



## Technical Notes

# Rockstop® Rockshield Specifications

4" to 20" (101.6 mm to 508 mm) O.D. Pipelines

### Physical Property Data – Minimum Thickness 3/8" (9.5 mm)

Property	Equivalent Test Method	Typical Test Result <sup>1</sup>
Impact Strength	ASTM G13 Modified <sup>2</sup>	No failures with 6" (152.4 mm) rock
Impact Strength	ASTM G14 Modified	218.5 in-lb (24.7 J)
Puncture Strength	ASTM D6241	2,900 lb (12,900 N)
Tear Strength	ASTM D4533	1,326 lb/in (238 N/mm)
Compressive Strength	ASTM D1621	1.00 lb/in <sup>2</sup> (6.9 kPa)
Diaphragm Burst Test	ASTM D3787	2,712 lb (12,064 N)
Grab Strength	ASTM D4632	476 lb (2,117 N); 200% Elongation at break
Low Temperature Brittleness	ASTM D746	≤ -65°F (≤ -54°C); exceeded chamber capacity
Weight	ASTM D5261	0.33 lb/ft <sup>2</sup> (1,600 g/m <sup>2</sup> )
Cathodic Protection	ASTM G95	No inhibiting effect
UV Resistance	ASTM 4355	70% at 500 hours
Melt Temperature	Custom	320°F (160°C)
Wrap Test	Custom -58°F (-50°C)	Fully wrapped around 2" (50.8 mm) O.D. pipe (dry)
Leach Test	EPA Method 8270E	Detection limits not exceeded
Permeability	ASTM D4491	17,400 gal/ft <sup>2</sup> /day (0.82 cm/s)

<sup>1</sup> Test results are average values and are not a guarantee of performance.

<sup>2</sup> Test has been modified to include 10 drops (50 lb/23 kg each) of the following rock size: 1.5", 3", 4", and 6" (38.1 mm, 76.2 mm, 101.6 mm, and 152.4 mm) diameter. Rocks were dropped from a height of 6ft (1.83 m) onto an FBE coated pipe protected by RockStop® Rockshield. The pipe was inspected by a holiday detector after each drop.

Note: RockStop® rockshield is rated for 6" (152.4 mm) minus backfill





## Technical Notes

# Rockstop® Rockshield Specifications

24" to 60" (609.6 mm to 1,524 mm) O.D. Pipelines

### Physical Property Data – Minimum Thickness ½" (12.7 mm)

Property	Equivalent Test Method	Typical Test Result <sup>1</sup>
<b>Impact Strength</b>	ASTM G13 Modified <sup>2</sup>	No failures with 8" (203 mm) rock
<b>Impact Strength</b>	ASTM G14 Modified	432.4 in-lb (48.9 J)
<b>Puncture Strength</b>	ASTM D6241	7,496 lb (33,344 N)
<b>Tear Strength</b>	ASTM D4533	1,385 lb/in (243 N/mm)
<b>Compressive Strength</b>	ASTM D1621	2.55 lb/in <sup>2</sup> (17.6 kPa)
<b>Diaphragm Burst Test</b>	ASTM D3787	2,820 lb (12,544 N)
<b>Grab Strength</b>	ASTM D4632	2,113 lb (9,400 N); 86% Elongation at break
<b>Low Temperature Brittleness</b>	ASTM D746	≤ -65°F (≤ -54°C); exceeded chamber capacity
<b>Weight</b>	ASTM D5261	0.41 lb/ft <sup>2</sup> (2,000 g/m <sup>2</sup> )
<b>Cathodic Protection</b>	ASTM G95	No inhibiting effect
<b>UV Resistance</b>	ASTM 4355	70% at 500 hours
<b>Melt Temperature</b>	Custom	320°F (160°C)
<b>Wrap Test</b>	Custom -58°F (-50°C)	Fully wrapped around 2" (50.8 mm) O.D. pipe (dry)
<b>Leach Test</b>	EPA Method 8270E	Detection limits not exceeded
<b>Permeability</b>	ASTM D4491	5300 gal/ft <sup>2</sup> /day (0.25 cm/s)
<b>R-Value</b>	ASTM C518	1.709 BTU/h/ft <sup>2</sup> /°F (9.704 W/m <sup>2</sup> /°C)

<sup>1</sup> Test results are average values and are not a guarantee of performance.

<sup>2</sup> Test has been modified to include 10 drops (50 lb/23 kg each) of the following rock size: 1.5", 3", 4", 6", and 8" (38.1 mm, 76.2 mm, 101.6 mm, 152.4 mm, and 203.2 mm) diameter. Rocks were dropped from a height of 6ft (1.83 m) onto an FBE coated pipe protected by RockStop® Rockshield. The pipe was inspected by a holiday detector after each drop.

Note: RockStop® rockshield is rated for 6" (152.4 mm) minus backfill

