



TEPHREX® Basalt Sleeves

Extreme temperature TEPHREX® basalt knitted sleeves provide excellent thermal protection, withstanding continuous exposure to temperatures of up to 1382°F (750°C). The dense, single-wall knitted construction is expandable, durable, and lightweight, enabling ease of assembly over tubes and pipes with a wide range of geometries while providing optimal coverage and preventing snagging or tearing. TEPHREX® sleeves help maximize heat retention in exhaust systems, allowing OEMs to meet strict emission regulations.

Product Applications

- Exhaust gas recirculation (EGR) tubes
- Exhaust system components
- Insulation and heat containment



AVAILABLE OPTIONS

Knitted

Custom cutting and sewing

TYPICAL INDUSTRIES

On-Highway Commercial Vehicles, Off-Highway Commercial Vehicles, ATVs, UTVs, Power Generation



Knitted Basalt Sleeve

TEPHREX® Basalt Sleeve

NOMINAL I.D.		DAVLYN PART NUMBER
1"	25 mm	M-E21630-16-xx
11/2"	38 mm	M-E21630-24-xx
2"	51 mm	M-E21630-32-xx
2 1/2"	64 mm	M-E21630-40-xx
3"	76 mm	M-E21630-48-xx
3 1/2"	89 mm	M-E21630-56-xx
4"	102 mm	M-E21630-64-xx
5"	127 mm	M-E21630-80-xx
6"	152 mm	M-E21630-96-xx

Davlyn's TEPHREX® sleeve is 15% denser than the competition's, resulting in a lower skin temperature. In addition, the sleeve can expand up to 1.5 times its normal diameter.



Basalt Engineering Data

Basalt Sleeve Performance Testing

TEST RESULT TEST SPECIFICATION

Thermal Testing

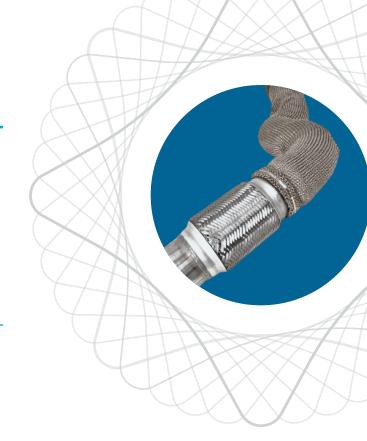
700°C soak test Passed Internal
Flammability and burn tests No Ignition SAE J369
Passed FMVSS 302

Passed CMVSS
Passed ISO 3795
No Ignition ASTM D5132

Salt Spray Testing

ASTM G85-11 Annex 2 Passed ASTM G85-11

Cyclic acidified salt spray



Basalt Yarn Technical Characteristics

Thermal

Maximum application temperature 982°C
Sustained operating temperature 750°C
Minimum operating temperature -260°C

Thermal conductivity 0.031 – 0.038W/(m·K)

Virtification conductivity 1050°C Glow loss 1.91%

Thermal expansion coefficient 8.0 ppm/°C

Acoustics

Sound absorption coefficient 0.9 – 0.99%

Electrical

Specific volume resistance 110x12 ohm.m

Loss angle tangent frequency 0.005 (1 MHz)

Relative dielectric permeability 2.2 (1 MHz)

The information contained herein is believed to be reliable. Users should make their own evaluations on the products and materials to determine the suitable applications.

Physical / Mechanical

Density 2.75 g/cm3 9 - 23 microns Filament diameter 4840 MPa Tensile strength 550,000 psi Compression 89 GPa Elastic modulus Elongation at break 3.15% Absorption of humidity (65% RH) < 0.1% Stability at tension (20°C) 100% Stability at tension (200°C) 95% Stability at tension (400°C) 82%

Chemical Resistance

Percentage weight loss after 3 hrs boiling in:

 ${
m H_2O}$ 0.20% 2N NaOH (Sodium Hydroxide) 5.00% 2N HCL (Hydrochloric Acid) 2.20%

