

Atrium Heating Cassette - Environmental Declaration

The Product

This environmental product declaration refers to Atrium heating panels. Frenger's Atrium heating panels consist of painted aluminium strips with internal copper pipes that are connected to soldered-on copper pipe connections.

Atrium panels are used where hydronic heating is required. Frenger's products do not affect the environment negatively when in use. There are very little or no demonstrable chemical emissions from the product materials. Frenger's Atrium panels are maintenance free, apart from normal cleaning. The products have a technical life of at least 30 years.

Manufacturing

Atrium heating panels are manufactured from strips and end gables that are joined together mechanically (not welded). The copper flow/return pipe connections and internal manifold arrangements are soldered on. To provide structural integrity, cross brackets are attached to the panels, one per metre. When assembly is complete, the product is painted using an automated and re-circulated powder coating process. After painting, the back of the product is insulated with foil encased mineral wool insulation quilts. Then the product is packaged in cling wrap and is fitted with Styrofoam spacers, and is packed on a wooden pallet.

Materials included in a 4-metre heating panel, 600 wide.

				% by wt
Aluminium: End gables	Strips	GA 5050-02	3.75 Kg	28.4 %
		SS 4054-02	0.53 Kg	4.0 %
	Cross bracket	SS 4104-06	0.36 Kg	2.7 %
	End beam	SS 4007-14	3.20 Kg	24.2 %
Copper:	Strips	SS 5015-02	1.57 Kg	9.9 %
	Connection pipe	SS 5015-02	0.33 Kg	2.5 %
Solder:	Spelter solder (Sn97Ag3)	EN 29453	< 1.5 g	
	Hard solder (Cu90Ag10)		< 1.5 g	
Paint:	Powder coating	Epoxy-polyester	0.23 Kg	1.7 %
Insulation:	Mineral Wool Class 'O' foil	Mineral Wool	2.70 Kg	20.5 %
Packaging:	Cling wrap Styrofoam feet Polyethylene			
Suspension system:	Galvanised steel	SS 1312-00	0.40 Kg	3.0 %
	Aluminium	SS 4104-06	0.05 Kg	0.3 %
Fasteners:	Screws	Steel (PIAS)	< 40 g	
	Pop rivets	Aluminium	< 50 g	
	Other	Aluminium	0.10 Kg	0.8 %
Total:			13.2 Kg	

Recycling

When disposing of used products, it is possible to recycle most materials, with the exception of the Styrofoam packaging that must be incinerated for disposal. The principal material in the product is aluminium. Aluminium has a high degree of recyclability, as does copper and steel.

Recyclable material is 99.5%.