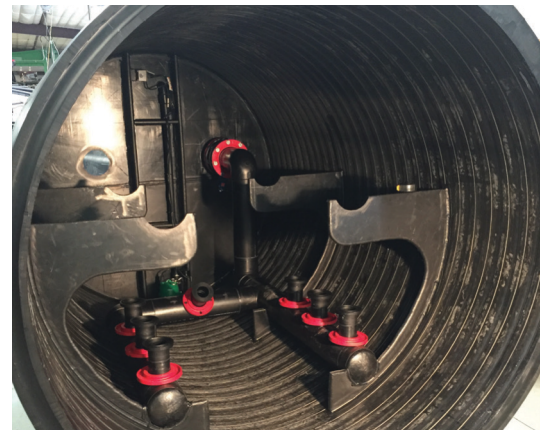




Industrial Products



The PE100 Special Black Polyethylene Sheet

King PipeGrade® is a PE100 special black polyethylene sheet. It is the product of a proprietary process called K-Stran™, the most advanced manufacturing process for superior flatness and consistency up to 1-1/2" thick. It is also available in compression mold greater than 1" through 4" thick, and extrusion mold from 2-1/2" up to 12" thick. Custom mold sizes available. King PipeGrade® has a smooth black finish on both sides of sheet. It displays improved performance characteristics in a variety of industrial applications. King PipeGrade® is chemical resistant, UV stabilized, and ideal for use in demanding outdoor applications from flanges and gussets to end caps. The polymer sheet will not rust, corrode or rot like traditional pipe materials and is easy to fabricate and weld using thermoplastic welding equipment.

King PipeGrade® is compliant to ASTM 3350 as a standard material meeting cell classifications: PE445574C CC3 and PE445576C CC3. King PipeGrade® (PE4710/PE100) is completely compatible and 100% interchangeable for use in applications that presently use PE3608/PE80 material. King PipeGrade® is NSF approved for Standards 14 & 61 to be used in potable water piping systems.

PE100 tends to have a higher hydrostatic design basis (HDB) than other resins but most significantly in the notched tensile/slow crack PENT test which is > 10,000 hours vs. 100-200 hours for others.

50 – 100 years service life per ISO CRS 10 MPa @ 20° C.

KING PIPEGRADE®

Applications

- End Caps
- Flanges
- Guides and Wear Plates
- Gussets
- Machine Parts
- Manhole Lids
- Tanks and Containers

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Specifications

Standard Sheet Sizes

| | |
|--------------------------------|-----------------------|
| in: 1/8" to 1-1/2" | 48" x 96" |
| mm: 8.255 mm to 38.1 mm | 1219 mm x 2438.4 mm |
| in: 1-1/2" to 4" | 48" x 96" |
| mm: 38.1 mm to 101.6 mm | 1219.2 mm x 2438.4 mm |
| in: 1/4" to 1-1/2" | 60" x 120" |
| mm: 6.35 mm to 38.1 mm | 1524 mm x 3048 mm |

Standard Color



Black

Note: Color accuracy can vary considerably on computer monitors and printers. Please consult your distributor for a product sample before making critical color choices.

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Standard Gauges 48" x 96"

| | | | | | | | |
|---------------------|---------|----------|---------|---------|-----------|----------|----------|
| in: 1/8" | 3/16" | 1/4" | 3/8" | 1/2" | 5/8" | 3/4" | 1" |
| mm: 3.75 mm | 4.76 mm | 6.35 mm | 9.53 mm | 12.7 mm | 15.875 mm | 19.05 mm | 25.4 mm |
| in: 1-1/4" | 1-1/2" | 1-3/4" | 2" | 2-1/2" | 3" | 3-1/2" | 4" |
| mm: 31.75 mm | 38.1 mm | 44.45 mm | 50.8 mm | 63.5 mm | 76.2 mm | 88.9 mm | 101.6 mm |

Standard Gauges 60" x 120"

| | | | | |
|--------------------|---------|---------|---------|----------|
| in: 1/4" | 1/2" | 3/4" | 1" | 1-1/2" |
| mm: 6.35 mm | 12.7 mm | 19.7 mm | 25.4 mm | 31.75 mm |

Approximate Weight 48" x 96"

| | | | | | | | | |
|---------------------|-----------|-----------|-----------|-----------|----------|----------|----------|----------|
| lbs: 20 lbs | 30 lbs | 60 lbs | 80 lbs | 100 lbs | 120 lbs | 160 lbs | 200 lbs | 240 lbs |
| kg: 9.07 kg | 13.61 kg | 27.21 kg | 36.29 kg | 45.36 kg | 54.43 kg | 72.58 kg | 90.72 kg | 108.9 kg |
| lbs: 280 lbs | 320 lbs | 360 lbs | 400 lbs | 480 lbs | 570 lbs | 640 lbs | | |
| kg: 127 kg | 145.15 kg | 163.30 kg | 181.44 kg | 217.72 kg | 258.5 kg | 290.3 kg | | |

Approximate Weight 60" x 120"

| | | | | |
|----------------------|---------|-----------|----------|-----------|
| lbs: 62.5 lbs | 125 lbs | 187.5 lbs | 250 lbs | 375 lbs |
| kg: 28.35 kg | 56.7 kg | 85.04 kg | 113.4 kg | 170.01 kg |

Tolerance Information:

K-Stran™

Gauges 1/8" through 1-1/2" ± 5% | Length and width plus only at room temperature

Compression Molding

Gauges greater than 1" and under 1-1/2" ± 10% | Gauges 1-1/2" and greater plus only | Length and width plus only at room temperature

Custom thickness up to 25"/635 mm with our King Size Blocks and Massive Shapes

Custom Sizes Available up to 96" width and 100'+ in length

| Properties | Units | ASTM | Nominal Values |
|---------------------------------------|--------------------------|--------|-----------------|
| Density | g/cc | D792 | 0.961 |
| Tensile Strength @ Break | psi | D638 | 5,510 |
| Tensile Strength @ Yield | psi | D638 | 3,630 |
| Elongation @ Break | % | D638 | 600 |
| Flexural Modulus 2% secant | psi | D790 | 150,000 |
| Izod Impact, Notched | ft.lbs./in. ² | D256 | 9.2 |
| Brittleness Temp. | °C (°F) | D746 | -118°C (-180°F) |
| Vicat Softening Temp. | °C (°F) | D1525 | 126°C (259°F) |
| Environmental Stress Crack Resistance | hrs | D1693C | >5,000 |
| Notch Tensile (PENT) | hrs | F1473 | >10,000 |

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