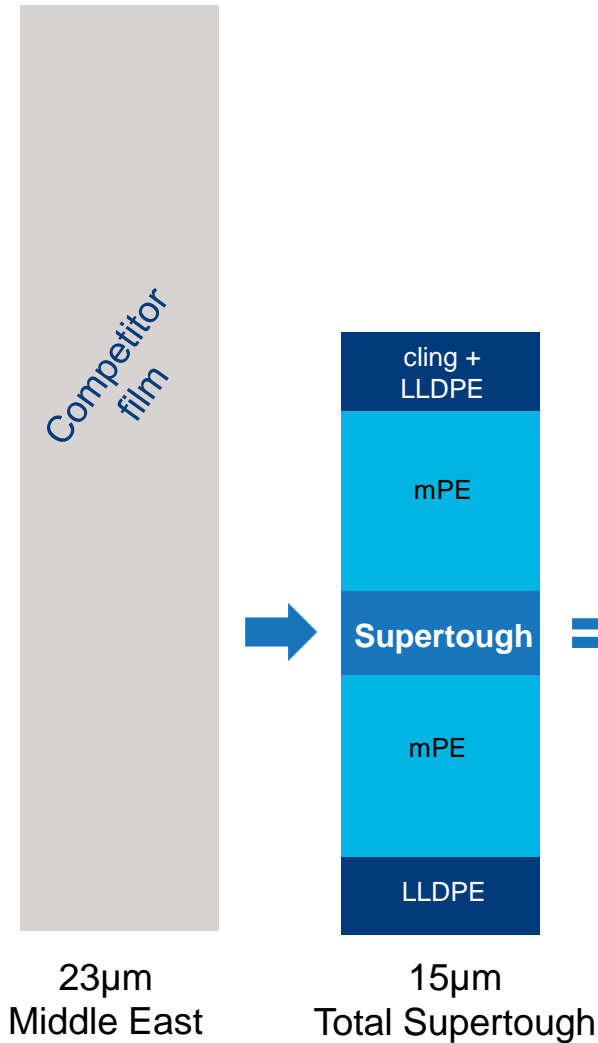
new
5-layers



Cost reduction
and / or
Extra holding
force

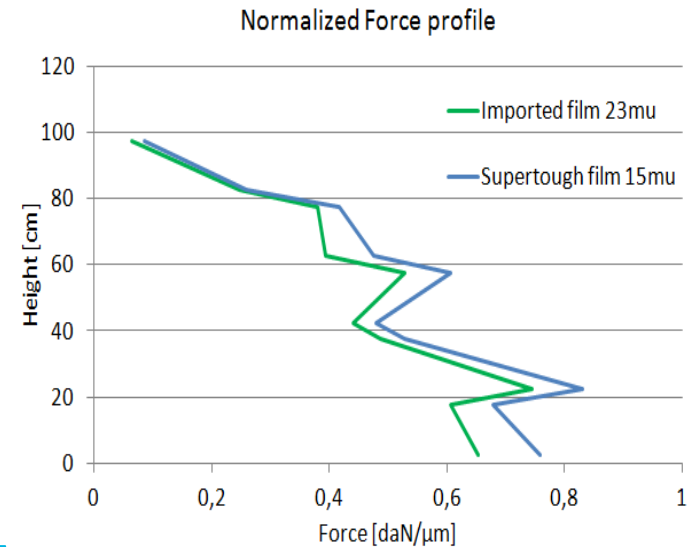
Improved packaging performance
& reduced costs :
Committed to better energy

CASE STUDY – INDUSTRIAL STRETCH



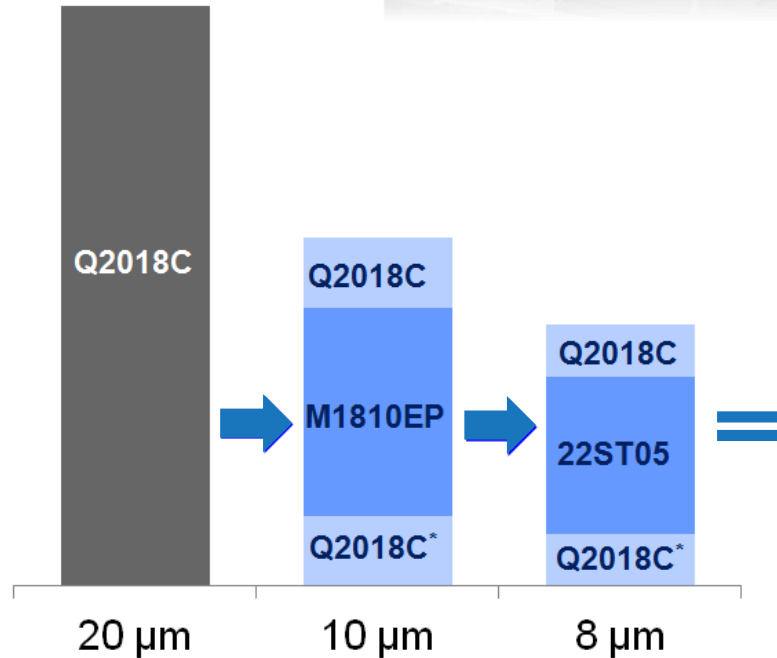
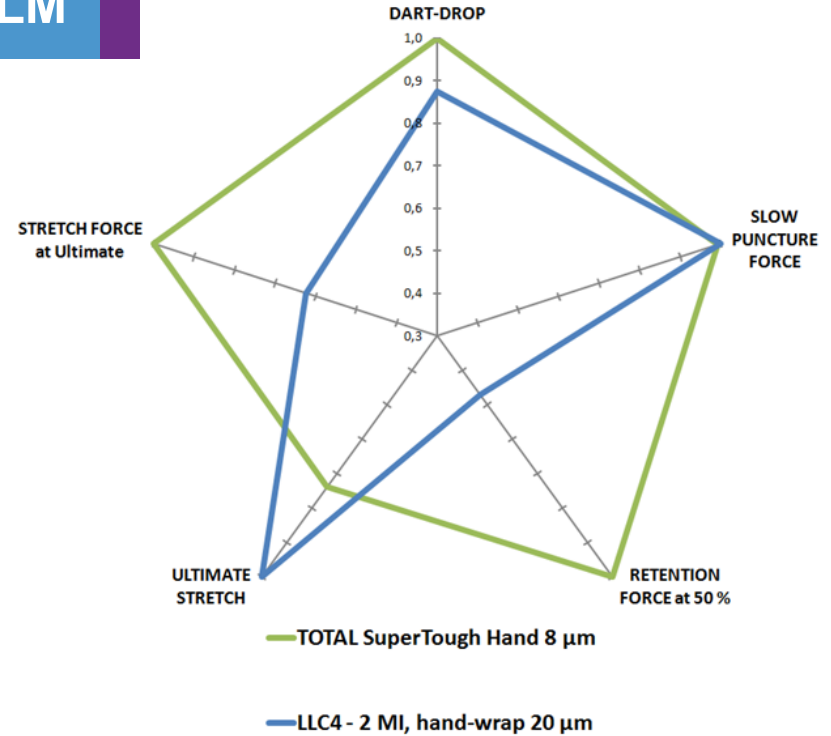
35% thinner

Weight reduction:
210g vs 325g



Downgauging :
reduce the environmental impact while improving performances

CASE STUDY – MANUAL STRETCH FILM

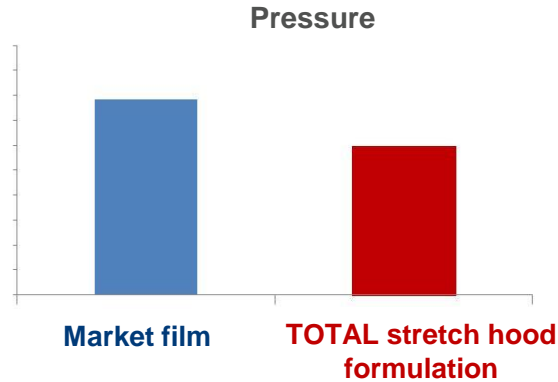


> 50% CO₂ reduction
 > 50% cost reduction

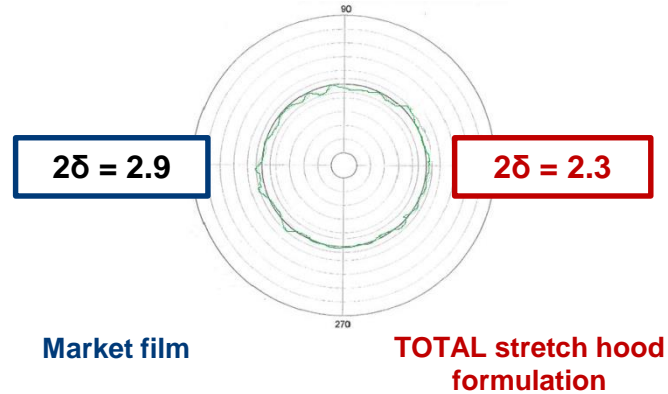
Downgauging :
 reduce the environmental impact while maintaining the same or even better performances

WHAT TOTAL CAN OFFER

Improved processability



2 sigma thickness distribution



Step change in stretch wrap using Lumicene Supertough®

