



Aluminium Jacketing with Exterior Clear Coat

with Polysurlyn Moisture Barrier

Description

Insu-W-Rapid Aluminium Jacketing with exterior clear coat is manufactured from alloy 3003 conforming to the ASTM B-209 designation with half hard temper (H14).

Insu-W-Rapid’s exterior clear coat jacketing has a durable acrylic clear paint for aesthetic beauty and corrosion protection. This special coating exhibits better resistance to oxidation and to the effects of various corrosive environments than mill aluminum. It resists water and fingerprint staining.

It is available in a smooth mill finish or a stucco embossed pattern, and can be supplied with 3/16” transverse corrugation or a 3/16” circumferential corrugation to add strength and enhance mechanical properties.

The painting systems enhance the emittance of the jacketing ($\epsilon \approx 0,5$).

A Polysurlyn Moisture Barrier on jacketing prevents moisture and corrosives in the insulation - which can cause galvanic, chemical and crevice* corrosion - from coming

into direct contact with the metal jacketing surface. Polysurlyn Moisture Barrier is factory laminated to the interior surface of the jacketing.

Polysurlyn Moisture Barrier is a co-extruded film of polyethylene and Surlyn® polymers with a total film thickness of 76 microns (3 mils). It exhibits a low water vapour transmission rate, virtually no pinholes. Polysurlyn Moisture Barrier does not decompose until 210°C, auto ignition temperature is above 315°C.

Applicable standard

ASTM B209 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate

ANSI H35.2 American National Standard Dimensional Tolerances for Aluminum Mill Products

ASTM C1729 Standard Specification for Aluminum Jacketing for Insulation

Available dimensions

Available in thicknesses ranging from 0.016" (0.4mm) to 0.050" (1.25 mm).

Standard widths are 36" (914mm), 1 meter and 48" (1219mm). Other widths available on special order, minimums apply.

Chemical composition

Chemical analysis	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others Each	Others Total	Al
% by weight	0,6	0,7	0,05-0,20	1,0-1,5			0,1		0,05	0,15	remainder

Limits are weight percent maximum values unless shown as a range or stated otherwise.

Mechanical properties

Temper	Rpo.2 min (N/mm ²)	Rpo.2 max (N/mm ²)	Rm min (N/mm ²)	Rm max (N/mm ²)	A50 min (%)	A50 (%)
Hx4	125	145	145	160	-	9
Hx6	150	165	170	180	-	6

Rpo.2 : Proof Stress 0.2% in N/mm²
 Rm : Ultimate Tensile Strength in N/mm²
 A50 : Elongation A50 in %

Tedlar®

Insu-W-Rapid BV can apply a grey Tedlar® films to the exterior surface of aluminium jacketing, as well as stainless steel. It is applied by bonding metal and Tedlar® film by means of permanent adhesives. The grey Tedlar® enhances the emissivity of the jacketing (>0,85), and blocks all of UV and visible light. It provides outstanding resistance against fading, cracking and corrosion. It is almost chemically inert and has excellent release properties.

Embossing

Material can be stucco embossed up to 1250 mm(w) and 1,5 mm thickness. Stucco embossing reduces glare and makes the metal less susceptible to finger print staining and reduces the appearance of scratches.

Profiling

The material can be profiled into corrugated sheets (e.g. 32x6 mm, 76x18 mm) or trapezoidal sheets (19x105,

35x207). Consult us for our range of profiles. 3/16" transverse and longitudinal corrugations, as well as micro-profiling, enhance strength, enabling the use of thinner base materials.

Cut to length and rolled

All Insu-W-Rapid BV Jacketing products can be cut to length to customer specification. Rolling to a specified diameter is also possible.

Special tempers

Special tempers, such as O, H12, H16, H24, etc. are available upon special request. Minimums may apply.

Packaging

Material supplied in coils or rolls. Coils packed on skids (eye to side) or pallets (eye to sky). Rolls packed eye to sky on pallets, or boxed per roll. Special packing available upon request.

**crevice corrosion:* a type of corrosion occurring on metal jacketing caused by differences in oxygen concentration in the electrolyte in adjacent regions of the material. These differences lead to a concentration cell and the region on the metal jacketing which is oxygen-starved is subject to corrosion.

Tedlar® and Surlyn® are DuPont Trade Marks.

IMPORTANT: Insu-W-Rapid BV warrants that each of its products will be manufactured in accordance with the specifications in effect on the date of manufacture. We make no other warranties and expressly disclaim any warranties of merchantability or fitness for a particular purpose. If a product fails to meet this limited warranty, purchaser's sole and exclusive remedy is replacement of the product or, at our option, refund of the purchase price. No guarantees for completeness, accuracy or results is expressed nor implied. The suitability of the product to an intended use is the sole responsibility of the user. Since material choice and application method are beyond our control, we accept no liability for direct or consequential damages.

Datasheet "Aluminium Jacketing with Exterior clear Coat with Polysurlyn Moisture Barrier" – April 2013 – V1.2