External Use of rigid foam PVC flat sheet

Sunlight is the element with greatest influence on the performance of foam PVC sheet materials outdoors. This influence is exerted in three ways: changing the temperature; creating thermal movement; degradation of the surface.

Surface degradation, indicated by colour change or “yellowing”, is slightly influenced by heat: UV radiation from sunlight can have a much greater effect.

Changing temperatures result in thermal movement. When mounting and fixing this movement must not be inhibited: recommendations for mounting and fixing are given in the Foamalux Product Guide. The darker the surface colour the faster and greater is the rise in temperature and thermal movement.

The worst installation situation for all foam PVC sheet brands is South-facing, so subject to maximum direct sunshine, therefore maximum UV radiation. The exposed white or coloured sheet surface could discolour in a few weeks or months depending on the season. In North-facing, or permanently shaded situations where there is no exposure to direct sunshine colour change could be gradual over a period of years.

If the surface is not exposed, but covered with a UV opaque ink or laminate then degradation will be at a much reduced rate even in direct sunlight. There is virtually no degradation in internal applications, except close to heat sources or applications fitted close behind glass subject to sunlight, where excessive temperatures can be reached.

The above applies to the Foamalux range as this family of products have several similar material and surface characteristics. When the black recycled core of Foamalux Xtra is exposed to UV radiation it can fade to grey depending on exposure conditions.

Greater resistance to UV degradation, again depending on the orientation to sunlight, is obtained by using Foamalux Ultra with its UV-inhibited gloss surface. This is the preferred choice for external applications where several years of service are achievable.

All Brett Martin Ltd foam PVC sheets have a closed cell structure: water is not absorbed so does not degrade the sheet. Frost in itself does not damage the sheet, but all PVCs become more susceptible to damage from impact as temperatures fall.