



BALDWIN-HILL COMPANY, TRENTON, N. J.

DATA SHEET

Product:

Baldwin-Hill Rigid Foam Pipe Insulation

Description:

Baldwin-Hill Rigid Foam is a modified polyurethane made from a diisocyanate and a polyester resin. It is formed as a mass of closed cells containing entrapped inert gas. It is molded as pipe half sections in 36" lengths.

Uses:

For insulating low temperature pipe lines where preformed sectional covering is required. Especially suited for process piping in chemical and petroleum plants.

Features:

Low "K" factor - low permeability - non-capillary - dimensionally stable. High compressive, flexural and tensile strength. Flame retardant - self extinguishing. Lightweight - pleasant to handle - non-irritating, non-abrasive, non-toxic. Tough - resists breakage in shipping and handling. Resistant to thermal and mechanical shock. Excellent resistance to chemicals and fumes. Will not rot nor sustain vermin or fungus. May be installed without special tools - may be applied with common joint mastics. Offers savings in materials, labor and accessories.

Technical Data:

Temperature range --

For continuous service Minus 300° to Plus 250°F

For intermittent service or steam out Plus 275°F

Density - 3 pounds per cubic foot

Sizes - IPS

Dimensional Thickness

1/2"		1", 1-1/2", 2"
3/4"		1-1/2", 2", 2-1/2"
1", 1-1/4"		1", 1-1/2", 2", 2-1/2"
1-1/2", 2", 2-1/2", 3"		3/4", 1", 1-1/2", 2", 2-1/2"
4", 6"		3/4", 1", 1-1/2", 2", 2-1/2"
8", 10"		1", 1-1/2", 2", 2-1/2"
12"		1-1/2", 2"

*Actual thickness

Thermal Conductivity -

<u>Mean Temp.</u>	<u>K</u>
40° F	0.096
70° F	0.170
150° F	0.260

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Alkalinity pH-8.0

Capillarity 0

Compressive Set 5 psi

..... 0.19% @ 75°F

Coefficient of Expansion

0.000015 in./in./°F. at 32°F.



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Technical Data:

Continued.....

**Compressive Strength 50 psi @ 75°F. Improves with age.
Combustibility .. Self-extinguishing Flexural Strength .. 103 psi
Tensile Strength .. 69 psi Vapor Transmission .. 3 to 6 perms**

Chemical Resistance --

Low density foams are swollen to some extent by polar organic solvents such as ketones and chlorinated hydrocarbons, but do not dissolve. While subject to attack by immersion in strong alkali or mineral acids, they resist attack by dilute acids and bases. They are not adversely effected by hydrocarbons such as gasoline and mineral spirits and will usually withstand the vapors found in most industrial atmospheres. In case of unusual conditions, tests are recommended.

Packaging:

Corrugated board fiber boxes.

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THERMAL CONDUCTIVITY

K-FACTOR

Comparison of Published Data

<u>MATERIAL</u>	<u>MEAN TEMP., DEGREE FAHR.</u>		
	<u>0°</u>	<u>70°</u>	<u>150°</u>
B-H RIGID FOAM	.096	.17	.26
Styrene Foam	.22	.27	---
Cellular Glass	.35	.39	.44
Cork Board 7# Density	.24	.269	.29
Glass Fiber	---	.24	.27

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BALDWIN-HILL RIGID FOAM PIPE INSULATION

SUGGESTED THICKNESSES

Suggested thicknesses for 70° Ambient and 80% Relative Humidity and allows a maximum heat gain of 7.5 BTU per square foot.

TEMPERATURE DEGREES FAHR.

<u>Pipe Size</u>	<u>32° to Amb.</u>	<u>+10° to 31°</u>	<u>-25° to +9°</u>	<u>-26° to -50°</u>
3/4"	----	--	-----	1-1/2"
1"	3/4"	1"	1"	1-1/2"
1-1/4"	3/4"	1"	1-1/2"	1-1/2"
1-1/2"	3/4"	1"	1-1/2"	1-1/2"
2"	3/4"	1"	1-1/2"	1-1/2"
3"	3/4"	1"	1-1/2"	1-1/2"
4"	3/4"	1"	1-1/2"	2"
6"	3/4"	1"	1-1/2"	2"
8"	Not Mfg.	1"	1-1/2"	2"
10"	Not Mfg.	1"	1-1/2"	2"
12"	Not Mfg.	1"	1-1/2"	2"

Above thicknesses are calculated to prevent surface condensation at 0 wind velocity.

Double layer construction is recommended for all temperatures below -30°F.

For lower temperature recommendations write Baldwin-Hill Co.

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APPLICATION SPECIFICATIONS

FOR BALDWIN-HILL RIGID FOAM PIPE INSULATION

1. All piping shall be insulated with Rigid Foam pipe insulation as furnished by Baldwin-Hill Company, in thickness recommended. (See Section D-5 Page 11)
2. B-H Rigid Foam shall be applied in recommended thickness to clean, dry surface of pipe after pipe has been tested. Insulation shall be applied with joints staggered and with both longitudinal and circumferential joints sealed with a high grade asphalt cutback or a non-drying mastic.
3. Pipe insulation shall be secured with suitable $3/8"$ or $1/2"$ wide bands, or 16 gauge wire, on 9" centers.
4. All flanges, valves and fittings shall be insulated with covers fabricated from B-H Rigid Foam to a thickness equal to that of the insulation of the adjoining pipe and securely fastened in place.
5. Finish
All pipe insulation and flange, valve and fitting covers shall be finished with asphalt impregnated paper or glass fabric and asphaltic cutback.
6. Hangers
When in contact with the pipe, clamp hangers shall be insulated separately in the same manner as fittings. The insulation shall be applied upward along the hanger rod to a distance not less than 6" and sealed (cold piping). On pipe hangers which fit around the insulation, a curved sheet metal shield shall be placed between the underside of the insulation and the hanger to limit the bearing stress on the insulation to 20 psi.
7. Outdoor Applications
Finish shall be glass fabric and asphaltic cutback or metal lagging.

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