



Service Life of SWG Grades on External
Exposure

Technical Service Laboratory Report

“PERSPEX”®: SERVICE LIFE OF SWG GRADES ON EXTERNAL EXPOSURE

“Perspex”® SWG is high molecular weight cast, cross-linked acrylic sheet. SWG grades are suitable for exterior use. In addition to the inherently good UV and weathering properties of cast acrylic, these grades are UV stabilised, are coloured with light stable pigments, and consequently have excellent UV resistance and weathering properties.

Long term exposure tests, accelerated weathering tests, and long experience of the product, all indicate that the expected service life of “Perspex”® SWG in exterior applications will be in excess of ten years, when exposed to the sun continuously. Longer service life will be obtained with units that are partially shaded, and much longer for units that receive no direct sunlight.

“Service life” means that period in which colour changes that may occur are sufficiently small as to remain unnoticed by a casual observer.

In addition, the rigidity of “Perspex”® will remain substantially unchanged in service. This means that the elastic modulus of a sample cut from a section of “Perspex”® will not be less than 2500 Mpa as delivered and for a period of ten years after delivery. (Test method: ISO 178 measured on specimens removed from the exposed “Perspex”® installation.)

“Perspex”® will suffer no unacceptable changes in brittleness. This means that the tensile strength as delivered and for a period of ten years after delivery of a sample cut from a section of “Perspex”® will not be less than 50 Mpa. (Test method: ISO R527 measured on specimens removed from the exposed “Perspex”®.)

The Light transmission for clear “Perspex”® will not fall below 85%. (Test method: ASTM D 1003 when measured using a cleaned and polished flat sample of 1mm thickness taken from the exposed sheet.)

Provided that the “Perspex”® and the articles made from it, has been stored, handled, fabricated, and installed, to acceptable standards, and was not subject to harm from chemical agents, solvents, unsuitable sealants or decorative material.