Food-Grade Foam Control



OUR DIFFERENCE

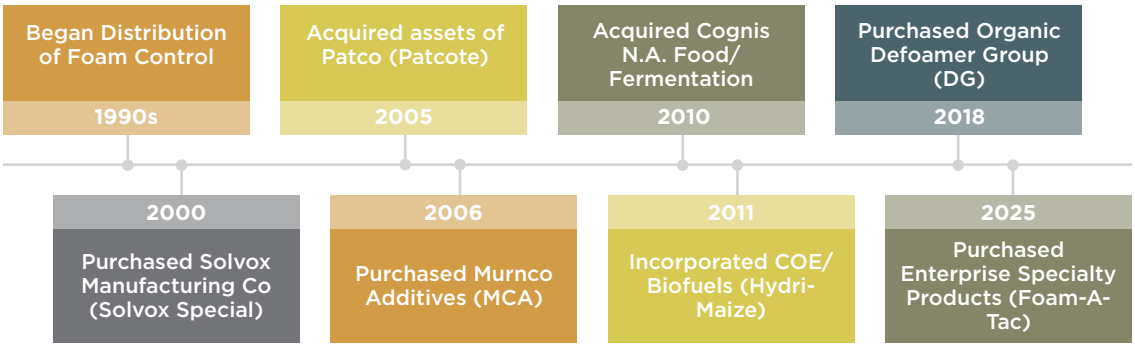
Reliable, Food-Contact Compliant Foam Control

Hydrite's food-grade foam control portfolio offers a broad range of defoamer and antifoam technologies designed to meet the diverse needs of food and beverage processing applications. The portfolio includes both silicone and non-silicone formulations, allowing customers to select the optimal chemistry based on process conditions, downstream sensitivity, and regulatory requirements.

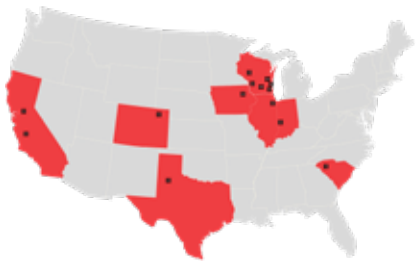
Hydrite foam control products are developed with a strong focus on food-contact compliance, supporting applicable FDA, non-GMO, kosher, halal, & GRAS needs while being suitable for use across a wide range of applications including fermentation, protein, dairy, beverage, produce wash, and CIP systems. This breadth of offerings enables reliable foam control while maintaining product safety, process efficiency, and regulatory confidence.

A History of Innovation

For decades Hydrite has strategically grown its foam control portfolio through targeted acquisitions, expanding expertise, technologies, and solutions to better serve our customers. The roadmap below highlights key milestones in our journey to become a comprehensive supplier.



Today, Hydrite's primary foam control manufacturing takes place in **Milwaukee, WI**, and **Laurens, SC**. Strategically located manufacturing sites enable us to efficiently serve customers throughout North America.



Foam Control 101

Why Does Foam Form?

Foam is created when air or gas becomes trapped in a liquid. Naturally occurring compounds such as surfactants can stabilize the bubble surface, making foam persistent and difficult to break down.

While foam may seem harmless, excessive foam can:

- Reduce process efficiency
- Cause overflow and housekeeping issues
- Interfere with mixing, pumping, and filling operations
- Increase downtime and maintenance costs
- Create safety concerns for operators

How Do Defoamers Work?

Defoamers are specially designed to destabilize foam bubbles. After entering the bubble surface, they spread across the foam film, thin the liquid layer, and promote drainage until the bubble ruptures and collapses. The process relies on creating a surface tension imbalance that disrupts the foam's stability.

The Result

Effective foam control helps maintain smooth operations, improve productivity, protect equipment, and support consistent product quality.







Foam Stabilization

Surfactants stabilize air bubbles and create a tough foam layer that prevents bubbles from breaking.

Defoamer Action

Hydrite defoamer droplets enter the foam film and spread across the surface, disrupting the stability of the bubble.

Foam Collapse

The foam film things, ruptures, and releases trapped air, leaving a clear liquid surface.



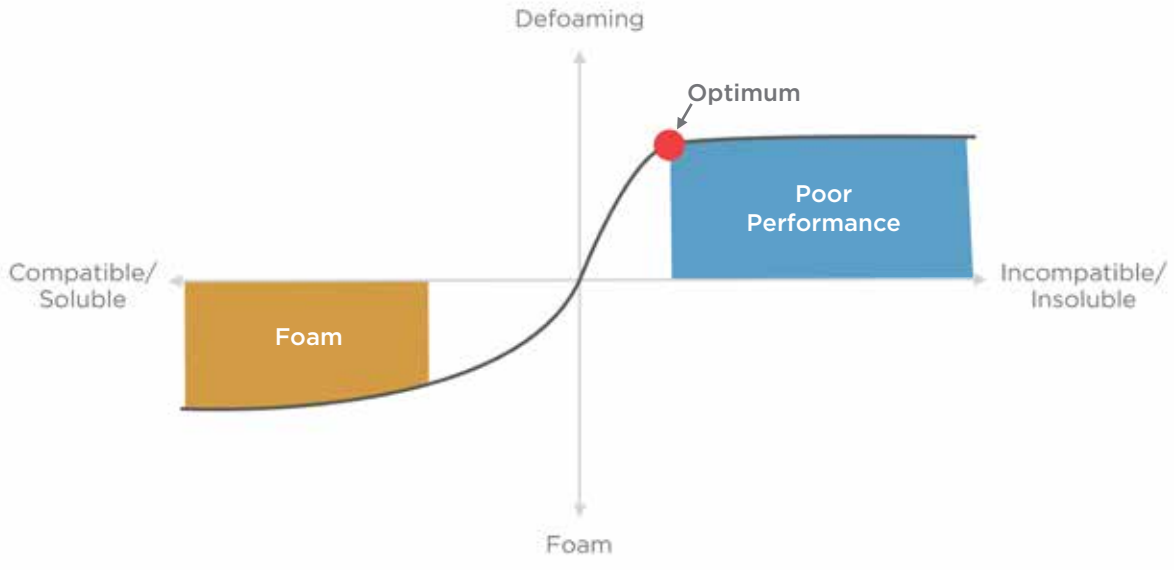
Chemistry Selection

Hydrite places strong emphasis on chemistry selection, offering silicone-based, oil-based, glycol-based, synthetic, and hybrid technologies. Different raw materials provide different foam-breaking mechanisms, spread rates, and persistence. Food processors are encouraged to match chemistry type to their system rather than using a one-size-fits-all product.

Foam Control Technologies

- Silicones
- Silicone Emulsions
- Fatty Alcohol Emulsions
- Mineral Oil Dispersions
- Synthetic Chemistries
- Hybrid Products

Correlation Between Defoamer Incompatibility & Defoaming Efficiency



Regulatory

Regulatory compliance is a foundational component of Hydrite's food-grade foam control solutions. Food-grade antifoam and defoamer products are formulated for direct or indirect food contact, as applicable, and are supported by labeling and documentation aligned with FDA and global food processing regulations. Certifications such as kosher and halal further support customer requirements across a wide range of applications and markets.

Hydrite's foam control products are manufactured in ISO-certified facilities and produced in alignment with current Good Manufacturing Practices (cGMP), reinforcing quality, traceability, and manufacturing consistency. This regulatory rigor allows customers to confidently integrate Hydrite solutions into food processing operations, meet audit and compliance expectations, and select foam control products based on verified regulatory fit rather than secondary qualification.

Confidence in Compliance

- **Direct vs. indirect food contact suitability,** depending on formulation and application
- **Manufactured in ISO certified facilities** with quality management systems in place
- **Aligned with cGMP principles** for food ingredient production
- **Kosher and Halal certified** options available
- **Non GMO / organic compliant formulations**, where applicable
- **GRAS compliant ingredients** suitable for animal feed applications
- **Designed for specific food categories**, including:
    - Dairy processing
    - Sugar and sweetener production
    - Potato and vegetable processing
    - Produce washing and preparation

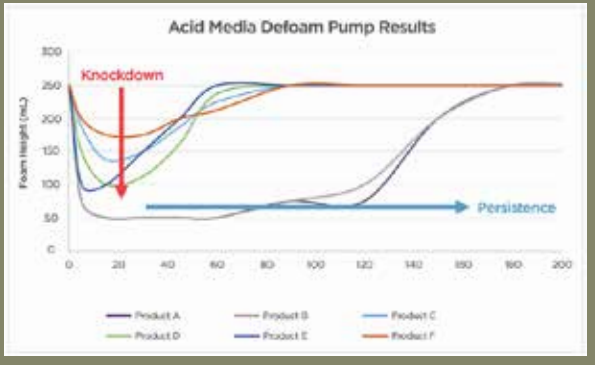


Application Support, Testing & Cost Optimization

Foam control at Hydrite goes beyond product selection. Customers benefit from on-site support, lab testing, and application-specific recommendations designed to optimize performance, minimize use rates, and reduce total operating costs, providing the right solution for each process.

Selection Criteria

- Recommended use levels (ppm ranges)
- Ability to dilute or customize formulations
- Lab or field testing availability
- Total cost of ownership vs. unit cost





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The Hydrite Advantage:
Technical Expertise
Manufacturing Capabilities and Flexibility
Quality Products
Innovative Solutions

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