PARAGON
INDUSTRIAL METAL COATING LLC

PRE-PAINTED ALUMINUM JACKETING

What this means in simple terms is that the exterior surface is coated using a layer of polyester paint that is applied to the exterior surface.
Apart from upgrading the finish it also improves the aesthetics, color coding, and increase in emittance and corrosion protection.
It is used on pipes, tanks, and insulation systems.
The paint that is applied on the aluminum jacketing is highly resistant to oxidation and can be exposed to various corrosive conditions. Apart from moisture it also prevents it from general wear and tears over the years, UV exposure, and water.
The paint contains 3 mil (76 micron) thick polysurlin moisture barrier or in short PSMB. This is heat laminated on the inner surface of the aluminum jacketing.

AVAILABLE COLORS

There are multiple color options available with PIMC as per RAL chart. There are more color choices available which you can check out once you confirm the order.

ALUMINUM ALLOYS

As we all know that aluminum itself is a very light metal and thus for use, it needs to be turned into an alloy by mixing it with small percentages of manganese, silicon, copper, zinc, and magnesium.
At Paragon Coating we choose the best aluminum coil suppliers to ensure that our products are of the best features.
Paragon Coating aluminum jacketing is mainly made using 3105 and 3003 alloys as this can be used interchangeably too.

COMPOSITION DIFFRENCES IN ALUMINUM ALLOYS (%)

Alloy	Cu	Mn	Mg	Zn
3105	≤ 0.3	0.3 - 0.8	0.2 - 0.8	≤ 0.4
3005	0.05 - 0.2	1 - 1.5	—	≤ 0.1

EMISSVITY OF PRE-PAINTED ALUMINUM

Paragon Coating has a surface emittance which is measured on ASTM C1371 and includes -
1. All colors without clear- Emissivity = 0.8
2. Clear coated- Emissivity = 0.5
3. And bare aluminum = Emissivity = 0.1

Landline : +97165460860, **E :** info@paragoncoating.com, **P.O. Box Number : 3855,**
Add : Plot No. 0849, Sector-5, Area 1, UMM AL QUWAIN U.A.E

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APPLICATIONS

The main use is found in insulation systems and thus it is found in -

1. Rooftop cold piping where there is increased corrosion resistance and high emittance required.
2. When users are considering the point of the aesthetics of view to get Paragon Coating aluminum jacketing.
3. Higher jacket emittance is required in cases to allow more condensation control on HVAC duct system for more corrision resistance especially on harsh enviorment

LIMITATIONS

There are some limitations of the coated aluminum jacketing solution such as -

When the tank insulation systems have a diameter of more than 8 feet of diameter and where a painted jacketing is required. You cannot use the cladding type jacketing here but corrugated jacketing should be used.

The aluminum jacketing may also be rendered useless in places that also need them to be highly fire-resistant. In such cases, stainless steel jacketing has to be used which by the way is also available at Paragon Coating.

The corrosion resistance is improved but you still need to have further advanced mechanisms and this is also a scenario where you need the Paragon Coating stainless steel jacketing.

SURFACE FINISHES

Four types of finishes can be achieved and each of them is available on Paragon Coating.

1. Smooth
2. Stucco Embossed
3. 3/16" (5 mm) Corrugated
4. Deep Corrugation
   - A. 32 mm Corrufgation(1-1/4" X 1/4")
   - B. 64 mm Corrugation (2-1/2" X 1/2")

Consult to speak with our experts for end-to-end assistance and guidance.

POLYSURLIN MOISTURE RETARDER/BARRIER (PSMR/PSMB)

This is a coat of engineered paint that contains a film of polyethylene and surlyn polymers. The thickness of the paint is not more than 3 mil (76 micron) and the process of application on aluminum jacketing is through heat lamination. This helps in corrosion fighting, crevice appearing, pitting, among others.

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FLAMMABILITY

At Paragon Coating after the lamination process the moisture barrier coating has been done the next stage is the flammability test.
We use the industry-standard method that is ASTM E84. Remember that aluminum jacketing is not the right type of flammability control method. You got to use stainless steel for this.
Anyways the results of the test are given below-
1. ASTM E84 Flame spread index- 0
2. ASTM E84 smoke develop index-5

COMPLIANCE TO STANDARDS

We at Paragon Coating ensure that all our aluminum jacketing has been confirmed as per the ASTM C1729 standard. This also includes adhering to the chemical and strength composition compliance as per the ASTM B209 aluminum alloy standard.

RECOMMENDATIONS ON THE THICKNESS

With us, you can get various types of aluminum jacketing as per your requirements. All of them are compliant with the ASTM C1729 standard. From less than 8 inches in diameter, we can help you to build large aluminum jacketing whose diameter exceeds more than 36 inches.

Outer Insulation Diameter (in)	Minimum Aluminum Jacket Thickness, inches (mm)	
	Rigid Insulation	Non- Rigid Insulation
≤ 8	0.016 (in) (0.41(mm)	0.016 (in) (0.41(mm)
Over 8 thru 11	0.016 (in) (0.41(mm)	0.020 (in) (0.51(mm)
Over 11 thru 24	0.016 (in) (0.41(mm)	0.024 (in) (0.61(mm)
Over 24 thru 36	0.020 (in) (0.51(mm)	0.032 (in) (0.81(mm)
>36	0.024 (in) (0.61(mm)	0.040 (in) (1.01(mm)

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