



FINGERPRINT™ Polyethylene Resins for Microirrigation Tubing and Drip Tape

Precision Fertigation Systems for Modern Agriculture



Microirrigation systems are used to help transport water to crops and landscapes in areas that lack sufficient moisture to maintain healthy plants. And, because microirrigation systems supply water and nutrients directly to root systems, they offer a more efficient alternative to flood and sprinkler irrigation.

With microirrigation:

- **Water use can be reduced by up to 50 percent compared to conventional irrigation methods.**⁽¹⁾ Since microirrigation tubing or tape is typically on the ground (or even in the ground), it delivers water to the exact spot it is needed. As a result, less water is lost to evaporation and runoff.
- **Crop quality and yields can be increased.** Properly installed and maintained microirrigation systems help support plants and crops in receiving the right amount of water. Over-watering is a frequent cause of disease and poor crop yield.
- **Fertigation and chemigation** are possible using chemically resistant tubing and tape, delivering nutrients precisely to plants while protecting system integrity and maximizing the value of high-cost fertilizers.
- **Less pressure is required.** That means less energy is used compared to other, higher-pressure irrigation systems.
- **Less labor and maintenance are required.** Properly installed microirrigation systems can be much easier to operate and maintain than other systems (including center pivots), and the opportunity for fertigation can increase operational efficiency even further.
- **Recent advancements in AI-powered monitoring and smart irrigation systems** have allowed microirrigation to become even more precise, leading to optimized water usage.

Engineered Resin Performance for Long-Lasting Microirrigation Systems

[FINGERPRINT™ Polyethylene Resins](#) help manufacturers produce microirrigation tubing and tape designed for durability and consistent performance.

In addition to helping improve the performance of microirrigation tubing and tape in the field, FINGERPRINT™ Resins offer great processing characteristics to manufacturers including:

- Long life expectancy
- Leak, crack, burst, tear, and puncture resistance
- More responsible water management
- Lower system costs

LLDPE and MDPE Resins for Microirrigation Performance Requirements

FINGERPRINT™ Resins feature specific characteristics suitable for microirrigation applications in both agricultural and landscaping systems:

[FINGERPRINT™ DFDA-7510 NT Polyethylene Resin:](#)

- A linear low density polyethylene (LLDPE) resin used to produce microirrigation tubing for orchards, vineyards, and landscaping

⁽¹⁾ Source: U.S. Environmental Protection Agency (EPA)



- Combines:
 - Environmental stress crack resistance (ESCR), weather resistance, and burst strength
 - Consistency and extrusion characteristics
 - Flexibility for easy roll-out

FINGERPRINT™ DFDC-7525 NT Polyethylene Resin:

- A medium density polyethylene (MDPE) resin used to produce microirrigation tape for a broad range of specialty row crops
- Features:
 - Drawdown characteristics and high tensile strength
 - Stress crack resistance
 - Burst strength and puncture resistance
- Gel quality control provides reliable balance of extrudability and toughness with blends of alternative materials

Polyethylene Resins That Support Efficient Water Use

Dow is committed to offering products that contribute to responsible water management and conservation. FINGERPRINT™ Resins are one way Dow is working to seek answers for issues faced by our larger human family, such as sustainable water supplies.

Dow also offers resins suitable for injection molded fittings and drippers, compatibilizers for recycled materials, and elastomers for enhanced flexibility.

Learn More About FINGERPRINT™ Polyethylene Resins

For more information, please visit www.dow.com or contact your Dow representative.

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