

InsulSeal 50

Self-Adhering, All-Purpose, Exposable Waterproofing Membrane

InsulSeal 50 is a High-Quality Rubberized Asphalt Waterproofing Membrane for Insulated and Non-Insulated Ducts and Pipes

FEATURES:

- InsulSeal 50 bonds to itself on overlaps. This eliminates banding and leaks on seams as with traditional metal cladding methods.
- Quick and easy to use.
- Suited for all weather types and can be exposed indefinitely.
- InsulSeal 50 is incredibly tough and abrasion resistant, yet pliable enough to conform to most irregular surfaces.
- Peel and stick application with an aggressive, rubberized, pressure-sensitive adhesive.
- Tough and durable, has high puncture and abrasion resistance.
- Quicker and easier application than mastic applied systems.



DESCRIPTION:

InsulSeal 50 is a .05" thick, self-adhering, exposable waterproofing membrane used to seal exterior insulated and non-insulated pipelines. InsulSeal 50 effectively protects exterior and interior insulation applications from moisture penetration. InsulSeal 50 acts as positive vapor barrier/retarder on chilled lines and in cold storage applications. It will fully adhere to cellular glass, fiberglass, perlite, urethane foam, extruded polystyrene, steel, aluminium, foil scrim kraft paper and mineral wool insulations.

TECHNICAL INFORMATION:

Thickness		.05"
Tensile Strength	ASTM D-412	450 PSI
Peel Strength	ASTM D-903	9 inch/lb.
Temp. Application		+30°F to +120°F
Puncture Resistance	ASTM E-154	90 lbs.
Elongation	ASTM D-412	225%
Perm Rating	ASTM E-96	.01 Max
In Service Temp.		-70°F. to +140°F.
Adhesive:	Rubberized Asphalt	
Facer:	Heavy Duty Black Polyethylene Film	



APPLICATION ON INSULATED DUCTS OR PIPE

On foil or FSK faced fiberglass:

When applying InsulSeal 50 over foil or FSK faced insulation board, the insulation must be firmly adhered to the metal duct with pins or bands; on pipe the insulation should be banded or secured with filament tape. The surface must be dry and clean and the temperature should be 30°F (-1°C) or higher for good adhesion. In colder temperatures the membrane can be applied if it has been stored at a temperature of 50°F (10°C) or higher and is still warm when applied.

On round duct:

InsulSeal 50 should be pre-cut to the length to go around the duct with a 2" overlap. Peel back the liner paper 2 or 3 inches and apply it with pressure starting at the 3 o'clock position, then pulling the liner off as the material is wrapped around the duct with the 2" overlap at the seam. Pressure should be evenly applied by hand or with a roller as the release liner is removed to assure adhesion with the foil surface and to prevent wrinkles or air being trapped under the membrane. The next section applied going down the duct should overlap the circumvental joint by 3" and special care should be taken to make sure there are no wrinkles or fishmouths on both horizontal and circumvental overlaps. If there are fishmouths in the overlap they should be cut and pressed down, then covered with a 6" wide strip of InsulSeal 50.

On square duct:

Use the same method, squaring the membrane to follow the corners and making sure the bottom area of the duct is well adhered. If the duct is 36" or more across, a perforated base glue-on pin should be applied to the bottom of the duct before insulation. Pins should be placed on 12" centers down the length of the duct. Impale the insulation on the pin, then cut a piece of InsulSeal 50 long enough to go across the bottom of the duct and half way up each side. Impale the InsulSeal 50 on the pin and secure with a 2" lock washer. Cut a piece of material long enough to go across the top of the duct and down each side, overlapping the bottom piece by at least 2". Clip off the end of the pin and place a 4" square piece of InsulSeal 50 over the washer to insure a vapor seal.

On un-faced fiberglass or mineral wool board:

A 6" wide strip of InsulSeal 50 should be wrapped around the insulation every 18" to give a good surface for adhering the top wrap that would be applied over it.

On urethane foam board or anywhere the surface might be dusty:

The board should be coated with #100 Primer or #80 Primer to give a good bond to the board. Allow the primer to dry with just a tacky feel before proceeding with the application of the membrane.

Storage:

- Do not store in direct sunlight.
- Do not remove from carton until ready to use.
- Store inside or in shaded areas between 50°F and 90°F (10°C and 32.2°C)



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Protecto Wrap Company
1955 South Cherokee Street • Denver, CO 80223
www.protectowrap.com (800) 759-9727 • FAX (303) 777-9273



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INSUL-SEAL-30 & INSUL-SEAL-50

SHEET MEMBRANE FOR WATERPROOFING THERMAL INSULATION

DESCRIPTION

Protecto Wrap's Insul-Seal-30 and Insul-Seal-50 Sheet Membrane Insulating Jacket System consists of a 30-mil or 50-mil thick SBS modified rubberized asphalt membrane laminated to a heavy-duty black polyethylene film on the face and a siliconized, removable, release sheet on the adhesive side. The factory controlled thickness ensures uniform thickness on the job, while the inherent waterproofing properties of the SBS modified rubberized asphalt membrane provide waterproofing protection to insulated piping and equipment, helping to assure the thermal performance of the insulation and provide energy savings. Insul-Seal is provided in 36 inch wide by 100 foot long rolls.

TYPICAL USE

Insul-Seal Sheet Membrane Insulation Jacket System, when wrapped around insulation, provides a tough, pliable outer film that resists punctures from rocks and sharp objects when backfill material is used. It also provides vapor barrier protection on cold piping and equipment to prevent moisture build up and condensation from forming in the insulation. Insul-Seal may be applied in spiral wrap or cigarette wrap applications. Since no drying or curing time is necessary, Insul-Seal may be buried immediately.

ADVANTAGES

- Factory controlled thickness
- Provides ease of application for significant labor savings
- Less material loss and cleanup
- Provides maximum resistance to water or vapor transmission
- Provides self-sealing properties that provides an excellent bond at the overlap.
- No special adhesives, primers, catalysts or heat are required.
- Minimizes energy loss by keeping insulation dry and free of condensation
- Protects substrate from deterioration from exposure to below ground acids and alkalis found in normal soils
- Provides improved resistance to hydrocarbon contaminated soils
- Elastomeric properties allow for movement of the substrate
- Has a 25/50 Flame/Smoke rating

TECHNICAL DATA

PROPERTY	TEST METHOD	RESULTS
Film Color		Black
Total System Thickness		30 or 50 mil
Overlap Adhesion	ASTM D903-49	9.5 lbs/in
Tensile Strength Film	ASTM D412	5000
Ultimate Elongation	ASTM D412	300%
Puncture Resistance	ASTM E154	50
Permeance	ASTM E96 Method A	.013
Application Temperature		40° to 130 °F
Operation Temperature		-25° to 165 °F

LIMITATIONS

Insul-Seal is a waterproofing membrane only. Do not use as a substitute for banding or mechanical fastening of pipe insulation. Consult insulation manufacturer's application instructions for correct banding or mechanical fastening information.

When used permanently above ground, Insul-Seal should be immediately overwrapped with an aluminum jacket to protect the membrane from ultraviolet degradation. Protecto Wrap Company's Protecto Seal 45 is a suitable outer wrap in exposed areas. Contact Protecto Wrap Company for more information on Protecto Seal 45.

MATERIAL STORAGE

Insul-Seal should be handled and stored in a manner as to prevent damage to the material and cartons from rain and physical damage. Protecto Wrap recommends that all materials be stored in a heated building during cold weather. Store all materials away from sparks or flames and where materials will not exceed 100 °F for extended periods. Outdoors, place Insul-Seal cartons on raised pallets and cover completely.

SURFACE PREPARATION

The insulation shall be clean of all frost, moisture and other foreign material. Surface temperatures of the insulation should not exceed 165 °F. Butt joints and longitudinal seams should be inspected so that excess heat (in hot lines) is not allowed to escape.

On soft or extremely dusty insulations such as fiber glass, rock wool, or calcium silicate, a 4 inch wide piece of Insul-Seal should be wrapped around the insulation every 16 inches to 38 inches as required to anchor the outer wrapping of Insul-Seal. It should be applied over the butt joint and may require mechanical fastening in some cases.



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SHEET MEMBRANE FOR

WATERPROOFING THERMAL INSULATION

INSTALLATION

When Insul-Seal is installed using the cigarette wrap technique using 36 inch wide sections, the Insul-Seal material should be cut to the proper length to wrap around the insulation and overlap a minimum of 2 inches. On small diameter installations, peel off the release paper and set Insul-Seal into the correct position. On large diameter installations, peel off the first 9 inches, position Insul-Seal and press the membrane around the insulation, removing additional release paper as the Insul-Seal is applied. Overlap longitudinal seams at least 2 inches. Butt seams should be overlapped at least 2 inches.

Apply pressure using a roller or other source to all lap and end joints to ensure that the lap is well conformed and adhered to the insulation surface.

On exposed or cold insulated piping or equipment, care should be taken to ensure all seams are well adhered. Fishmouths should be slit and repaired with a strip of 6 inch wide tape applied around the entire installation and overlapping itself at least 2 inches.

If moisture is already present in the insulation at the time of application of Insul-Seal, blisters may begin to form on hot lines. Slit the blisters to relieve the vapor pressure and patch using a 6 inch wide strip of Insul-Seal applied around the entire installation and overlapping itself at least 2 inches.

If application is to be permanently exposed to ultraviolet light, Protecto Wrap Protecto Seal 45 Aluminum-topped tape shall be used.

APPURTENANCE DESIGN

Consult the engineer's application instructions for recommendations for wall penetrations, insulation supports, line guide, line anchor, expansion-contraction joints, expansion chamber and ditch configurations including drainage pipes.

BACKFILLING

Backfill shall be made with sand or other fine particle size material. If dirt is used it shall be of a type that is free from clay or any other type of fill that will result in shrinkage or will adhere to the membrane in a way that it could pull or dislocate the membrane.

DRAINAGE

Insulated pipe should be installed above the water table on a gravel base topped with a 6 inch layer of sand. If this is not possible, a perforated drain pipe covered with a fabric to prevent debris or dirt from plugging the holes should be used in combination with the gravel base to provide adequate drainage. The trench design and conditions required need to be provided by the architect or engineer.

LIMITED WARRANTY

Protecto Wrap Company warrants materials to be free of defects and will replace or, at our option, refund the purchase price of any materials proven to be defective. THIS LIMITED WARRANTY IS IN LIEU OF ANY OTHER WARRANTY OR GUARANTEE, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL PROTECTO WRAP COMPANY BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES NOR SHALL LIABILITY, IF ANY, EXTEND BEYOND THE PURCHASE PRICE OF THE MATERIAL. PROTECTO WRAP COMPANY DOES NOT WARRANT THE WORKMANSHIP OF THE APPLICATOR.

PACKAGING

ROLL SIZE	ROLLS PER CASE	WEIGHT PER CASE	CASES PER PALLET	
36" x 100	1	75	25	IS30
36" x 75'	1	106	25	IS50



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PROTECTO WRAP COMPANY
1955 South Cherokee St
Denver, CO 80223
(303) 777-3001 • (800) 759-9727
FAX (303) 777-9273