

# OP 4035

## Optically Clear Silicone Potting Firm Gel

| Typical Properties                            |                        |                         |                  |
|---|------------------------|-------------------------|------------------|
| Property                                      | Unit                   | Value                   | Test Method      |
| Color / Component                             |                        | Transparent Water Clear | Visual           |
| Density                                       | Gram /cc               | 0.98                    | ASTM D792        |
| Viscosity at 25°C                             | cP.s                   | 4,600                   | ASTM D2196       |
| Property as Cured                             |                        |                         |                  |
| Color   |                        | Optically Clear         | Visual           |
| Hardness                                      | Shore A                | 35                      | 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                    | 4.2                     | ASTM D638        |
| Elongation                                    | %                      | 160                     | 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                 | 280                     | IPC-TM-650       |
| Tg  | °C                     | -120                    | TGA              |
| Useful Temperature Range                      | °C                     | -55 to 200              | TGA              |
| Shelf Life                                    | Month                  | 6@ < 5°C                | Viscosity double |
| Cure Profile                                  |                        |                         |                  |
| Cure at 125°C                                 | Minutes                | 20                      | DSC              |
| Cure at 80°C                                  | Hours                  | 1.5                     | Durometer        |
| Cure at 65°C                                  | Hours                  | 2 to 3                  | Durometer        |
| Pot / Work Life at 25°C (in closed container) | Week                   | > 1                     | Viscosity double |

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

### Processing Instruction

**Important!** OP4035 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.

### Storage

OP4035 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

OP4035 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.

### Characteristics

OP4035 is a one-part water clear potting gel. It is a flowable, addition-curing, silicone that cures at elevated temperature to a very firm optically clear rubbery gel for casting or injection molding of high performance optical components. 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. OP4035 can be automated to dispense from pails or hand extruded from syringe.

### Special Features and Benefits

- Optically clear firm gel
- Non-yellowing and thermo-optically stable
- One component and ready to apply
- 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

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.