NOMACO Insulation

IMCOLOCK®

Made with up to 100% post industrial recycled product

Home Innovation NGBS GREEN CERTIFIED

Made in USA

DESCRIPTION

IMCOLOCK® is a self-sealing, flexible, polyolefin, thermal insulation and is black in color. It is available in wall thicknesses of 3/8", 1/2", 3/4" and 1", in sizes ranging from 3/8" CTS to 4" IPS. IMCOLOCK® is manufactured using NRG5 technology, which for the first time, enables consistent high quality processing of up to 100% recycled post-industrial and post-consumer use polyolefin material. The creation of the ***NRG5 technology*** platform incorporates sustainability principals of **recycling** and **reuse** of materials, **reduction** of virgin raw materials and total material content, **re-engineering** of complex formulations and **re-design** of processes and products to minimize environmental impact.

APPLICATIONS

IMCOLOCK® is used to retard heat gain and prevent condensation or frost formation on cold water plumbing, chilled-water and air conditioning lines. IMCOLOCK® also retards heat loss on hot water plumbing.

IMCOLOCK® has a low thermal conductivity and very low water vapor transmission rate. This low density product demonstrates excellent thermal, physical and chemical resistant properties and has a broad service temperature range between -330°F and 210°F (-201°C and 99°C). It can be installed in commercial, industrial and residential insulation projects. Acceptable for use with heat tracing/heat tape.

INSTALLATION

IMCOLOCK® is pre-slit with factory applied pressure sensitive adhesive (PSA) to both seam surfaces and has convenient built-in release tabs for easy installation: slip on the tube, pull the tab, and pinch it shut. It can be easily pushed around P-traps and fittings, though mitering is recommended for optimum performance. All butt joints should be sealed with 320 or 620 (black) Contact Adhesive or other approved sealing system. It is easily cut with a sharp knife. IMCOLOCK® is available in a wide range of I.D.s and is sized to fit over copper couplings and fittings. It should be installed on pipes that have been pre-tested for leaks, are not presently hot, and have application temperatures that will not exceed 210°F (99°C).

OUTDOOR APPLICATIONS

IMCOLOCK® pipe insulation is made from UV resistant polyolefin resins. For severe UV exposure (roof-top applications) or where optimum performance is required, the product must be protected from the elements. Various jacketing or cladding materials are recommended, ie. PVC, CPVC, AL, etc. If coatings are going to be used, please refer to technical bulletin for recommended coatings.

UNDERGROUND

For buried lines above the water table, use a clean fill such as sand (3" - 5" layer) to protect IMCOLOCK® before backfilling. It is recommended to use a minimum 1" wall thickness and the materials to be buried are properly sealed at all seams and butt joints with an approved contact adhesive. For optimum performance, the lines should be encased in a conduit to protect them from problems associated with ground water. *Note: All Nomaco Insulation products must always be installed above the water table.*

RESISTANCE TO MOISTURE VAPOR FLOW

The closed-cell structure and unique formulation of IMCOLOCK® effectively retards the flow of moisture vapor, and is considered a low transmittance vapor retarder. For most indoor applications, IMCOLOCK® needs no additional protection. Additional vapor barrier protection may be necessary for IMCOLOCK® when installed on low temperature surfaces that are exposed to continuous high humidity.

FLAME AND SMOKE RATING

IMCOLOCK® in wall thicknesses of 1" (25 mm) and below has a flame spread rating of 25 or less and a smoke development rating of 50 or less as tested by ASTM E 84 Method of Testing entitled: "Surface Burning Characteristics of Building Materials." IMCOLOCK® is acceptable for use in duct/plenum applications meeting the requirements of NFPA 90A/90B.
Numerical flammability ratings alone may not define the performance of products under actual fire conditions. They are provided only for use in the selection of products to meet limits specified, when compared to a known standard.

SPECIFICATION COMPLIANCE

- ASTM C 1427, Type 1, Grade 1
- ASTM E 84 1" 25/50
- Specification Compliance ASTM C 1427, NFPA 90 A/B.
- Dade Co., Fl., Product Control Approved, Acceptance 95-1215.08
- New York City OTCR #13-09 USDA Requirements
- Sound transmission co-efficient = 11 at 1" per ASTM E90
- City of Los Angeles, Gen. Approval, Research Report RR 8316
- Greenguard Gold Certified (formerly children & schools)
- Approved as being eligible to contribute points toward a building under the National Green Building Standard ™

FEATURES

- CFC/HCFC Free
- Non-porous
- Low VOCs
- Halogen Free
- Fiber Free
- Resistant to mold growth

Manufactured with NRG5 Technology

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IMCOLOCK®

Physical Properties		IMCOLOCK® Insulation	Test Methods
Thermal Conductivity (K)	90°F (32°C) Mean Temp	.255 (.037)	ASTM C 177/C 518
BTU -in/hr - Ft^2 - °F (W/mK)	75°F (24°C) Mean Temp	.250 (.036)	ASTM C 177/C 518
	50°F (10°C) Mean Temp	.245 (.035)	ASTM C 177/C 518
Operating Temperature Range	Upper	210°F (99°C)	
Flexible to -100°F (-73°C)	Lower	-330°F (-201°C)	
Water Vapor Permeability Dry Cup. Perm-In		0.0	ASTM E 96
Ozone Resistance		Pass	ASTM D 1171
Chemical/ Solvent Resistance		Good	
Mildew Resistance/Air Erosion		Pass	UL 181

Thickness Recommendations* - To Control Condensation

Pipe Size	Line Temp 50°F	Line Temp 10°C	Line Temp 35°F	Line Temp 2°C	Line Temp 0°F	Line Temp -18°C	Line Temp -20°F	Line Temp -29°C
Normal Conditions (Max 85°F, 29°C - 70% R.H.)								
3/8" I.D. thru 1-3/8"	3/8"	10 mm	1/2"	13 mm	3/4"	19 mm	1"	25 mm
Over 1-3/8" thru 3-1/8"	3/8"	10 mm	1/2"	13 mm	1"	25 mm	1"	25 mm
Over 3-1/8" thru 4-1/2"*	3/8"	10 mm	1/2"	13 mm	1"	25 mm	1"	25 mm
Over 4-1/2"	1/2"	13 mm	3/4"	19 mm	1"	25 mm	1-1/4"	32 mm
Mild Conditions (Max 80°F, 26°C - 50% R.H.)								
3/8" I.D. thru 2-1/8"	3/8"	10 mm	3/8"	10 mm	1/2"	13 mm	1/2"	13 mm
Over 2-1/8" thru 3-1/8"	3/8"	10 mm	3/8"	10 mm	1/2"	13 mm	1/2"	13 mm
Over 3-1/8" thru 4-1/2"*	3/8"	10 mm	3/8"	10 mm	3/4"	19 mm	3/4"	19 mm
Over 4-1/2"	3/8"	10 mm	1/2"	13 mm	3/4"	19 mm	3/4"	19 mm
Severe Conditions (Max 90°F, 32°C - 80% RH)								
3/8" I.D. thru 1-1/8" I.D.	3/4"	19 mm	3/4"	19 mm	1-1/4"	32 mm	1-1/4"	32 mm
Over 1-1/8" I.D. thru 4-1/2"	3/4"	19 mm	1"	25 mm	1-1/2"	38 mm	1-1/2"	38 mm
Over 4-1/2"	3/4"	19 mm	1"	25 mm	1-1/2"	38 mm	2"	50 mm

IMCOLOCK® in thickness noted within the specified temperature ranges will prevent condensation on indoor piping under design conditions defined below. Thickness recommendations above 1" can be sleeved to achieve thickness desired.
Normal: Maximum severity of indoor conditions seldom exceed 85°F and 70% R.H. in United States.
Mild: Typical conditions are most air-conditioned spaces and arid climates.
Severe: Generally found in areas where excessive moisture is introduced or in poorly ventilated areas where the temperature may be depressed below the ambient.
Under conditions of high humidity, additional thickness of insulation may be required.
*Available: Nom. 1/2" or Nom. 3/4" thickness only.

IMCOLOCK® "R" Values

Pipe O.D. or Nominal Insulation I.D.		R Value 3/8" (10 mm) Wall	R Value 1/2" (13 mm) Wall	R Value 3/4" (19 mm) Wall	R Value 1" (25 mm) Wall
3/8"	10 mm	3.1	4.2	6.6	9.3
1/2"	13 mm	2.8	3.7	6.0	8.5
5/8"	16 mm	2.8	3.5	5.6	7.9
3/4"	19 mm	2.6	3.4	5.4	7.6
7/8"	22 mm	2.5	3.3	5.1	7.2
1-1/8"	29 mm	2.4	3.1	4.8	6.8
1-3/8"	35 mm	2.3	3.2	4.9	6.8
1-5/8"	41 mm	2.3	2.9	4.5	6.2
2"	50 mm	2.0	2.6	4.1	5.7
2-1/8"	54 mm	2.3	2.9	4.3	6.0
2-3/8"	62 mm	2.0	2.6	4.0	5.5
2-5/8"	67 mm	2.3	2.8	4.2	5.7
2-7/8"	72 mm	2.0	2.5	3.8	5.3
3-1/8"	79 mm	2.3	2.8	4.1	5.5
3-1/2"	89 mm	2.0	2.5	3.7	5.1
3-5/8"	92 mm	2.8	2.8	4.0	5.5
4-1/8"	105 mm	2.8	2.8	4.0	5.4
4-1/2"	115 mm	1.9	2.4	3.6	4.9

NOMACO Insulation
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