

Aluminium Sheet With Moisture Barrier | Haomei

[Aluminium sheet with moisture barrier](#) has a bare outer surface and comes with a polyfilm as polykraft and polysurlyn moisture barrier. This polyfilm moisture barrier is heat-laminated to the interior surface to help prevent corrosion of the aluminum jacketing and the underlying metal pipe, vessel, or equipment.

MOISTURE BARRIER (also known as moisture retarder): layer of plastic film or other material applied to the inner side of metal jacketing to inhibit jacket corrosion by interfering with the formation of a galvanic cell between the dissimilar metal of the pipe and jacket or by preventing crevice corrosion.

Moisture Barrier is a very important and most discussed topic by the insulation systems experts. Moisture barrier is a coating applied on the back of a metal jacketing to prevent corrosion of the aluminum jacketing and also the underlying pipe. It is a very important component of a good insulation system and used in all applications including hot and cold (cryogenic) applications. The barrier has a very important role to isolate the jacketing from other insulation layers and shield the underside of the aluminum metal jacket from moisture contact and thus preventing corrosion.

The industry have seen many different materials over the years which have been used as moisture barriers on metal jacketing in mechanical insulation systems. Two most common moisture barriers used are Polykraft and Polysurlyn barriers.

Polykraft:

Polykraft is a layer of kraft paper laminated to a thin layer of polyethylene film which is factory applied on the metal in a lamination process. It is an improvement from the paint system as Polykraft is 1.5 mil (37.5 μ m) thick and uses polyethylene layer which is good for moisture resistance. However, kraft paper exhibits a poor water resistance and can be easily damaged on mechanical abuse. The properties of polykraft deteriorate significantly over a short time. Polykraft promotes the growth of fire, hence is not used in areas where there is a high risk of fire.

Polysurlyn:

Polysurlyn moisture barrier is a 76 μ m thick three-layer film which is factory laminated on the metal without the use of any addition adhesive layer. The layers are a combination of polyethylene and Dupont™ Surlyn®. Surlyn® is known for its strength and moisture resistance properties and combining it with 2 additional layers of polyethylene prevents the alignment of pinholes in each layers, hence, this moisture barrier exhibits zero pinholes. Polysurlyn moisture barrier is the most popular moisture barrier used today.

Specification of aluminum jacketing roll with moisture barrier are:

Alloy: 1050, 1060, 1100, 1200, 3003, 3015, 5005

Temper: H14, H16, H24, H26

Thickness: 0.4mm-1.5mm

Standard Width: 914mm 1000mm 1200mm 1219mm

Surface: Plain, Flat, Mill finish, Smooth, Stucco embossed

Coatings: PE/PVDF Coated, PolySurlyn or Polykraft paper Laminated

Kraft paper thickness: about 0.1mm

Polysurlyn thickness: about 0.076mm (3mil)

Inner diameter: 305mm, 405mm or 505mm with paper core or without core

Out diameter: 125m, 150m, 250m ,300m, 500m, 1000m, 2540m or according to coil weight

Quality standard: ASTM B209, EN573-1

Quantity: have ready stock, small quantity order are acceptable.

Application: Industrial insulation jacketing, cover, insulation protective jacketing

Alloy	Temper	Thickness (inch)	Thickness (mm)	Width (mm)	Length (m)	Suggested Application
1100, 1060, 3003, 3105, 5005	H14, H16, H24, H26	0.012	0.3	914, 1000, 1219	20, 25,30, 60, 90, coil	OD below 36"(914mm) insulated pipe lines.
		0.016	0.4			OD below 36"(914mm) insulated pipe lines.
		0.020	0.5			OD below 36"(914mm) insulated pipe lines.
		0.024	0.6			OD 36"-8'(914mm-2.43m) insulated pipe lines&equipment.
		0.032	0.8			Special applications where extra thickness and protection is required, such as fabricated tank head covers and other special fabrications.
		0.040	1.0			Special applications where heavy mechanical is required.
		0.050	1.2			Flat ducts or precipitators. Also recommended for areas subject to high wind conditions.

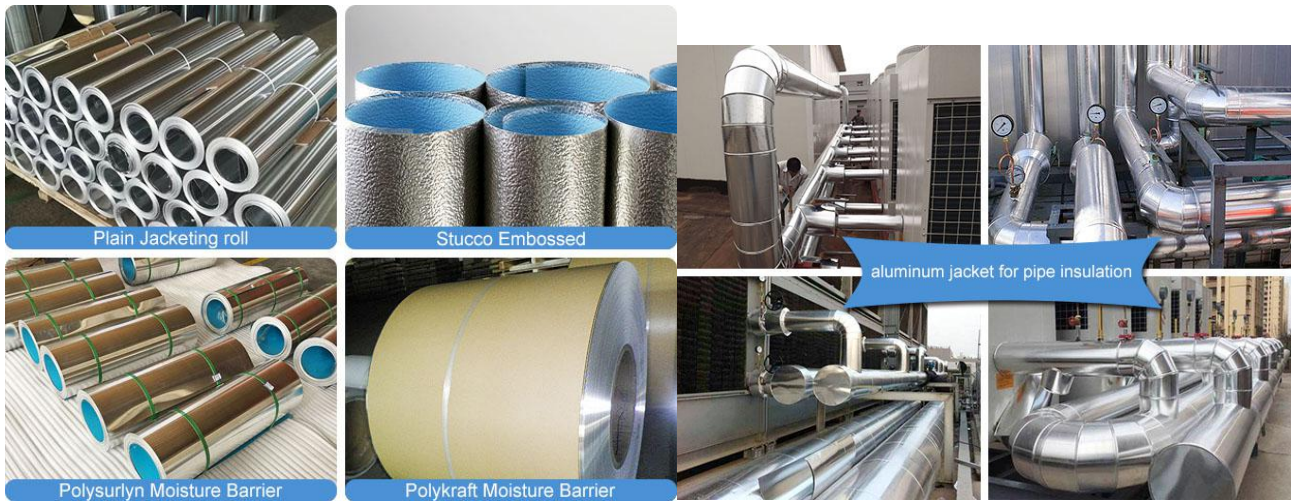
Chemical Composition of aluminium jacketing with moisture barrier:

Alloy	Si	Fe	Cu	Mn	Zn	Mg	Ti	Cr	Other Elements		Al
									Each	Total	
1060	0.25	0.35	0.05	0.03	0.05	0.03	0.03	-	0.03		99.6min
1100	Si+Fe=0.95		0.05-0.20	0.05	0.10	-	-	-	0.05	0.15	99.0min
3003	0.6	0.7	0.05-0.20	1.0-1.50	0.10	-	-	-	0.05	0.15	remainder
3105	0.6	0.7	0.30	0.30-0.80	0.40	0.20-0.80	0.10	0.20	0.05	0.15	remainder
5005	0.3	0.7	0.20	0.20	0.25	0.50-1.10	-	-	0.05	0.15	remainder

Features of aluminum jacket with moisture barrier are:

1. Customized packaging solutions for extended shelf life.
2. Excellent barrier against moisture, oxygen & odour.
3. Excellent mechanical properties even at low thickness.
4. High burst strength and puncture resistant.
5. Light weight: Aluminum is about 1/3 weight of iron or steel, making it easier to handle and less expensive to ship.
6. Strong: the tensile strength can be 85-120Mpa, and can satisfy most of insulation jacketing needed.
7. Corrosion resistant: they do not rust.

8, Easy to fabricate & assemble.



Application of aluminum jacketing with moisture barrier:

Aluminum jacketing is recommended for use in all of the following insulation system applications:

- Standard outdoor use on all pipe, vertical tank insulation systems up to 8 ft outer diameter, and all horizontal tanks.
- Indoor insulation system applications up to 8 ft outer diameter where increased damage resistance is desired.

Why Choose Us :

1. Verified supplier:

We are verified supplier, with quality assurance. Production process is approved by SGS and BV.

2. Price Competitive:

We provide factory price to save your purchase cost.

3. Customized size:

We can produce any size according to clients requirement. We further provide clients with aluminium sheet/coil further process, such as anodizing, brush, polish, stucco emboss, corrugation, mirror, color coating etc.

4. Safe package and Fast delivery:

About 25-40 days after receipt client LC or deposit.

5. Existing clients reference:

Our aluminium products are exported to all over the world, we can give you our existing customer name in your region for you to check our company and our quality.

6. Free samples:

Haomei supply free sample available for test at first.

7. After sales service:

We have good reputation for all customer; If any quality problem with third party inspection report, We will take full responsibility.