Datasheet

Stainless Steel T304 Jacketing

with Polysurlyn Moisture Barrier

Description

Stainless Steel Type 304 with factory applied Polysurlyn Moisture Barrier (PSMB) for insulation cladding, with a 2B finish for reduced glare.

Stainless Steel Type 304 exhibits excellent corrosion resistance and has a melting point of around 1450°C, which offers excellent fire protection.

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 A240	Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
ASTM A480/A480M	
EN 10088-1	Stainless steels - Part 1: List of stainless steels
EN 10088-2	Stainless steels - Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes
ASTM 1767	Standard Specification for Stainless Steel Jacketing for Insulation (Type 1, Grade 1, Class A)

Available dimensions

Available in thicknesses ranging from 0.010" (0.25 mm) to 0.032" (0.8 mm).
Standard widths are 36" (914mm), 1 meter and 48" (1219mm).
Other thicknesses and widths available on special order, minimums may apply.

Chemical composition

Chemical analysis % by weight	C	Mn	P	S	Si	Cr	Ni	Mo	N	Cu	Other elements
Type 304	0,08	2,00	0,045	0,03	0,75	18,0-20,0	8,00-10,5	…	0,01	…	…
Type 304L	0,03	2,00	0,045	0,03	0,75	18,0-20,0	8,00-12,0	…	0,01	…	…

Limits are weight percent maximum values unless shown as a range or stated otherwise. Iron (Fe) shall be determined arithmetically by difference of 100 minus the sum of the other specified elements.

Mechanical properties

Temper	Rp0.2 min (N/mm^2)	Rm min (N/mm^2)	A50 min (%)
Type 304	205	515	40
Type 304L	170	485	40

Rp0.2 : Proof Stress 0.2% in N/mm^2
Rm : Ultimate Tensile Strength in N/mm^2
A50 : Elongation A50 in %

Painting

A wide range of painting systems is available, such as acrylic, polyester and PvdF, either on the exterior surface
or both surfaces. Painting enhances the emissivity of the jacketing which is advantageous for cold insulation systems.

Tedlar®

Insu-W-Rapid BV can apply a grey Tedlar® films to the exterior surface of stainless steel jacketing, as well as aluminium. 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 0,5 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.

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.

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