Corrosion Resistance

Breezway Technical Bulletin

Altair Louvers and Louver Window Systems are manufactured exclusively from corrosion-resistant materials. The following table lists the various materials used and their corrosion resistant properties.

Material	Used In	Corrosion Resistance Properties
Mill finish aluminum	Operating bars. Some processed edges.	6060-T5 Aluminum Corrosion resistance is excellent due to a thin surface layer of aluminium oxide that forms when the metal is exposed to air, effectively preventing further oxidation.
Powder coated aluminium	Channels. Surround Frames.	Powder coating is the technique of applying dry paint to a part. The part is then placed in an oven and the powder particles melt and coalesce to form a continuous film. Powder coating produces a high specification coating which is relatively hard, abrasion resistant (depending on the specification) and tough.
Clear Anodized Aluminum	Channels. Surround Frames.	Anodizing is an electrochemical process that thickens and toughens the naturally occurring protective oxide. The resulting finish, depending on the process, is the second hardest substance known to man, second only to diamond. The anodic coating is part of the metal, but has a porous structure which allows secondary infusions, (ie organic and inorganic colouring, lubricity aids, etc.)
304 Stainless Steel	Rivets. Handles. Handle to operating bar links.	Excellent resistance to corrosion in wide range of atmospheric environments and many corrosive media. Subject to pitting and crevice corrosion in warm chloride environments. Subject to stress corrosion cracking above 60C.
Acetal plastic	Handles. Bearings . Keylocks.	The acetal resins are among the strongest and stiffest of all thermoplastics, and are characterized by good fatigue life, low moisture sensitivity, high resistance to solvents and chemicals, and good electrical properties. UV stabilisers are added to improve resistance to UV degradation.
Polypropylene plastic	Clips.	Polypropylene is a thermoplastic material offering a combination of lightness, rigidity, toughness, heat resistance, chemical resistance and high surface gloss. UV stabilisers are added to improve resistance to UV degradation.

Sources of information:

http://www.anodising.org/specify.htm
http://www.anodising.org/whatis.htm
http://www.finishing.com/Library/pennisi/powder.html
http://www.azom.com/details.asp?ArticleID=965
http://en.wikipedia.org/wiki/Stainless_steel
http://www.ides.com/generics/Acetal.htm
http://www.pacia.org.au/_uploaditems/docs/3.polypropylene.pdf