



Lenzing Jacketing

Innovative cladding solutions!

www.lenzing-plastics.com

Lenzing
Plastics

The revolution of insulation cladding



Lenzing Plastics has developed a perfect solution for the cladding of insulated pipes, ducts, boilers, and equipment. A product that combines optimal physical properties, 100% water tightness and vapour barrier, resistance against climatic influences with appealing look and easy installation. This innovative jacketing system is the first product of its kind that is suitable for indoor and outdoor applications, in all climatic conditions.

Lenzing Jacketing is replacing costly and complex processible aluminium and stainless steel sheet facings and has already started to revolutionise the insulation industry worldwide.

Lenzing Jacketing, made of a unique and proprietary construction of several layers, is providing numerous advantages:

- Up to 50% installation time reduction leads to large installation cost savings.
- Lenzing Jacketing is easily installed with just a few simple tools.
- The light weight of Lenzing Jacketing grants easy transportation and handling on site.
- Lenzing Jacketing is saltwater resistant, food safe and highly resistant against chemicals.
- Mechanical tensions, impacts and further forces can be absorbed without deformation or damage due to the unique memory effect of Lenzing Jacketing.
- Lenzing Jacketing is available as a complete cladding system including fittings, accessories and tools.
- The high UV resistance and physical durability of Lenzing Jacketing is making it the perfect choice for any climatic conditions.

50% FASTER

Lenzing Jacketing can be installed up to 50% faster than metal cladding. This is giving insulation contractors and end users a considerable cost advantage.



What is Lenzing Jacketing?

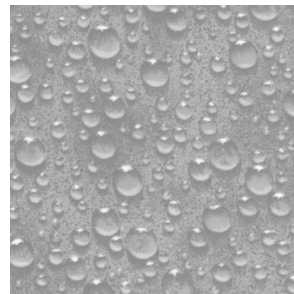
Lenzing Jacketing is a multi layer construction that consists of several laminates of plastic materials with an aluminium layer inside. This aluminium layer is acting as vapour barrier. The plastic layers give the construction the desired additional characteristics. The high tensile strength guarantees an excellent protection of the insulation against mechanical stress. This multi layer construction has a high stiffness and a very good recovery effect that avoids dents and wrinkles. An unique and patented cover layer gives the construction UV-light and weather resistance, it impedes the adherence of dirt and allows easy cleaning. These properties make Lenzing Jacketing the ideal choice for applications where appearance is important.

Recovery effect makes Lenzing Jacketing stay in good shape



100% water tight and vapour barrier

Lenzing Jacketing is 100% water tight. When installed properly by professionals, this new jacketing system guarantees zero water permeability and very low values of water vapour transmission. Independent test laboratories continuously check the quality of the product to ensure highest quality according to international standards. Water tightness and vapour permeability are the most important quality criteria for any jacketing system. Inhibiting water and water vapour from infiltrating the insulation guarantees optimal insulation characteristics and avoids corrosion of pipes, air ducts and equipments. A dry insulation is also the most important factor for a sustainable energy management.



Application and utilisation

Applications

- Indoor
- Outdoor
- Hot insulation
- Cold insulation



Typical utilisation:

- Construction industry
- Chemical & petrochemical industry
- HVAC
- Power plants
- Solar industry
- Food industry
- Shipbuilding/Offshore
- Pharmaceutical industry

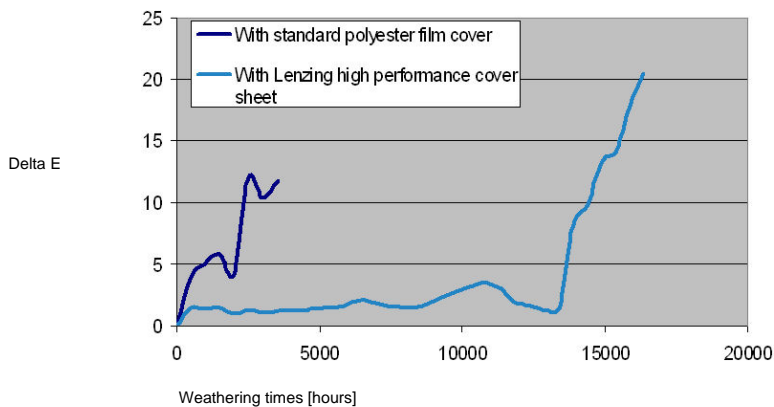


Issues with ordinary cladding materials

- Mechanical damages
- Leakages
- Infiltration of humidity and dirt
- Water condensation
- Corrosion
- Energy loss
- Costly maintenance and reconstruction



UV-irradiation with fluorescence lamp and water spray



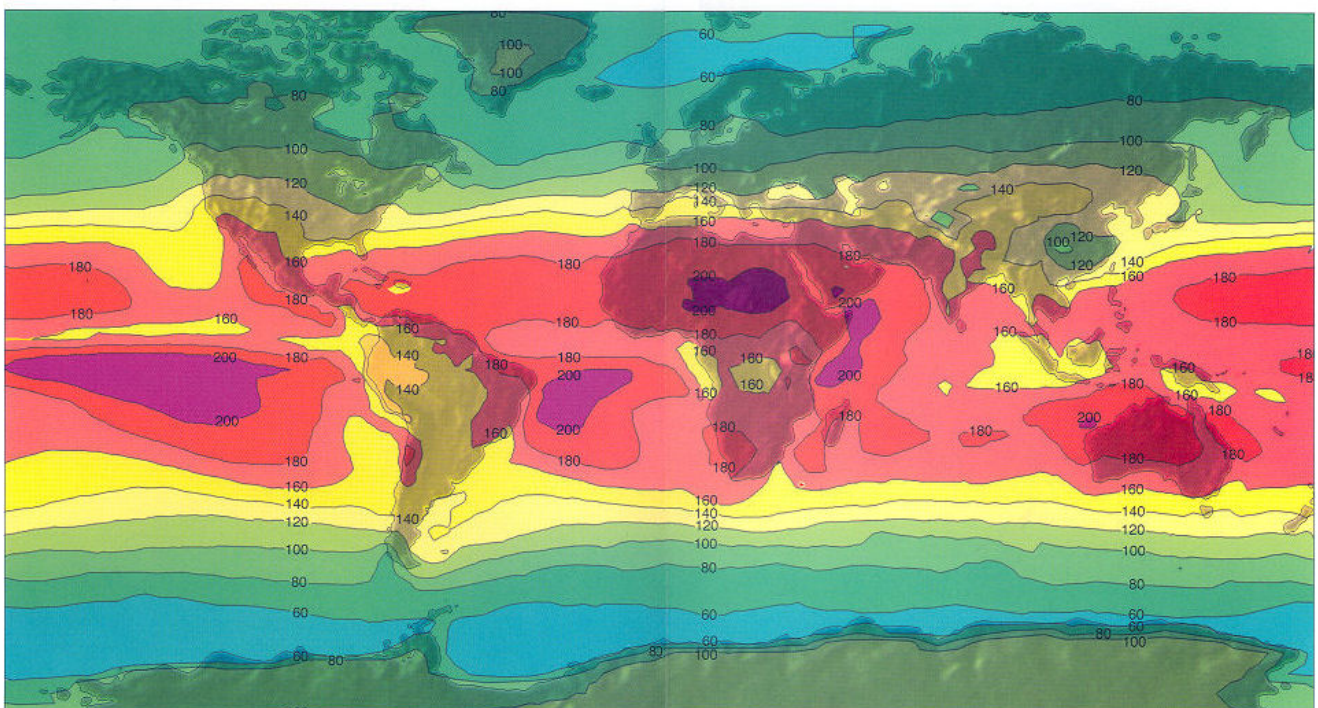
The durability of any plastic materials in outdoor applications mainly depends on the resistance of the construction against ultraviolet radiation. Without effective UV-protection the physical properties of any plastic materials change rather quickly during exposure to sunlight and the product will lose the desired characteristics.

Lenzing Jacketing is especially UV-protected. We cooperate with institutes who are worldwide leading in the field of UV-stabilisation of plastic materials. The Lenzing Jacketing system can be used for numerous years even in regions with glaring sunlight such as Australia, the Middle East or tropical areas. The global radiation that reaches the ground, depends on the geographic latitude, the average cloud cover and the humidity. Take a look at the map to see the level of average global radiation in your area. The UV-resistance of Lenzing Jacketing is constantly tested with Weather-O-Meter equipment. The samples are exposed to simulated sunlight for at least 15,000 hours, which equals estimated 15 years of outdoor application in an area with 100 kLangley/year.

kLangley World Map

1 kLangley = 1 kcal/cm² = 41.84 MJ/m²
1 kLangley/year = 1.33 W/m²

60 80 100 120 140 160 180 200 220 kLy/year

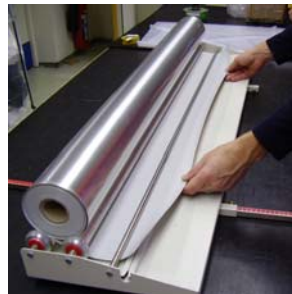


Installation

As a matter of fact the new Lenzing Jacketing system is very easy to install. Insulation contractors only need a few basic tools on the construction site to do all necessary tasks.

Step 1

A very useful tool is the "cutting table". The workman measures the circumference of the pipe, that has to be cladded and cuts the multi-layer compound at the desired length.



Step 2

The jacketing is wrapped around the pipe or attached on the boiler, air duct etc. and may easily be fixed on the insulation with a customary tacker or with plastic rivets. Special application tools for piercing and fixing of the rivets are available.



Step 3

Finally all joins have to be sealed with adhesive tapes which are made of the same material as the jacketing itself. Installed properly these tapes guarantee 100% water tightness and excellent vapour barrier characteristics of the jacketing.

(For detailed descriptions about handling and installation please refer to the Lenzing Jacketing user manual.)



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Various fittings for pipes, like elbows, tees, etc. enable easy installation. Special Lenzing Jacketing types for the common production of fittings are available as well.

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Standard types



Type	Curling Effect	Thickness	Temp. Range	Tensile Strength	Puncture Resistance d = 0.8 mm	Puncture Resistance d = 3.0 mm	WVTR Water Vapour Permeability	UV-Light Resistance Testing	Fire Testing						
		mm	°C	N/15 mm	N	N	g/m ² /24h		LOI %/O ₂ DIN 4102	BS 476 Part 6&7	ASTM E162-02a Radiant Panel Index	ASTM 662-03 Flaming Mode Ds = 4 mm	ASTM 662-03 Flaming Mode Ds = 1.5 mm	UL 94 V	ASTM E84 -10
524	Yes	0.35	-25 to +75	250 - 290	28	116	< 0.03	ISO 4892	35.5	Class 0	0.37	3	1	Class 1	10/50
528	No									Class 0	0.50	3	1	-	-
570	Yes	0.23	-25 to +75	175 - 200	23	87	< 0.03	ISO 4892	35.5						
573	No														
632	No	0.22	-40 to +120	970 - 1 200	45	170	< 0.03	ISO 4892	40.0	-	0.59	2	0	-	0/5
424	Yes														
428	No	0.33	-25 to +80	290 - 300	27	125	< 0.06	ISO 4892	29.0	Class 0	-	-	-	-	-

Chemical resistance

The surface of Lenzing Jacketing has a high chemical resistance. See following table or ask us for more detailed specifications:

Acids	Acetic acid (all concentrations)	resistant	Chlorinated hydrocarbons	Carbon tetrachloride	partially resistant	
	50% formic acid	resistant		Chlorinated biphenyls	partially resistant	
	10% hydrochloric acid	resistant		Chloroform	resistant	
	30% hydrochloric acid	partially resistant		Trichloroethylene	resistant	
	10% and 35% hydrofluoric acid	resistant		Esters	Ethyl acetate	resistant
	10% nitric acid	resistant			Hydrocarbons	Aliphatic hydrocarbons
	65% and 100% nitric acid	not resistant		Benzene		resistant
	30% and 85% phosphoric acid	resistant		Gasoline (petrol)		resistant
	20% sulphuric acid	partially resistant		Mineral oils		resistant
	sulphure dioxide gas, dry	resistant		Toluene		resistant
80% and above sulphuric acid	not resistant	Xylene	resistant			
Aldehydes	Acetaldehyde	resistant	Miscellaneous substances	Chlorine	resistant	
	Formaldehyde	resistant		Hydrogen peroxide	resistant	
Alcohols	Benzyl alcohol	partially resistant		Oxygen	resistant	
	Cyclohexanol	resistant		Water*	resistant	
	Ethyl alcohol	resistant		Acetone	resistant	
	Glycerine	resistant		Diethylether	resistant	
	Glycol	resistant		Nitrobenzene	not resistant	
	Isopropyl alcohol	resistant	Phenol	not resistant		
	Methyl alcohol	resistant	Salt solutions	Alkaline carbonates	resistant	
Aqueous alkaline solutions	Ammonium hydroxide	not resistant		Bichromates	resistant	
	Calcium hydroxide	partially resistant		Cyanides	resistant	
	Sodium hydroxide	not resistant		Fluorides	resistant	

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