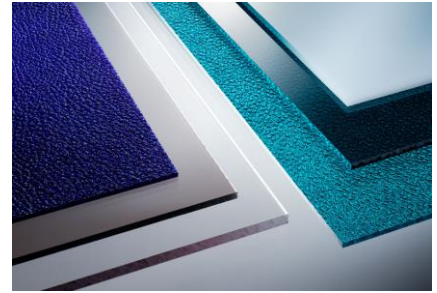


marlon fs

Guillotining & Punching



Guillotining

Marlon polycarbonate flat sheet can be guillotined up to approximately 4mm thick. The success of this type of cutting will depend to a very large degree upon the condition of the guillotine blade and block. Any damage or nicks will be transferred to the polycarbonate edge and can lead to stress concentrations and failure of the sheet.

The finished edge can be rough especially on thicker sheet and depending on the application this may need to be scraped, planed or polished to provide a satisfactory edge.

Normal safety considerations will apply including the use of eye protection and gloves.

Punching

Punching is a technique usually used for cutting multiple holes and apertures (circular shaped or rounded) in thin or medium thickness.

Marlon polycarbonate sheets up to 3 mm thick are easy to cut and punch, the thicker the sheet, the poorer the quality of the cut is likely to be, and the greater the risk of cracking. Good results can be obtained using a sharp shearing tool with a wedge angle of max. 45°, with clearance between the tool and the cutting surface of 0.01 to 0.03 mm.

Allowance must be made for shrinkage. The hole should be 1.5 x hole diameter larger than actually required. Good results are obtained using symmetrically ground shearing tools.

For punching/cutting Marlon FS/FSX sheets that are more than 1.5 mm thick, asymmetrically ground blades will be adequate. To achieve right angles, use blades ground on one side with a wedge angle of 30°.

The punching process involves a shearing action with a guillotine or a punch which tends to leave a roughly cut surface. This surface often contains micro-cracks which may lead to premature failure. This technique is not recommended for sheets with a thickness higher than 1.5mm if smooth edges are required.

Although, these techniques are used, they are not recommended since they either induce unnecessary stress on the finished part or result in a poor surface finish.



Brett Martin Ltd. pursues a policy of continuous product development and reserves the right to amend specifications without notice.

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