

# OP 4036

## Fast Cure Optically Clear Silicone Potting Firm Gel

Typical Properties			
Property	Unit	Value	Test Method
Color / Component Par A and B		Transparent Water Clear	Visual
Density (mixed)	Gram /cc	0.98	ASTM D792
Mixing Ratio	Vol / wt	1 : 1	
Viscosity at 25°C (mixed)	cP.s	4,900	ASTM D2196
Property as Cured			
Color		Optically Clear	Visual
Hardness	Shore A	40	ASTM D2240
Refractive Index, 589 nm	n <sub>D</sub> (25 °C)	1.41	ASTM D542
% Transmittance	360 nm to 1000 nm	97% to 99%	ASTD D1003
Tensile Strength	Mpa	4.8	ASTM D638
Elongation	%	140	ASTM D638
Dielectric Constant	@100Hz	2.5	ASTM D150
Dissipation Factor	@100 Hz	< 0.003	ASTM D150
Dielectric Strength	Volt/mil AC	> 480	ASTM D149
Volume Resistivity	Ohm-cm	> 10E+14	ASTM D257
Coefficient of Thermal Expansion	ppm/°C	270	IPC-TM-650
Tg	°C	-120	TGA
Useful Temperature Range	°C	-55 to 200	TGA
Shelf Life	Month	6 @ < 25°C	Viscosity double
Cure Profile			
Cure at 125°C	Minutes	5	Durometer
Cure at 80°C	Minutes	10	Durometer
Cure at 25°C	Hours	4	Durometer
Pot / Work Life at 25°C (After Mix Part A and B)	Minutes	30	Viscosity double

These figures are only intended as a guide and should not be used in preparing specifications.

### Processing Instruction

**Important!** OP4036 is platinum cure system. Please keep applied surface / housing clean and avoid using this material on any place that contains sulfur, amine, phosphorous, organo-metals, acid, etc. because these contaminants could inhibit the cure the material. Please let the compound thoroughly thaw after taking it out from freezer. This typically needs half to one hour depending on the size of container.

We recommend running preliminary tests to optimize conditions for the particular application. Comprehensive processing instructions can be obtained by contacting directly to United Adhesives Inc.

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose. For technical, quality, or product safety questions, please contact directly to United Adhesives Inc.

### Characteristics

OP4036 is a two-part water clear potting gel. It is a flowable, addition-curing, silicone that cures fast at elevated temperature to a very firm optically clear rubbery gel for casting or injection molding of high performance optical components. It also cures in room temperature. It has non-corrosive and self-priming adhesion to various substrates. It stays thermo-optically stable with heat and UV exposure and will not yellowing over time. OP4036 can be automated to dispense from pails with auto mixing & dispensing pump or hand extruded from 50cc or 200cc dual cartridge using dispensing gun with a mixing tube and a plunger.

### Special Features and Benefits

- Optically clear firm gel
- Non-yellowing and thermo-optically stable
- Two component and ready to apply
- Room temperature curable
- Fast cure at elevated temperature
- Very soft for stress compliance
- Excellent dielectric properties
- Mechanical shock and vibration damping
- Low outgassing and minimal volatile
- Broad range of temperature stability

### Typical Applications

- Pot / encapsulate optical parts
- Coat various opt-electronic components
- LED, solar or other optical applications
- Seal lids, covers, housings, connectors
- Vibration dampening
- Thermal stress coupling

### Storage

OP4036 has a shelf life of at least 6 months when stored at < 5°C freezer in the originally sealed container. Storage beyond the date specified does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

### Safety information

OP4036 silicone contains neither toxic nor corrosive substances that might require special handling precautions. General hygiene regulations should be observed. Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from United Adhesives Inc.