

# Milliken® Hyperform® HPN® 68Li

## High-Performance Additive for Polypropylene

### CASE STUDY

## Ideal for food delivery: Thin-wall injection molded polypropylene packaging

### Cleaner look and higher productivity with Hyperform HPN 68Li

The ongoing boom in food delivery is creating strong demand for clean-looking, high-clarity plastic packaging materials that are not only sustainable and transparent, but which also can withstand the rigors of handling and transportation. It's vital that such food packaging seal well to avoid leakage and be durable enough to avoid cracking and breaking.

That's where homopolymer polypropylene (HPP) resin modified with Hyperform® HPN® 68Li comes into play. This material is ideally suited for use in clear PP packaging applications, including thin-wall injection molding (TWIM). It delivers a cleaner look while also yielding tough, lightweight packaging.

TWIM PP containers are also freezer-safe and microwavable, making them an effective reusable food-storage solution for keeping food healthy, fresh for longer.

Having highly recyclable PP that performs so well in the food packaging application also aids sustainability by helping to reduce the need for retail outlets to use plastic-coated paper boxes for their take-out food.

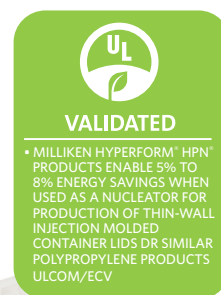
HPP resin formulated with Hyperform HPN 68Li reduces haze, yielding clear, aesthetically pleasing PP parts. This high-performance additive also allows materials to exhibit improved isotropic shrinkage and warpage control, which contributes to better-quality end parts. This improved uniformity translates into better sealing and a reduced chance of leakage.

Hyperform HPN 68Li offers also additional key benefits to converters. With its extremely fast crystallization speed, this additive helps injection molders to boost their productivity by accelerating cooling times and reducing cycle times.

The independent, global testing agency UL, meanwhile, has certified that PP modified with Hyperform HPN 68Li delivers significant energy savings during the injection molding process. This allows users to display the UL Environmental Claim Validation label on the resulting products, thereby helping to promote the brand's commitment to sustainability.

	STANDARD HPP	HPP with HPN 68Li
MFR (g/10 min)	50	50
Haze (%) - 1 mm	58	40
Crystallization behavior T <sub>c</sub> (°C)	112.8	128.8
Notched Izod impact @ 23°C (J/m)	25	36
1% secant modulus (Mpa)	1210	1660

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**30%**  
HAZE  
REDUCTION



**37%**  
STIFFNESS  
INCREASE



**5-8%**  
CYCLE TIME  
REDUCTION

**NORTH AMERICA**  
Spartanburg, SC, USA  
Tel: 800-910-5592  
Fax: 864-503-2430  
[millichem@milliken.com](mailto:millichem@milliken.com)

**EUROPE**  
Gent, Belgium  
Tel: 32-9-265-1100  
Fax: 32-9-265-1195  
[eurochem@milliken.com](mailto:eurochem@milliken.com)

**LATIN AMERICA**  
Sao Paulo, Brazil  
Tel: 55-11-3043-7942  
Fax: 55-11-3043-7096  
[lachem@milliken.com](mailto:lachem@milliken.com)

**LATIN AMERICA**  
Mexico City, Mexico  
Tel: 52-55-3088 3600  
Fax: 52-55-9000 2643  
[lachem@milliken.com](mailto:lachem@milliken.com)

**ASIA**  
Singapore  
Tel: 65-6377-0770  
Fax: 65-6377-0990  
[asiachem@milliken.com](mailto:asiachem@milliken.com)

**ASIA**  
Shanghai  
Tel: 86-21 6145-5555  
Fax: 86-21 6145-5558  
[asiachem@milliken.com](mailto:asiachem@milliken.com)

**ASIA**  
Pune, India  
Tel: 91.20.6730.7501  
Fax: 91.20.6730.7514  
[asiachem@milliken.com](mailto:asiachem@milliken.com)