



Jämförelse mellan olika optiska material

Polycarbonate

Pros

Tough and can withstand severe impact
High resistance for high temperature and good flame spread characteristics ‘
(normally UL 94 HB but can obtain V0 rated versions)

Cons

Poor optical standard
Imperfections such as black/white specs, scratches, etc.
On uncoated surfaces will scratch very easily even with the softest of cloths.
Poor solvent resistance
Surface can have ridges caused by the extrusion process
Optical transmission lower than acrylic, ADC and glass

Acrylic

Pros

Available in many colours and tints.
Relatively good optical standard.
Cast acrylic has flat surfaces.
Better abrasion and solvent resistance than polycarbonate but not as good as a coated surface. (uncoated surfaces still need to be handled carefully)

Cons

Still requires coating if abrasion resistance is important.
Is not as tough as polycarbonate and will break under severe impact
Softening and forming temperature at about 100 C

Cast Allyl Carbonate (ADC)

Pros

Very good optical standard
Abrasion and solvent resistant in its own right and therefore does not require hard coating
Can be cast with matt surfaces removing the requirement for coating
can be tinted in many different colours
High operational temperatures (over 100 C)
Light transmission close to optical glass
Resistant to pitting from hot metal sparks

Cons

Not as impact resistant as polycarbonate
Does not have a UL fire rating (although if tested will pass at 94 HB as acrylic)