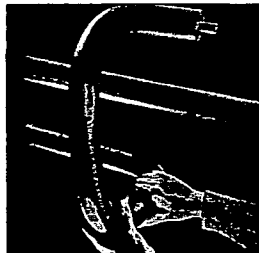


Armstrong

CORK COMPANY
Lancaster, Pennsylvania

ARMAFLEX PIPE COVERING AND SHEETS REDUCE INSULATING TIME AND COSTS ON HOT AND COLD LINES AND EQUIPMENT



Armstrong Armaflex insulation is a flexible, foamed plastic material in tubular pipe covering and flat sheet form. It has a closed cellular structure with excellent insulating efficiency and high moisture vapor resistance. In pipe covering form, Armaflex is widely used on liquid cooling and heating lines, chilled water lines, and other cold lines in plumbing, heating, air-conditioning, and refrigeration installations. In sheet form, it is particularly adaptable to insulating large tanks of all shapes, irregular vessels, and large-size piping and fittings. Pipe covering is made in three engineered wall thicknesses, each calculated to prevent condensation on cold lines within their individual recommended usage ranges at temperatures down to zero. For temperatures below zero, multiple thicknesses can be applied.

Armaflex Pipe Covering also can be used on heated lines, where it will withstand temperatures to 200°F. Armaflex in sheet form can be applied with full adhesive coverage to metal surfaces operating as high as 160°F.

There is no practical low-temperature limitation, as necessary thicknesses can be built up with successive layers.

HIGH INSULATING EFFICIENCY

The closed cellular structure of Armaflex gives it a low k value of 0.28 at 75°F. mean temperature. Armaflex resists deterioration, so efficiency remains high in service.

IMPERVIOUS TO MOISTURE VAPOR

The uniformly sized closed cells of Armaflex seal out air and moisture vapor. The result is a water vapor transmission rating of less than 0.1 perm.

PHYSICALLY AND CHEMICALLY STABLE

When the inner surface of Armaflex Pipe Covering and Sheet Insulation is ex-

posed to recommended temperatures, shrinkage is negligible. Armaflex is only slightly affected by solvents and for all practical purposes is unaffected by oils, common corrosive chemicals, or fungus.

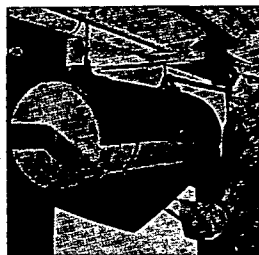
SELF-EXTINGUISHING

Armaflex will burn very slowly on direct contact with a flame, but burning ceases when the flame is removed.



FAST AND EASY TO APPLY

The extreme flexibility of Armaflex Pipe Covering and Sheets makes application very rapid. Both types can be applied easily, even in close quarters. Armaflex Pipe Covering can be slipped onto pipe and tubing prior to its installation or slit and snapped over piping that is already



in place. The only sundry item required is Armstrong 520 Adhesive. (Scotch Brand No. 472 Tape may be used to close the joints in straight piping applications.) Fittings can be insulated with miter-cut pieces of covering, assembled on the job using 520 Adhesive to adhere joints. Large piping and fittings are insulated with Armaflex Sheets. On tanks and vessels, Armaflex Sheets are applied directly to clean, dry metal surfaces with 520 Adhesive. Conventional mechanical supports are unnecessary. On outdoor installations, excellent protection is provided by Armstrong Armaflex Finish, a vinyl lacquer type coating. Indoors, Armaflex requires no finish, but where a decorative or protective finish is desired, Armaflex Finish is recommended.

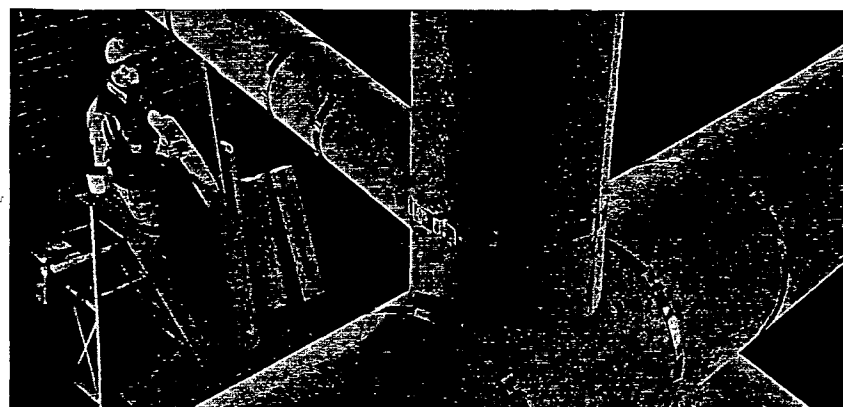
Physical Properties of Armaflex

THERMAL CONDUCTIVITY—Btu-in./sq ft.-hr.-°F.	
k75	0.28
k120	0.30
WATER VAPOR TRANSMISSION RATE	
Perms-in.	Less than 0.1
AIR TRANSMISSION—Cu ft.-in./hr.-sq ft.	
(Static pressure of 10" water)	Less than 0.03
WATER ABSORPTION—28 DAYS' SUBMERSION	
% by volume	3.0
DENSITY	
Lbs.-cu ft.	7.5 (p/c) 6.0 (sheet)
FIRE RATING	
PIPE COVERING	Self-extinguishing
Wall thickness—(nominal)	$\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$
Inside diameter—(nominal)	$\frac{3}{8}$ to $3\frac{1}{2}$
Length of section—feet	6
SHEET ARMAFLEX	
Size—(nominal)	30 x 36
Thickness—(nominal)	$\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$

For complete application instructions and specifications, write today to Armstrong Cork Company, 6000 Preston Avenue, Lancaster, Pennsylvania.

THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN

DOW INSULATION



STYROFOAM® stops moisture, repels heat

Advantages of Styrofoam* as a Low Temperature Pipe Covering Material

(1) Low "k" factor stays low because Styrofoam (a Dow plastic foam) resists water and water vapor. (2) Prevents condensation and dripping. (3) Light, clean, easy to handle, economical to apply. (4) Resists rot, mold, deterioration. (5) Will not split or crack nor is it subject to ice build-up around valves in extreme cold.

USES

Pipe covering • Wall, floor and ceiling insulation for low temperature space • Cavity walls • Insulation—plasterbase • Refrigerated vehicles • Curtain wall panels

ENGINEERING DATA

Thermal Properties

Thermal Conductivity (k factor), Btu/(hr.) (sq. ft.) (°F./in.) .00003 to .00004 in./in.°F. between ... 0°F. and 80°F. .027 Btu/(lb.) (°F.) at 40°F. Average less than 0.28 at mean temperature of 40°F. Linear Thermal Coefficient of Expansion Specific Heat Resistance to Heat (Maximum recommended temperature for continuous use) Styrofoam 22—170°F. Styrofoam 33—160°F.

Physical Properties

	Styrofoam 22	Styrofoam 33
Density (lb./cu. ft.)	1.6-2.0	1.7-2.3
Compressive Yield Strength (psi)	19-32	16-38
Tensile Strength (psi)	45-61	65-95
Shear Strength (psi)	27-36	30-40
Flexural Strength (psi)	42-61	48-99
Compressive Modulus (psi)	1200-1700	1500-2000

*STYROFOAM is Dow's registered trademark for its expanded polystyrene

	Styrofoam 22	Styrofoam 33
Bending Modulus (psi)	1000-1285	1250-1760
Modulus of Rigidity (psi)	700-1600	1000-1300

Water Resistance Properties

Capillarity	None
Water absorption (When subjected to 90°F., 90 per cent relative humidity for 15 days)	Less than 0.03 per cent by volume
Water absorption (When completely submerged for one week)	Water pick-up only on surface cells less than 0.15 lb./sq. ft. of area

VAPOR TRANSMISSION

When Styrofoam acts as a barrier between spaces having different atmospheric conditions	1.0-2.0 grains/(sq. ft.) (hr.) (in. thickness) (in. of Hg. vapor pressure difference)
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MANUFACTURERS

Styrofoams, 17 Hawkins Street, Somerville, Mass. • Glo-Brite Products Incorporated, 6415 North California Avenue, Chicago, Illinois • Tuffite, Inc., Ballston Spa, New York • Styro Fabricators, 1401 Fairfax Trailway, Kansas City, Kansas • Robinson Industries, 3051 Curtice Road, Coleman, Michigan • MMM, Incorporated, P.O. Box 968, Portsmouth, Ohio • Kennedy Industries, 4447 Alger Street, Los Angeles, California • Fastab Insulation, Inc., 304 Cleveland Transit Building, Cleveland 14, Ohio • Fibrous Glass Products, Inc., Hicksville, L. I., New York • Kransco Manufacturing Company, 503 Railroad Avenue, South San Francisco, California • Dal-Vir Products, Inc., 117 W. Bristol Street, Elkhart, Indiana.

For further information on Styrofoam in any application write to THE DOW CHEMICAL COMPANY, Midland, Michigan, Plastics Sales Department 2233CH. We can also give you information on Scorebord®t, the new easy-to-apply member of the Styrofoam family specifically designed for foundation and slab applications.

(PATENT APPLIED FOR)