PRHF ALUMINUM JACKETING- PROJACT

POLYKRAFT

PROFILES RH FACTORY LLC,
INDUSTRIAL AREA# 15,
SHARJAH,
U.A.E.
TEL# +971 6 5342222
FAX# +971 6 5342000
www.profilesrhf.com

PROJACT- ALUMINUM JACKETING

Corrosion in the interiors of metal jacketing is an insidious problem which is difficult to detect until it becomes severe and is an expensive endeavor to repair in all kinds of applications.

Key properties of Moisture Barriers

- ✓ **Pinholes** – Zero pinholes is most desirable.
- ✓ **Water resistance** – Low water absorption and low water-vapor transmission rate are desirable.
- ✓ **Durability** –Strong, tough, scratch resistant and durable film is desirable.
- ✓ **Flammability** – Lower flammability is preferred.

Polykraft moisture barrier (PKMB) demonstrates almost all of the above necessary properties and represents state-of-the-art moisture barrier which is economical and widely available.

Science explains the causes of the different types of corrosion such as pitting, crevice and galvanic corrosion. Laboratory corrosion tests show the effectiveness of PKMB in preventing the occurrence of corrosion.

Why opt for Polykraft Moisture Barrier?

- ✓ Proven high performance
- ✓ Low water vapor transmission rate
- ✓ Low water absorption
- ✓ Durable
- ✓ Scratch resistant
- ✓ Low flammability
- ✓ Excellent adhesion to metal substrates

+971 6 5342222
www.profilesrhf.com

PROJACT- ALUMINUM JACKETING

POLYKRAFT MOISTURE BARRIER

DESCRIPTION

Polykraft Moisture Barrier (PKMB) is an engineered multilayer composite film used as a moisture retarder on metal jacketing consisting of at least one layer of minimum 40 LB Kraft paper and one layer of plastic film, usually polyethylene at a minimum thickness of 1 mil.

PKMB is heat laminated in the factory to the interior surface of all types of metal jacketing for mechanical insulation to help prevent pitting, crevice, and galvanic corrosion of the interior surface of the metal jacketing and the underlying insulated pipe, tank, or equipment.

This corrosion can occur when water enters the installed insulation system through joints or damage in the metal jacketing.

PHYSIOLOGY

PKMB consists of two film layers each carefully selected to yield optimum performance. Each of the two layers is min. 1 mil (25 µm) thick. The inner layer is predominantly low-density polyethylene (LDPE) for excellent adhesion after heat lamination and the top-layer is high-durable Kraft paper for superior toughness and abrasion resistance. The use of two separate film layers virtually guarantees minimum pinholes through the entire film.

APPLICATIONS

The preferred method for specifying metal jacketing is to require the use of PKMB to help prevent corrosion of the interior surface of the metal jacketing and the underlying insulated pipe, tank, or equipment. PKMB is preferred on all types of metal jacketing including aluminum, stainless steel, galvanized steel, Aluzinc, and aluminized steel types I and II to help prevent this corrosion.

PKMB is preferred on the metal jacketing for all applications of mechanical insulation including that used in hot, cold, pipe, tanks, and equipments in industrial, commercial, petrochemical, and oil/gas applications.

+971 6 5342222
www.profilesrhf.com

PROJACT- ALUMINUM JACKETING

Prevention is always better and cheaper than cure. Water-staining mostly occurs while aluminum is in transit to the warehouse or jobsite, or it may occur if the aluminum sheet or jacketing is stored improperly in a warehouse or at a jobsite.

APPEARANCE

PKMB Film is light brown in color to distinguish it from other film types and to allow visual confirmation of its presence on the metal jacketing. Below table provides an insight into the physical properties of PKMB

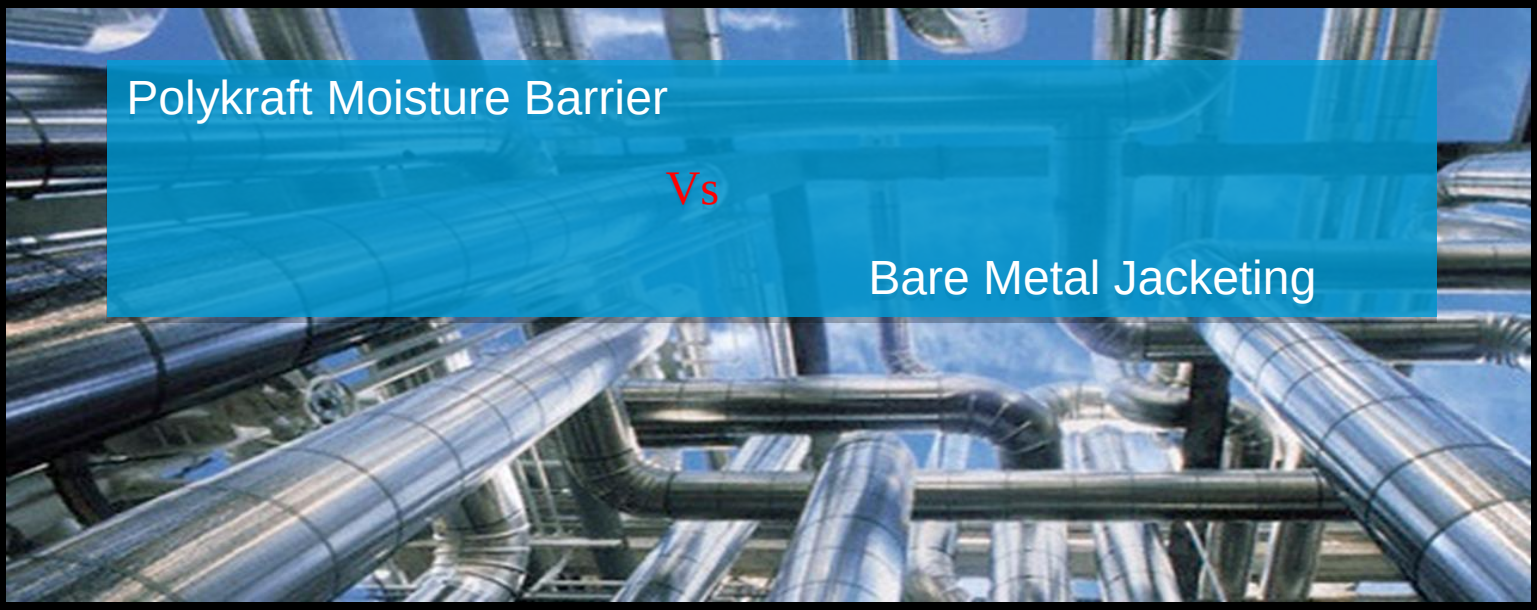
Physical Property	Value	Standard
Total Film Thickness	5 mil (125 µm) appx.	**DIN ISO 536**
Tensile Strength in machine direction	4000 N/m	**DIN EN ISO 1924**
Tensile Strength in cross direction	2000 N/m	**DIN EN ISO 1924**
Burst strength	200 kPa	**DIN EN ISO 2758**
Elongation in Machine direction	2%	**DIN EN ISO 1924**
Elongation in cross direction	4%	**DIN EN ISO 1924**
Corrosion 60C/95% R.H/24h	0	**---**
Temperature Resistance	-5 to +90˚C	**---**
Absorption of Water (Cobb/60")	~30 g	**DIN EN 20535**
Water vapor permeability g/m2/24 h	25	**DIN EN ISO 12572**

[a]Data shown are typical values obtained from representative samples. This data may be used as a guide for design purposes but should not be construed as specifications.
[b]FS/SD values are for aluminum jacketing with PKMB heat laminated to one surface. This numerical flame spread data is not intended to reflect hazards presented by this or any other material under actual fire conditions.
[c]Note that most hot insulation systems are designed to keep the temperature of the jacketing from exceeding 140°F(60°C) for personal protection reasons.
[d]PRHF Insulation Systems has third party test lab reports verifying these critical performance attributes [e]Via thermo-gravimetric analysis.

Suggested description to require that metal jacketing have a PKMB applied to it:

"Metal jacketing of all types shall have a polykraft moisture barrier, 40 Lbs. Kraft paper+1 mil PE film, factory heat laminated to the interior surface."

PROJACT- ALUMINUM JACKETING



Polykraft Moisture Barrier

Vs

Bare Metal Jacketing

Metal Jacketing and Water Don't Mix….

When water is present and touching the interior surface of metal jacketing, corrosion can and does occur. This can happen in all applications (hot or cold), with all metal jacketing types, and with all insulation types.

Desired properties of moisture barrier ….

To keep water from causing jacket and pipe corrosion, the moisture barrier must be water resistant, pinhole free, tough, scratch resistant, and durable. Polykraft Moisture Barrier (PKMB) offers all of these necessary properties while also being economical and widely available.

Why Polykraft Moisture Barrier?

- Provides optimized performance
- High durability
- Low water-vapor transmission
- Tough and fairly strong to resist installation damage
- Great adhesion to metal substrate
- Low flammability

+971 6 5342222
www.profilesrhf.com