



## Toughening Polyamide

Polyamide (PA) thermoplastic resins are one of the major engineering and high-performance plastics used today thanks to their excellent balance of processibility and mechanical properties. Mostly used in technical applications, particularly for the automotive industry, improved impact performance at ambient or low temperature is critical.

Arkema has developed very effective impact modifiers for PA and glass-reinforced PA compounds. Lotader® ethylene-acrylate-maleic anhydride terpolymers and Orevac® maleic anhydride grafted polyolefins allow manufacturers to meet technical specification for PA 6, PA 66, PA 11, PA 12 and glass-reinforced PA compounds.

### SK Functional Polymer Resins for PA Impact Modification

	High Fluidity	Super-Toughness Below -15°C	Super-Toughness Above -15°C	Glass-Reinforced	Cost
Lotader® 4700			✓	✓	\$
Orevac® IM300	✓			✓	\$\$
Orevac® IM800		✓	✓	✓	\$\$

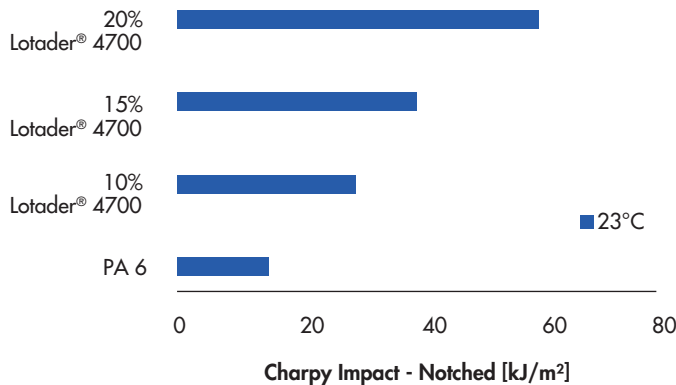
### LOTADER® 4700 FOR PA IMPACT MODIFICATION

Lotader® 4700 provides outstanding processibility and excellent toughening at room temperature of PA 6 and PA 66. The reactive maleic anhydride group enables chemical bonds, boosting adhesion of impact modifier to the polyamide phase. At 15 wt.-% to 20 wt.-% loading, compounds can reach super-tough impact modification at room temperature at a competitive cost.

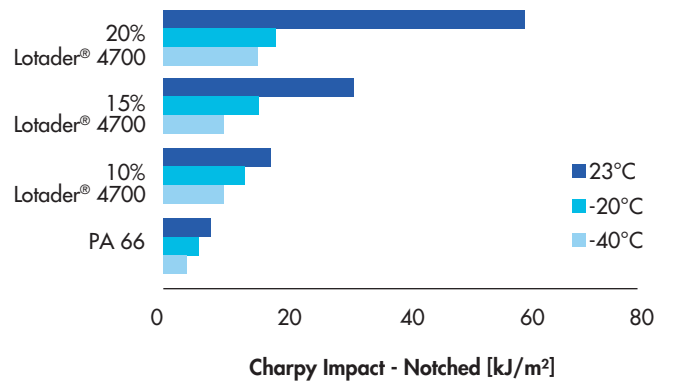
#### Key Benefits:

- General-purpose impact resistance at room temperature
- High processibility up to 300°C

PA 6 Impact Modification



PA 66 Impact Modification



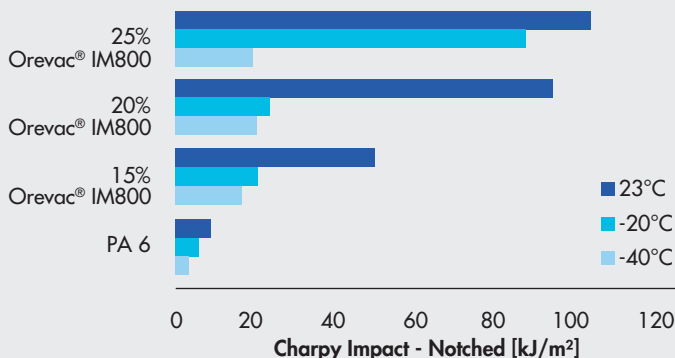
## OREVAC® IM300 & IM800 FOR PA IMPACT MODIFICATION

**Orevac® IM800** is the most effective impact modifier for polyamide. It enables super-tough performance at room temperature and low temperatures down to -40°C with a very low ductile/brittle transition temperature. In applications such as automotive, using **Orevac® IM800** can increase significantly low temperature impact strength with optimum stiffness.

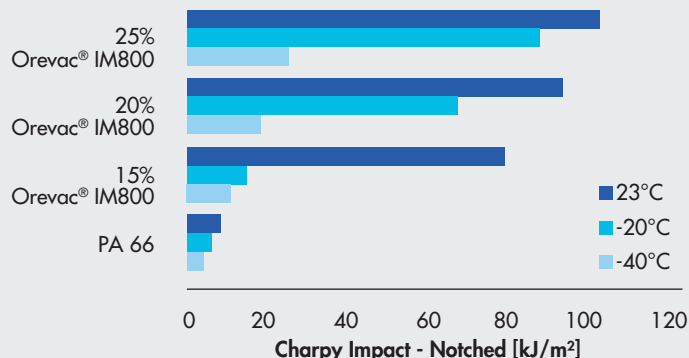
### Key Benefits:

- Excellent impact resistance at low temperatures down to -40°C
- Optimum balance between stiffness & toughness

#### PA 6 Impact Modification



#### PA 66 Impact Modification

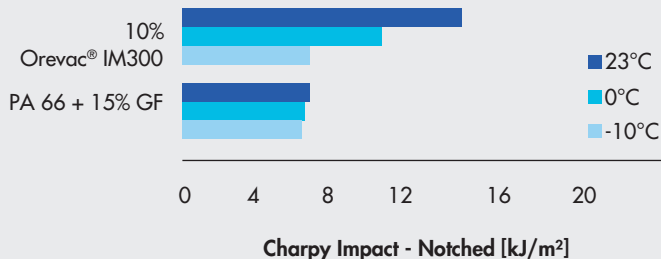


**Orevac® IM300** can also be used to boost polyamide impact strength. **Orevac® IM300** has been specifically designed in order to reach excellent fluidity while maintaining impact strength and mechanical properties. Thanks to its low reactivity, **Orevac® IM300** reduces compound melt viscosity and improves mould filling and surface appearance of glass-filled injection moulded parts.

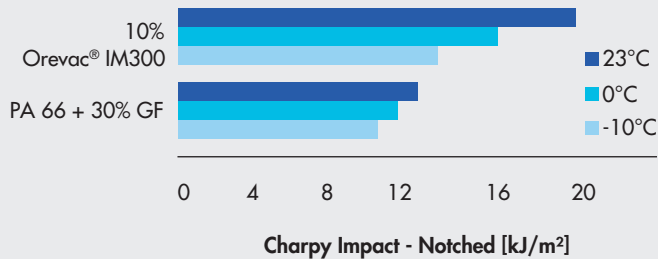
### Key Benefits:

- Excellent impact resistance at room temperature
- High fluidity for improved productivity

#### 15 wt.-% Glass Reinforced PA 66



#### 30 wt.-% Glass Reinforced PA 66



Disclaimer: Please consult SK Functional Polymer disclaimer regarding the use of SK FP products on <https://www.lotader.com/en/technical-literature/disclaimer.index.html>  
Regulatory information: for information on regulatory compliance, consult your local representative.  
Read and understand the Material Safety Data Sheet (MSDS) before using these products.

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