# Standard Silicone Sealing Mat v Solvent Resistant Mat for U-2D System - Tech Information

*Date: 9-APRIL-2019  Last Updated: 1-FEBRUARY-2026*

Standard silicone pre-slit sealing mats are formulated for compatibility with pure aqueous solutions and buffer systems only. Silicone rubber performs well in these environments, maintaining its elasticity, sealing integrity, and chemical stability during typical plate-based workflows. For applications involving standard biological samples, enzyme assays, or general laboratory buffers, the standard silicone mat is the appropriate choice.

For workflows that require exposure to polar organic solvents, a solvent-resistant sealing mat is recommended. These mats are engineered to withstand common LC/MS-related solvent mixtures such as:

- Methanol
- Acetonitrile
- Water or buffer/organic solvent blends

The solvent-resistant formulation maintains its structural integrity and prevents swelling, degradation, or leaching when used with these polar solvents—conditions under which standard silicone mats would not perform reliably.

However, the solvent-resistant mats **should not** be used with:

- Non-polar solvents (e.g., hexane, toluene)
- Highly aggressive acids or bases

These chemicals can compromise the material and lead to seal failure, cross-contamination risk, or chemical absorption into the mat.

In summary, selecting the correct mat ensures optimal chemical compatibility, maintains data integrity, and extends the usable life of the sealing material within automated or manual workflow environments.

*U-2D Silicone Mats Product Page*

**MicroSolv Technology Corporation**
9158 Industrial Blvd. NE, Leland, NC 28451
Tel: (732) 380-8900
Fax: (910) 769-9435
Email: customers@mtc-usa.com
Website: www.mtc-usa.com