Milliken®

Millad® NX™ 8000

The New Standard In Clear Polypropylene

Increased Productivity and Energy Savings

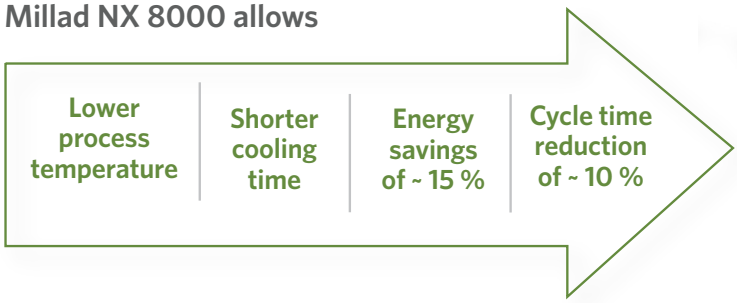
Polypropylene (PP) clarified with Millad® NX™ 8000 is revolutionizing the industry by creating new opportunities for crystal clear packaging and products never before seen. Transparency is no longer limited to thin or highly oriented parts, allowing even thicker parts to approach the look of clear materials like glass or amorphous polymers.

Also, PP based on traditional clarifiers (DMDBS) requires high processing temperatures to optimise transparency/clarity. The better solubility of Millad NX 8000 provides improved aesthetics at significantly lower temperatures than traditional clarifiers.

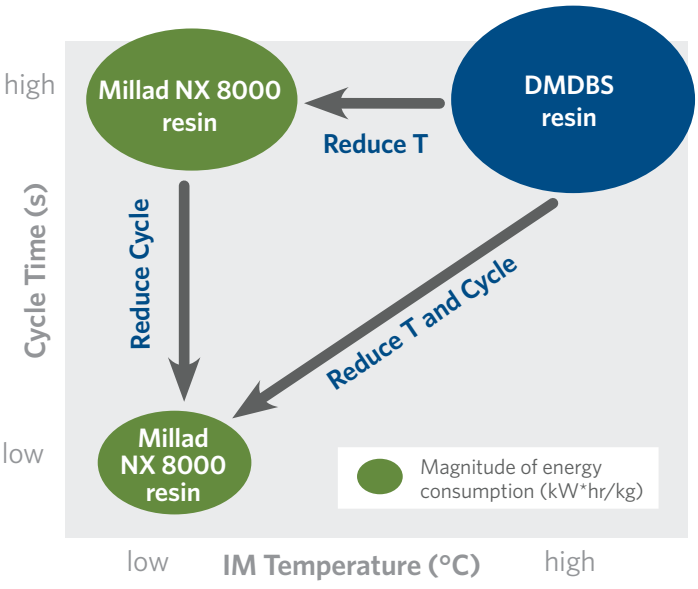
Numerous industrial test data indicates that use of PP clarified with Millad NX 8000 can lower required processing temperatures from 235°C to 190°C, resulting in energy savings between 8 and 12% and associated CO_2 emissions reductions.

Lower temperatures mean lower energy consumption and shorter cooling time, hence improved productivity. The overall concept results in a more sustainable solution.

Polypropylene clarified with Millad NX 8000 allows



Millad NX 8000 | Traditional Clarifier



UL VALIDATED

- MILLAD® NX™ 8000 ENABLES AN AVERAGE OF 10% ENERGY SAVINGS FOR PRODUCTION OF CLARIFIED PP PARTS

UL.COM/ECV

The lower injection temperatures of PP clarified with Millad NX 8000 promote more energy-efficient operations, which have been validated by the independent organization UL Environment, a business unit of UL (Underwriters Laboratories).

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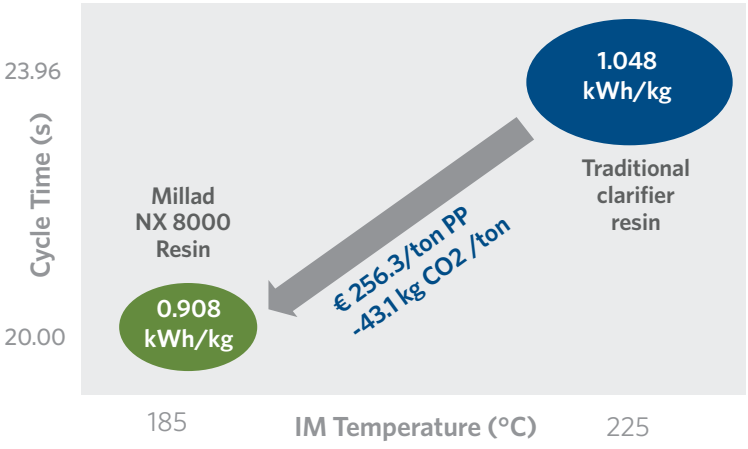
Increased Productivity and Energy Savings

Millad NX 8000 clarifier allows PP to be processed at significantly lower temperatures of 190°C to 200°C, a reduction of up to 40°C vs. traditional clarifiers with similar or even better opticals. These cooler temperatures reduce energy demands and associated carbon dioxide (CO_2) emissions,enabling more sustainable packaging solutions.

Part	Houseware
Machine	Hydraulic
Shot Weight	137 g/part ; 1 cavity mould
Traditional Clarifier Resin	85 MFR RCP
Millad NX 8000 EQ Resin	85 MFR RCP

Parameter	Assumptions
Energy Cost	€ 0.11/kWh
Machine Cost	€ 25/hour
Labour Cost	€ 5/hour (1 person per 4 machines)
Sustainability	0.308 kg CO_2/kWh



SAVINGS /1000MT PP EXPRESSED AS

- **17%** cycle time
- **8029** hours saved in manufacturing
- **256300** €
- **13.4%** CO_2 emissions
- **8.45** cars running per year
- **5.38** domestic power [houses] per year
- **9.19** acres of forest

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