

Milliken®  
**Hyperform® HPN® 715**  
 High-Performance Additive for Polypropylene

CASE STUDY

**Hyperform® HPN® 715 delivers processing and performance benefits in PPBs used for large-diameter, non-pressure pipes**

Milliken Chemical's Hyperform® HPN® 715 performance additive helps to enhance the key properties of polypropylene block (PPB) copolymers for use in large-diameter, non-pressure sewage and drainage pipe systems.

Pipes extruded from such PPBs exhibit high stiffness while retaining excellent impact resistance. In fact, resin incorporating Hyperform HPN 715 ensures the highest stiffness possible compared with PP made using other nucleators while also meeting industry standards for those types of large-diameter pipes.

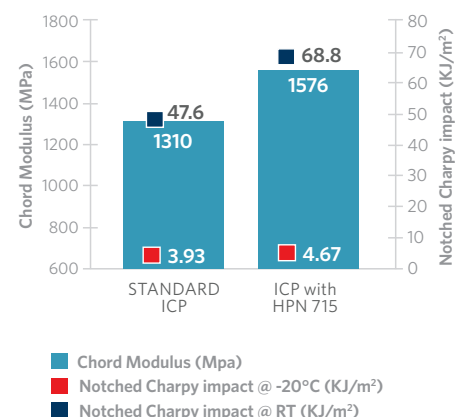
PP formulated with Hyperform HPN 715 also features faster crystallization speeds, which allows the converter to realize increased productivity rates. The ability to downgauge pipe thickness can further reduce material costs.

Polypropylene - particularly this latest generation of PP-HM (higher-modulus) block copolymer material - is ideal for this type of large-diameter pipe application. The resulting pipes are lightweight, offer high ring stiffness, good sealing properties, and exhibit both rigidity and flexibility.

The material can resist more than 300 chemicals, and has better frictional resistance than concrete or competitive resins such as HDPE or PVC. These factors combine to yield a long service life (demonstrated by some experimental data to exceed 50 years).



Stiffness/Impact Balance



	STANDARD ICP	ICP with HPN 715
Chord Modulus (MPa)	1310	1576
Notched Charpy Impact @ RT (KJ/m²)	47.6	68.8
Notched Charpy Impact @ -20C (KJ/m²)	3.93	4.67



**20%  
STIFFNESS  
INCREASE**



**5-10%  
CYCLE TIME  
REDUCTION**

Please contact your Milliken representative for any additional information.

PLEASE NOTE: As each customer's use of our product may be different, information we provide, including without limitation, recommendations, test results, samples, care/labeling/processing instructions or marketing advice, is provided in good faith but without warranty and without accepting any responsibility/liability. Each customer must test and be responsible for its own specific use, further processing, labeling, marketing, etc. All sales are exclusively subject to our standard terms of sale posted at [www.milliken.com/terms](http://www.milliken.com/terms) (all additional/different terms are rejected) unless explicitly agreed otherwise in a signed writing.

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