



DynamicFabrication
INC.

Product Data Sheet

Phenolic Foam Hard Sections



Description

Phenolic Foam Hard Sections are insulation, vapor barrier, structural insert, and shield assemblies designed to protect insulation systems at hanger locations from damage or deformation. Our basic Hard Section assembly includes the selected weight supporting foam density material enclosed in all-service jacket (ASJ) with a self-sealing lap and a 120° galvanized shield adhered to the ASJ. For compatibility with a wide range of support styles, Hard Sections can be made of various lengths and thicknesses with optional matching jacketing and alternative shield arrangements.

Features

All Hard Section offerings are constructed and assembled from materials and components made in the USA. DFI can provide custom insulation thicknesses to accommodate non-standard pipe sizes (e.g. Aquatherm, cast iron) or heat-traced systems, while maintaining outside diameters in accordance with ASTM C-585 to ensure proper installation with fittings and external jacketing products. All Hard Sections are constructed to allow for proper overlap of vapor barrier tapes and external jacketing products that may be incorporated into the associated piping system(s).

Standard Offerings¹

Nominal Pipe Size (NPS)	Density	Insulation Length (in.)	Shield Length (in.)	Struct. Insert Length	Shield Gauge
Copper Piping					
½ - 1-1/2	2-1/2 lb.	9	6	n/a	24
2 - 3	2-1/2 & 5 lb.	9	6	n/a	24
4 - 8	2-1/2 & 5 lb.	12	9	6	18 ²
Steel Piping					
½ - 1	2-1/2 lb.	9	6	n/a	24
1-1/4 - 2-1/2	2-1/2 & 5 lb.	9	6	n/a	24
3 - 12	2-1/2 & 5 lb.	12	9	6	18 ²
14 - 18	2-1/2 & 5 lb.	18	12	9	18 ³
20 - 30	2-1/2 & 5 lb.	24	18	12	18 ³
36 - 48	2-1/2 & 5 lb.	36	24	18	18 ³

1 - Standard offerings subject to change without notification

2 - Roller hangers require additional steel roll plate

3 - All sizes 14" and larger require additional steel roll plate

Insulation Density Information

Insulation Type	Thermal Performance (k at 75°F)	Compressive Strength (psi)	Service Temp. (°F)
Phenolic 2.5PCF	.19	25	-297 - +257
Phenolic 5.0PCF	.21	90	-297 - +257

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Applications

Phenolic Foam Hard Sections can be designed and fabricated for use in a wide array of hydronic piping systems including chilled water, heating hot water, domestic water, and cryogenic applications. Our Hard Sections are commonly used in applications with operating temperatures from 0° F to 200° F. They can be used with any type of hanger/support system, including rollers, trapeze, clevis, Unistrut, and a variety of structural steel configurations.

Notes:

- (1) Information contained in this data sheet is subject to change at any time. Supply chain issues, code requirements, and shifting industry standards impact these products. Please contact DFI to verify specific current design parameters.
- (2) Performance data authored by phenolic material manufacturer is available upon request.
- (3) This information is not intended to be provided in accordance with any specific project documents. These products have not been listed or tested to perform with regard to any criteria provided in any specific project documents.

ASTM Material Standards

E84	25 Flame 50 Smoke
C1136, Type I	Vapor Retarders for Insulation
A653, Type II, III	Galvanized Steel Sheet
C1126, Type III, Grade 1	Phenolic Thermal Insulation