



ALUMINIUM

Aluminium is a very common and extraordinarily versatile material. It can be transformed in a wide range of shapes and different finishes. Aluminium is a hard metal, flexible, impermeable, has a long life and it is 100% recyclable. The profiles of Emac® made of aluminium, are manufactured in two different alloys, 6063 y 1050A and are treated with lacquers and anodized with quality seals Qualicoat and Qualanod respectively. These profiles combine high mechanical performance with quality finishes in multiple colors available.

Technical Features

Ductility	High
Mechanical resistance	Good
Tensile strength	160-200 Mpa (N/mm ²) pure aluminium
Yield	110 N/mm ²
Limit break	150 N/mm ²
Shear resistance	117 MPa
Elastic modulus	69
Corrosion resistance	Very good
Density	2,7 g/cm ³
Fire resistance	M0 según UNE 23-727-90 Non combustible against thermal action
Linear expansion coefficient	23,5 * 10 ⁻⁶ m/mK
Recyclable	Yes

Applications

Aluminium is one of the more used metals to manufacture all over the world. It is present in many areas and in different forms. Sectors such as automotive, transport, packaging for food conservation or architecture and building, among others, are examples of the use of this material.

Emac® works with aluminium alloys. These alloys, 1050A and 6063, have high performance and are available in multiple possibilities of finishes. These profiles are manufactured by different processes such as extrusion, rolling or folding.

Emac® has a wide range of products made of aluminium: decorative listellos, stair nosing, scotias, edge protectors, etc. The excellent properties of aluminium, make it suitable to its application in any product of this range. They can be installed depending on the finish chosen, outdoors or indoors, wall or floor, always with excellent results and the maximum quality.

Surface finishes

Emac® offers different finishes to its products in a wide range of colors:

- *Anodized*: Is an electrochemical surface treatment in which aluminium is protected by a surface layer of alumina (aluminium oxide). The thickness of this layer determines the protection of the profile. The anodizing, increases the resistance to abrasion and corrosion of aluminium and provides color through dye processes. The anodized profiles of Emac® are manufactured by processes certified with the quality seal Qualanod, which regulate the tests applied to the profile. The anodized finishes of Emac® are available in different colors, original textures or decorative patterns with or without crystals.





- *Lacquering*: Lacquering consists on the application of lacquer on the surface of the profile. It can be applied as powder coating, electrically charged with opposite sign to the support, melting and polymerizing in furnace. The lacquered of the profiles of Emac® is certified by the quality seal Qualicoat, which guarantee the quality of the processes and the final products. Emac® offers in its catalog a wide range of laquered. with surprising colors such as choral nacre, life green, mineral white...



- *Technology of microbial control*: This finish belongs to the range of sanitary and health solutions of Emac®. It is a specific covering which protects the profile against harmful microorganisms such as fungi, molds, yeasts and bacteria. It's ideal for installations with requirements of high control of bacteria (hospitals, nursery, etc.) and for the home environment. It is available in antibacterial colors white and metallized.

- *Natural*: the natural finish is the common silver of aluminium. Natural aluminium, despite having a protective natural layer on the surface, is chemically more vulnerable than the rest of the finishes offered in the Emac®'s catalogue, which improve notably its protection. This material can suffer from color change in humid or outdoor environments. It has no additional protection against corrosion and is more easily scratched. We recommend protecting natural aluminium by using varnishes or specific paintings to improve its appearance and properties. It is not recommended to install natural aluminium without additional protection in humid or saline environments.

Cleaning and maintenance

Cleaning must be done periodically with a soft cloth. If you use a neutral liquid cleaner, you must rinse the profile with cold water and dry to remove excess moisture. If dirtiness persists, clean the profile with a solution with clean water and detergent or neutral soap 5%, brushing with a cloth that has no particles that could scratch the finish. Ensure the lacquered surface is totally cold (maximum 20°C) before the cleaning.

Steel wool, abrasive cleaners, souring products as well as strong acids (hydrochloric and perchloric), strong bases (caustic soda or ammonia) or carbonated solutions are not recommended. Citric acid is neither recommended because dissolves the protective layer of the surface of aluminium. Waxes, petrolatum, lanolin or similar substances are not appropriate. Solvents containing haloalkanes (hydrofluoroether and chlorinated solvents) and curing accelerators containing chlorides should not be used (use special accelerators free of chlorides).

Links

- www.wikipedia.org
- www.instaladoresdealuminio.es
- www.aluminio.org
- www.eaa.net
- www.emac.es

Technical information

You can find out more information about the technical features of Emac®'s products by downloading their Technical Files from www.emac.es

If you have any query please contact our Technical Department in tecnico@emac.es