

PolyPipe® EHMW PE3408/PE3608 Pipe

Extra High Molecular Weight (EHMW) High Density Polyethylene for use in industrial applications such as underground fire mains, mining, landfill, water reclamation or sewer.

➤ Other dimensional standards or custom requirements available.

| TYPICAL PHYSICAL PROPERTIES | | | |
|--|-------------------------|-----------------------------|-------------------------------|
| PROPERTY | ASTM TEST METHOD | *NOMINAL VALUES | |
| | | SI UNITS | ENGLISH UNITS |
| Density, Natural | D1505 | 0.946 gm/cc | -- |
| Density, Black | D1505 | 0.955 gm/cc | -- |
| Melt Index (190°C/2.16 kg) | D1238 | 0.07 gm/10 min. | -- |
| Flow Rate (190°C/21.6 kg) | D1238 | 8.5 gm/10 min. | -- |
| Tensile Strength @Ultimate | D638 | 34.5 MPa | 5,000 psi |
| Tensile Strength @ Yield | D638 | 24.1 MPa | 3,500 psi |
| Ultimate Elongation | D638 | >800% | >800% |
| Flexural Modulus | D790 | 938 MPa | 136,000 psi |
| 2% Secant | | | |
| Environmental Stress Crack Resistance (ESCR) | | | |
| F ₀ , Condition C | D1693 | >10,000 hrs. | >10,000 hrs. |
| PENT | F1473 | >100 hrs. | >100 hrs. |
| Brittleness Temperature | D746 | <-117°C | <-180°F |
| Hardness, Shore D | D2240 | 64 | 64 |
| Vicat Softening Temperature | D1525 | 124°C | 255°F |
| Izod Impact Strength (Notched) | D256 | 0.37 KJ/m | 7 ft – lb _f /in |
| Volume Resistivity | D991 | >10 ¹⁵ ohm-cm | -- |
| Thermal Expansion Coefficient | | 2x10 ⁻⁴ cm/cm/°C | 1.0x10 ⁻⁴ in/in/°F |
| CELL CLASSIFICATION: | D3350 | 345464C | Grade PE36 |
| MATERIAL CLASSIFICATION: | D1248 | Type III Category 5 | Class C |
| PPI HYDROSTATIC DESIGN BASIS (HDB) | D2837 | 11.0 MPa @ 23°C | 1,600 psi @ 73.4°F |
| <i>(As listed in PPI TR-4)</i> | | 5.5 MPa @ 60°C | 800 psi @ 140°F |
| PPI HYDROSTATIC DESIGN STRESS (HDS) | | 5.5 MPa @ 23°C | 800 psi @ 73.4°F |
| <i>(As established by the Hydrostatic Stress Board (HSB) of the Plastics Pipe Institute (PPI))</i> | | | |

*Nominal values are intended to be guides only, and not as specification limit.

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POLYPIPE[®] EHMW Pipe
Pipe Data and Pressure Ratings – IPS

| Pressure Rating | | Class 265 DR7 | | Class 200 DR9 | | Class 160 DR11 | | Class 130 DR13.5 | | Class 100 DR17 | | Class 80 DR21 | | Class 65 DR26 | | Class 50 DR32.5 | |
|-------------------|-----------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|
| Nominal Pipe Size | OD Size, inches | Min. Wall, inches | Weight, lbs/ft | Min. Wall, inches | Weight, lbs/ft | Min. Wall, inches | Weight, lbs/ft | Min. Wall, inches | Weight, lbs/ft | Min. Wall, inches | Weight, lbs/ft | Min. Wall, inches | Weight, lbs/ft | Min. Wall, inches | Weight, lbs/ft | Min. Wall, inches | Weight, lbs/ft |
| 1/2" | 0.840 | 0.120 | 0.12 | 0.093 | 0.10 | 0.076 | 0.08 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3/4" | 1.050 | 0.150 | 0.18 | 0.117 | 0.15 | 0.095 | 0.13 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1" | 1.315 | 0.188 | 0.29 | 0.146 | 0.23 | 0.120 | 0.20 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 1/4" | 1.660 | 0.237 | 0.46 | 0.184 | 0.37 | 0.151 | 0.31 | 0.123 | 0.26 | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 1/2" | 1.900 | 0.271 | 0.60 | 0.211 | 0.49 | 0.173 | 0.41 | 0.141 | 0.34 | --- | --- | --- | --- | --- | --- | --- | --- |
| 2" | 2.375 | 0.339 | 0.94 | 0.264 | 0.76 | 0.216 | 0.64 | 0.176 | 0.53 | 0.140 | 0.43 | --- | --- | --- | --- | --- | --- |
| 3" | 3.500 | 0.500 | 2.05 | 0.389 | 1.66 | 0.318 | 1.39 | 0.259 | 1.15 | 0.206 | 0.93 | 0.167 | 0.76 | 0.135 | 0.62 | --- | --- |
| 4" | 4.500 | 0.643 | 3.38 | 0.500 | 2.74 | 0.409 | 2.29 | 0.333 | 1.91 | 0.265 | 1.54 | 0.214 | 1.26 | 0.173 | 1.03 | 0.138 | 0.83 |
| 5" | 5.375 | 0.768 | 4.83 | 0.597 | 3.91 | 0.489 | 3.27 | 0.398 | 2.72 | 0.316 | 2.20 | 0.256 | 1.80 | 0.207 | 1.47 | 0.165 | 1.19 |
| 5" | 5.563 | 0.795 | 5.17 | 0.618 | 4.18 | 0.506 | 3.51 | 0.412 | 2.91 | 0.327 | 2.35 | 0.265 | 1.93 | 0.214 | 1.57 | 0.171 | 1.27 |
| 6" | 6.625 | 0.946 | 7.34 | 0.736 | 5.93 | 0.602 | 4.97 | 0.491 | 4.13 | 0.390 | 3.34 | 0.315 | 2.74 | 0.255 | 2.23 | 0.204 | 1.80 |
| 7" | 7.125 | 1.018 | 8.49 | 0.792 | 6.86 | 0.648 | 5.75 | 0.528 | 4.78 | 0.419 | 3.86 | 0.339 | 3.17 | 0.274 | 2.58 | 0.219 | 2.08 |
| 8" | 8.625 | 1.232 | 12.43 | 0.958 | 10.05 | 0.784 | 8.43 | 0.639 | 7.00 | 0.507 | 5.66 | 0.411 | 4.64 | 0.332 | 3.78 | 0.265 | 3.05 |
| 10" | 10.750 | 1.536 | 19.31 | 1.194 | 15.62 | 0.977 | 13.09 | 0.796 | 10.88 | 0.632 | 8.79 | 0.512 | 7.20 | 0.413 | 5.88 | 0.331 | 4.74 |
| 12" | 12.750 | 1.821 | 27.17 | 1.417 | 21.97 | 1.159 | 18.41 | 0.944 | 15.30 | 0.750 | 12.36 | 0.607 | 10.13 | 0.490 | 8.27 | 0.392 | 6.67 |
| 14" | 14.00 | 2.000 | 32.76 | 1.556 | 26.49 | 1.273 | 22.20 | 1.037 | 18.45 | 0.824 | 14.91 | 0.667 | 12.22 | 0.538 | 9.97 | 0.431 | 8.04 |
| 16" | 16.00 | 2.286 | 42.79 | 1.778 | 34.60 | 1.455 | 28.99 | 1.185 | 24.09 | 0.941 | 19.47 | 0.762 | 15.96 | 0.615 | 13.02 | 0.492 | 10.51 |
| 18" | 18.00 | 2.571 | 54.15 | 2.000 | 43.79 | 1.636 | 36.70 | 1.333 | 30.49 | 1.059 | 24.64 | 0.857 | 20.20 | 0.692 | 16.48 | 0.554 | 13.30 |
| 20" | 20.00 | 2.857 | 66.85 | 2.222 | 54.06 | 1.818 | 45.30 | 1.481 | 37.64 | 1.176 | 30.42 | 0.952 | 24.94 | 0.769 | 20.35 | 0.615 | 16.42 |
| 22" | 22.00 | --- | --- | 2.444 | 65.41 | 2.000 | 54.82 | 1.630 | 45.55 | 1.294 | 36.81 | 1.048 | 30.17 | 0.846 | 24.62 | 0.677 | 19.86 |
| 24" | 24.00 | --- | --- | 2.667 | 77.85 | 2.182 | 65.24 | 1.778 | 54.21 | 1.412 | 43.80 | 1.143 | 35.99 | 0.923 | 29.30 | 0.738 | 23.64 |
| 28" | 28.00 | --- | --- | --- | --- | 2.545 | 88.80 | 2.074 | 73.78 | 0.647 | 59.62 | 1.333 | 48.87 | 1.077 | 39.88 | 0.862 | 32.17 |
| 30" | 30.00 | --- | --- | --- | --- | 2.727 | 101.93 | 2.222 | 84.70 | 1.765 | 68.44 | 1.429 | 56.11 | 1.154 | 45.78 | 0.923 | 36.93 |
| 32" | 32.00 | --- | --- | --- | --- | --- | --- | 2.370 | 96.37 | 1.882 | 77.87 | 1.524 | 63.84 | 1.231 | 52.09 | 0.985 | 42.02 |
| 36" | 36.00 | --- | --- | --- | --- | 3.273 | 146.78 | 2.667 | 121.96 | 2.118 | 98.55 | 1.714 | 80.79 | 1.385 | 65.92 | 1.108 | 53.19 |
| 42" | 42.00 | --- | --- | --- | --- | --- | --- | --- | --- | 2.471 | 134.14 | 2.000 | 109.97 | 1.615 | 89.73 | 1.292 | 72.39 |
| 48" | 48.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 2.286 | 143.63 | 1.846 | 117.19 | 1.477 | 94.55 |
| 54" | 54.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 2.571 | 181.78 | 2.077 | 148.32 | 1.662 | 119.67 |
| 63" | 63.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 3.000 | 247.42 | 2.423 | 201.89 | 1.938 | 162.88 |
| 65" | 65.00 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 3.095 | 263.38 | 2.500 | 214.91 | 2.000 | 173.39 |

*See notes on Page 3 for product information and pressure rating information.

POLYPIPE[®] EHMW Pipe
Pipe Data and Pressure Ratings – DIPS

| Pressure Rating | | Class 265 DR7 | | Class 200 DR9 | | Class 160 DR11 | | Class 130 DR13.5 | | Class 100 DR17 | | Class 80 DR21 | | Class 65 DR26 | | Class 50 DR32.5 | |
|-------------------|-----------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|
| Nominal Pipe Size | OD Size, inches | Min. Wall, inches | Weight, lbs/ft | Min. Wall, inches | Weight, lbs/ft | Min. Wall, inches | Weight, lbs/ft | Min. Wall, inches | Weight, lbs/ft | Min. Wall, inches | Weight, lbs/ft | Min. Wall, inches | Weight, lbs/ft | Min. Wall, inches | Weight, lbs/ft | Min. Wall, inches | Weight, lbs/ft |
| 3" | 3.96 | 0.566 | 2.62 | 0.440 | 2.12 | 0.360 | 1.78 | 0.293 | 1.48 | 0.233 | 1.19 | 0.189 | 0.98 | 0.152 | 0.80 | 0.122 | 0.64 |
| 4" | 4.80 | 0.686 | 3.85 | 0.533 | 3.11 | 0.436 | 2.61 | 0.356 | 2.17 | 0.282 | 1.75 | 0.229 | 1.44 | 0.185 | 1.17 | 0.148 | 0.95 |
| 6" | 6.90 | 0.986 | 7.96 | 0.767 | 6.43 | 0.627 | 5.39 | 0.511 | 4.48 | 0.406 | 3.62 | 0.329 | 2.97 | 0.265 | 2.42 | 0.212 | 1.95 |
| 8" | 9.05 | 1.293 | 13.69 | 1.006 | 11.07 | 0.823 | 9.28 | 0.670 | 7.71 | 0.532 | 6.23 | 0.431 | 5.11 | 0.348 | 4.17 | 0.278 | 3.36 |
| 10" | 11.10 | 1.586 | 20.59 | 1.233 | 16.65 | 1.009 | 13.95 | 0.822 | 11.60 | 0.653 | 9.37 | 0.529 | 7.81 | 0.427 | 6.27 | 0.342 | 5.06 |
| 12" | 3.20 | 1.886 | 29.12 | 1.467 | 23.55 | 1.200 | 19.73 | 0.978 | 16.40 | 0.776 | 13.25 | 0.629 | 10.86 | 0.508 | 8.86 | 0.406 | 7.15 |
| 14" | 15.30 | 2.186 | 39.12 | 1.700 | 31.64 | 1.391 | 26.51 | 1.133 | 22.03 | 0.900 | 17.80 | 0.729 | 14.59 | 0.588 | 11.91 | 0.471 | 9.61 |
| 16" | 17.40 | 2.486 | 50.60 | 1.933 | 40.92 | 1.582 | 34.29 | 1.289 | 28.49 | 1.024 | 23.02 | 0.829 | 18.87 | 0.669 | 15.40 | 0.535 | 12.43 |
| 18" | 19.50 | 2.786 | 63.55 | 2.167 | 51.39 | 1.773 | 43.07 | 1.444 | 35.79 | 1.147 | 28.92 | 0.929 | 23.70 | 0.750 | 19.34 | 0.600 | 15.61 |
| 20" | 21.60 | 3.086 | 77.98 | 2.400 | 63.06 | 1.964 | 52.84 | 1.600 | 43.91 | 1.271 | 35.48 | 1.029 | 29.09 | 0.831 | 23.73 | 0.665 | 19.15 |
| 24" | 25.80 | --- | --- | 2.867 | 89.96 | 2.345 | 75.39 | 1.911 | 62.64 | 1.518 | 50.62 | 1.229 | 41.50 | 0.992 | 33.86 | 0.794 | 27.32 |
| 30" | 32.00 | --- | --- | --- | --- | --- | --- | 2.370 | 96.37 | 1.882 | 77.87 | 1.524 | 63.84 | 1.231 | 52.09 | 0.985 | 42.02 |
| 36" | 38.30 | --- | --- | --- | --- | --- | --- | --- | --- | 2.253 | 111.55 | 1.824 | 91.45 | 1.473 | 74.61 | 1.178 | 60.20 |
| 42" | 44.50 | --- | --- | --- | --- | --- | --- | --- | --- | 2.618 | 150.59 | 2.119 | 123.45 | 1.712 | 100.73 | 1.369 | 81.27 |
| 48" | 50.80 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 2.419 | 160.88 | 1.954 | 131.27 | 1.563 | 105.91 |
| 54" | 57.56 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 2.741 | 206.54 | 2.214 | 168.53 | 1.771 | 135.97 |
| 60" | 61.61 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 2.370 | 193.07 | 1.896 | 155.77 |
| 64" | 65.67 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 2.526 | 219.36 | 2.021 | 176.98 |

- NOTES : ➤ PolyPipe[®] EHMW Pipe is manufactured in accordance with the following standards:
- ◆ ½" IPS through 3" IPS, products are manufactured in accordance with ASTM D3035.
 - ◆ 4" IPS through 64" DIPS, products are manufactured in accordance with ASTM F714.
 - ◆ Metric sizes also available.
 - ◆ Coiled pipe available through 6" OD and straight lengths available in 40' and 50' lengths. For custom lengths, contact a Customer Service Representative.
 - ◆ Products tested and certified to NSF Standard 61 are available upon request.
 - ◆ Factory Mutual (FM) pipe available upon request (*Refer to B-1007 for approved sizes*).
- Pressures are based on using water at 23°C (73.4°F) and are determined per ASTM D3035 or F714.
- Service factors should be utilized to compensate for the effect of substances other than water and for higher temperatures.
- The above weights for IPS and DIPS sizes are calculated in accordance with Plastics Pipe Institute (PPI) TR-7, using a value of 0.955 for density.
- Available with color-coded striping.
- Some sizes listed are special order. Call for availability on sizes.



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Roaring Springs Plant

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Sandersville Plant

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PolyPipe® is an active member of the Plastics Pipe Institute, AWWA, AGA and ASTM.

ISO 9001:2000



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