

## Re: Sourcing an Acrylic / Plexiglas / Perspex / PMMA adhesive

**Source:** <http://sci.tech-archive.net/Archive/sci.materials/2005-01/0120.html>

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grant wrote:

- > *I am currently trying to source an acrylic adhesive that fulfils the*
- > *following requirements, and I would appreciate any product*
- > *suggestions.*
- > *Thanks*
- > *Grant*
- >
- >
- > *Requirements:*
- >
- > *1/ Must be structural, very high strength*
- > *2/ Must be gap filling*
- > *3/ Must be clear after setting (no colouration, no bubbles released*
- > *from solvent evaporation)*
- > *4/ Must be unaffected by long term UV or Sunlight*
- > *5/ Must be permanently submersible in water (fresh and sea water)*
- > *6/ UV setting adhesives cannot be used due to nature of the join*
- > *7/ Must not give off extremely noxious vapours on setting*
- > *8/ Must be distributed in Europe*
- > *9/ Easily dispensed would be appreciated*
- >
- >
- > *The product is intended to bond cast, extruded and formed acrylic*
- > *together in a high-pressure, load bearing application. The intention*
- > *is*
- > *to anneal the acrylic either before bonding or after. (Annealing and*
- > *setting the adhesive at the same time – I would be interested to know*
- > *some opinions on doing this together)*
- >
- >
- > *I have currently tested some products, specific polymer adhesives*
- > *more*
- > *than general adhesives. I have tested:*
- >
- > *IPS Weld-On #16 – seemed to fulfil the requirements except for the*

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- > *bubbles released from the solvent. I have tried cooling the*
- > *solvent-based adhesives to 5deg °C before use to limit the bubbles*
- > *formed, but the result was still unsatisfactory.*
- >
- > *IPS Weld-On #40/42 – has a yellow colour tinge.*
- >
- > *A 'self-mixed' adhesive of Bostik Extrufix with acrylic cuttings*
- > *added to form a paste – seemed to fulfil the requirements except for*
- > *the bubbles released from the solvent.*
- >
- > *Bostik Tensol #3 – From the specification it seemed this would fulfil*
- > *the requirements perfectly, however in use it gives of the most*
- noxious
- > *vapours.*

You need a solvent-free, two component system, try an epoxy. Google for source, there are many compounders.–Jitney