

LUSTRE

technical specifications

GENERAL DESCRIPTION

The sheets are made of polymethylmethacrylate (PMMA) obtained by casting from pure monomers synthesis. The material is an acrylic glass, organic, thermoplastic, with high transparency and clarity. It shows a very good resistance to weathering and sunlight (UV rays) and is easy to work with all wood machinery. It's also a suitable material to be worked and shaped at high temperature. As wood, also the PMMA is a material low grade fuel, with a reduced emission of smoke, and has an operating temperature up to approx. 80 ° C.

THE WORKING

CUTTING

The straight cut is performed with a circular saw with widia teeth for a possible multiple panels cut . Any overheating creates internal stresses in the material that can generate micro cracks (grazing) when you submit the article to subsequent mechanical stress in installation, or contact with no suitable chemicals , as a result of a deterioration or even a break of it.

DRILLING

The drilling is done with straight or tapered drills HSS, HSS.

THERMOFORMING

It is a process to be performed at the temperature most suitable to the mold and the object to be carried out between 130 ° C and 160 ° C for an average time of about 3-4 min for each mm of thickness. The behavior of the material is isotropic with a heat shrinkage maximum of 2% in all directions. The sheet can then be reworked hot.

The thermoforming may occur by simply lay the sheet on the mold, in this way it can create the desired forms. It can also work with actions of depression through the creation of vacuum or, on the contrary, under pressure of blowing air: in these cases the "stretching" of the mechanical sheet can create variations in thickness, which does not depend on the original quality of the sheet.

The subsequent cooling process of the thermoforming is continued until the slab will gradually reach at least 60 ° C. Thermoforming, does not alter some original properties (transparency, resistance to weathering and sunlight, mechanical properties, surface characteristics), but it can produce on certain colours, tonal variations that depend on the colour, the temperature reached and the time stay at that temperature.

For these reasons, a preliminary test is needed by the end user who has to assess the possibility to perform such work, for this the company declines any responsibilities and the supplier can not guarantee the quality and consistency of the final result.

PLANING AND GRINDING

The planing is needed to make the surface smoother, remove the surface residues caused by the cutting operations, ensuring a good degree of finishing and balance.

The sanding is an operation that is performed with a sanding machine and is useful for smoothing / finishing of a surface making it homogeneous and balanced.

Two steps:

- A first with a coarse paper, to calibrate and make a homogeneous surface of the sheet.
- A second for a fine sanding that removes the marks left by the previous step.

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POLISHING

To polish use soft no-abrasive felts and polish like for car-refinishing speed of 900-1200 revolutions / min working without excessive pressure to avoid overheating and consequent "burning". Any imperfections more pronounced can be removed by a sanding process.

MANIPULATION

The edge of the sheets is often sharp, it is recommended to use gloves when handling.

The sheets should be stored with protection film preferably in local to room temperature and at low humidity and in vertical position / angle of 80 °. The sheets should not be exposed to sunlight, which may further deform the excessive heat.

It's important not to stack the pallets to avoid excessive pressure drop which would alter the flatness.

The movement of the material to be taken with lots of care and make sure the protective film remains intact, thus avoiding scratching the sheet. The outdoor storage may compromise the flatness for excess heat; once the protective film is damaged it may be difficult its removal for any machining operations.

WASTE

The treatment of the waste have no significant environmental problems.

It is a recyclable material with cracking at a very high temperature cracking that allow the regeneration of the monomer. If the waste will not be recycle removes as special waste (code EWC 02.01.04) to be granted by authorized companies.