

# + Innovalene® 4365 Chemical Resistant Transparent Peristaltic Pump Tubing

The 4365 series is a transparent hose specially designed for transporting various chemical reagents, using thermoplastic elastomer materials. Good resistance to various corrosive liquids is guaranteed by a special formula, and can be used for conventional peristaltic pumps. With low gas permeability, 65A hardness is suitable for peristaltic pumps. Good resistance to acids, bases, ketones, alcohol chemicals. Does not contain any plasticizers, pure and recyclable. Prepared through special processing technology, it has a smooth inner surface, reduces hanging liquid and microbial residues, and avoids cross-contamination. With a wide range of certifications, it can be widely used in various industrial, food, chemical and laboratory fields.

Adopt precision extrusion process, strictly control the dimensional tolerance, and can customize the cutting length. It can also be used for secondary treatment processes such as bonding buckle, flaring, coding, laser etching, etc., and customized production.



\*Other calibers, lengths or packing methods can be customized

## + Innovalene® 4365 Product Specification

### Peristaltic Pump Tubing

|                                       |                                                                                                                                                                                                                                                                      |                         |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| <b>Feature</b>                        | Thermoplastic elastomer                                                                                                                                                                                                                                              |                         |
|                                       | <ul style="list-style-type: none"> <li>• Colorless and transparent</li> <li>• Chemical resistance, resistant to grease, fuel, etc.</li> <li>• Can be used with peristaltic pump</li> <li>• No plasticizer</li> <li>• Comply with RoHS and REACH standards</li> </ul> |                         |
| <b>Caution</b>                        | <ul style="list-style-type: none"> <li>• Avoid folding</li> <li>• Avoid high temperature</li> </ul>                                                                                                                                                                  |                         |
| <b>Material</b>                       | • Thermoplastic elastomer                                                                                                                                                                                                                                            |                         |
| <b>Operating temperature range</b>    | -73 °C to +93C                                                                                                                                                                                                                                                       |                         |
| <b>Physical properties</b>            | Color                                                                                                                                                                                                                                                                | Colorless & transparent |
|                                       | Shore A Hardness ASTM D 2240                                                                                                                                                                                                                                         | 65A                     |
|                                       | Density ASTM D792                                                                                                                                                                                                                                                    | 0.86 g/cm3              |
|                                       | Tensile Strength at Break ASTM D 412                                                                                                                                                                                                                                 | 6.20 MPa                |
|                                       | Tensile Elongation ASTM D 412                                                                                                                                                                                                                                        | 1000 %                  |
|                                       | Tear Strength ASTM D 1004-94                                                                                                                                                                                                                                         | 34 kN/m                 |
|                                       | Permanent Compression Set 70°C 22Hrs ASTM D 395                                                                                                                                                                                                                      | 25 %                    |
| <b>Regulations and Certifications</b> | FDA, RoHS, REACH                                                                                                                                                                                                                                                     |                         |
| <b>Sterilization</b>                  | ETO ethylene oxide sterilized single time<br>25kGy irradiation sterilization single time                                                                                                                                                                             |                         |
| <b>Gas permeability rate</b>          | $\frac{\text{CO}_2 \text{ 1140 Gas volume [cm}^3\text{] x wall thickness [mm]}}{\text{O}_2 \text{ 76 Inner Diameter Sectional Area [cm}^2\text{] x Time [sec]}} \times 10^{-10}$ $\text{N}_2 \text{ 190 x Pressure drop along pipe wall [cm Hg]}$                    |                         |
| <b>Odor</b>                           | none                                                                                                                                                                                                                                                                 |                         |
| <b>Toxicity</b>                       | none                                                                                                                                                                                                                                                                 |                         |
| <b>Theoretical service life</b>       | at 0 bar life                                                                                                                                                                                                                                                        | 500 hrs                 |
|                                       | at 0.7 bar                                                                                                                                                                                                                                                           | 200 hrs                 |

| Cat. No.           | Model       | ID<br>(mm) (inch) | OD<br>(mm) (inch) | Wall Thickness<br>(mm) (inch) | Per Package Length*<br>(m) (foot) |
|--------------------|-------------|-------------------|-------------------|-------------------------------|-----------------------------------|
| L436-201-0050-0150 | Metric size | 0.50              | 1.50              | 0.50                          | 15.2 50                           |
| L436-201-0079-0397 | 13#         | 0.79 1/32         | 3.97 5/32         | 1.59 1/16                     | 15.2 50                           |
| L436-201-0100-0200 | Metric size | 1.00              | 2.00              | 0.50                          | 15.2 50                           |
| L436-201-0150-0250 | Metric size | 1.50              | 2.50              | 0.50                          | 15.2 50                           |
| L436-201-0100-0300 | Metric size | 1.00              | 3.00              | 1.00                          | 15.2 50                           |
| L436-201-0159-0318 |             | 1.59 1/16         | 3.18 1/8          | 0.79 1/32                     | 15.2 50                           |
| L436-201-0159-0476 | 14#         | 1.59 1/16         | 4.76 3/16         | 1.59 1/16                     | 15.2 50                           |
| L436-201-0159-0635 | 119#        | 1.59 1/16         | 6.35 1/4          | 2.38 3/32                     | 15.2 50                           |
| L436-201-0200-0400 | Metric size | 2.00              | 4.00              | 1.00                          | 15.2 50                           |
| L436-201-0238-0556 | 19#         | 2.38 3/32         | 5.56 7/32         | 1.59 1/16                     | 15.2 50                           |
| L436-201-0300-0500 | Metric size | 3.00              | 5.00              | 1.00                          | 15.2 50                           |
| L436-201-0318-0476 |             | 3.18 1/8          | 4.76 3/16         | 0.79 1/32                     | 15.2 50                           |
| L436-201-0318-0635 | 16#         | 3.18 1/8          | 6.35 1/4          | 1.59 1/16                     | 15.2 50                           |
| L436-201-0318-0794 | 120#        | 3.18 1/8          | 7.94 5/16         | 2.38 3/32                     | 15.2 50                           |
| L436-201-0397-0714 |             | 3.97 5/32         | 7.14 9/32         | 1.59 1/16                     | 15.2 50                           |
| L436-201-0476-0794 | 25#         | 4.76 3/16         | 7.94 5/16         | 1.59 1/16                     | 15.2 50                           |
| L436-201-0476-0953 | 15#         | 4.76 3/16         | 9.53 3/8          | 2.38 3/32                     | 15.2 50                           |
| L436-201-0635-0953 | 17#         | 6.35 1/4          | 9.53 3/8          | 1.59 1/16                     | 15.2 50                           |
| L436-201-0635-1111 | 24#         | 6.35 1/4          | 11.11 7/16        | 2.38 3/32                     | 15.2 50                           |
| L436-201-0635-1270 | 26#         | 6.34 1/4          | 12.70 1/2         | 3.18 1/8                      | 15.2 50                           |
| L436-201-0794-1111 | 18#         | 7.94 5/16         | 11.11 7/16        | 1.59 1/16                     | 15.2 50                           |
| L436-201-0794-1270 | 35#         | 7.94 5/16         | 12.70 1/2         | 2.38 3/32                     | 15.2 50                           |
| L436-201-0953-1270 | 96#         | 9.53 3/8          | 12.70 1/2         | 1.59 1/16                     | 15.2 50                           |
| L436-201-0953-1429 | 36#         | 9.53 3/8          | 14.29 9/16        | 2.38 3/32                     | 15.2 50                           |
| L436-201-0953-1588 | 73#         | 9.53 3/8          | 15.88 5/8         | 3.18 1/8                      | 15.2 50                           |
| L436-201-1111-1429 |             | 11.11 7/16        | 14.29 9/16        | 1.59 1/16                     | 15.2 50                           |
| L436-201-1270-1588 |             | 12.70 1/2         | 15.88 5/8         | 1.59 1/16                     | 15.2 50                           |
| L436-201-1270-1905 | 82#         | 12.70 1/2         | 19.05 3/4         | 3.18 1/8                      | 15.2 50                           |
| L436-201-1270-2223 | 88#         | 12.70 1/2         | 22.23 7/8         | 4.76 3/16                     | 15.2 50                           |
| L436-201-1588-2064 |             | 15.88 5/8         | 20.64 13/16       | 2.38 3/32                     | 15.2 50                           |
| L436-101-1588-2223 | 184#        | 15.88 5/8         | 22.23 7/8         | 3.18 1/8                      | 7.62 25                           |
| L436-101-1588-2540 | 89#         | 15.88 5/8         | 25.4 1            | 4.76 3/16                     | 7.62 25                           |
| L436-101-1905-2540 |             | 19.05 3/4         | 25.4 1            | 3.18 1/8                      | 7.62 25                           |
| L436-101-1905-2858 | 191#        | 19.05 3/4         | 28.58 1-1/8       | 4.76 3/16                     | 7.62 25                           |
| L436-101-1905-3175 | 91#         | 19.05 3/4         | 31.75 1-1/4       | 6.35 1/4                      | 7.62 25                           |
| L436-101-2540-3175 |             | 25.40 1           | 31.75 1-1/4       | 3.18 1/8                      | 7.62 25                           |
| L436-101-2540-3493 | 92#         | 25.40 1           | 34.93 1-3/8       | 4.76 3/16                     | 7.62 25                           |
| L436-101-2540-3810 |             | 25.40 1           | 38.10 1-1/2       | 6.35 1/4                      | 7.62 25                           |