

# INDEPENDENT PIPE PRODUCTS, INC.



“BETTER BY DESIGN”®

Specification Sheet #P4

## DESIGN-FLOW® High Density Polyethylene Pipe for Municipal & Industrial PE3408 / PE3608 Nominal Physical Properties\*

Typical Specification	ASTM Test Method	Nominal Values
Density	ASTM D 1505	.955 gm / cm <sup>3</sup>
Melt Index <sup>1</sup>	ASTM D 1238	6.5 gm / 10 min.
<b>Tensile Strength</b>		
@ Yield (2 in/min)	ASTM D 638	3300 psi
@ Break (2 in/min)	ASTM D 638	4500 psi
<b>Hydrostatic Design Basis (HDB)</b>		
@ 23° C (73.4° F)	ASTM D 2837	1600 psi
@ 60° C (140° F)	ASTM D 2837	1000 psi
HDB Design Factor (DF)	PPI TR-4	0.50
Elongation @ Break (2 in/min)	ASTM D 638	>750%
Flexural Modulus <sup>2</sup>	ASTM D 790	125,000 psi
Notched Izod Impact Strength	ASTM D 256	6.0 ft-lbf / in
Hardness (Shore D)	ASTM D 2240	66
Brittleness Temperature	ASTM D 746	< -103 ° F
Environmental Stress Crack Resistance <sup>3</sup>	ASTM D 1693	>5000 hrs
Cell Classification	ASTM D 3350	345464C (min)
NSF	STANDARD 61	APPROVED
Vicat Softening Point	ASTM D 1525	257 ° F

DESIGN-FLOW® High Density Polyethylene Pipe for M & I is manufactured to ASTM F 714, ASTM D 3035, AWWA C901/C906 and NSF standards as applicable. Standard color of pipe is black with blue print line.

**Notes:** <sup>1</sup> 190° C / 21,600 g; <sup>2</sup> 2% Secant - Method 1

\*This list of typical physical properties is intended for basic characterization of the material and does not represent specific determinations of specifications. The physical properties values reported herein were determined on compression molded specimens prepared in accordance with procedure C of ASTM D 4703 and may differ from specimens taken from pipe.

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