DEAERATOR TECHNOLOGIES FOR MOLDED FIBER APPLICATIONS

Optimizing Performance Through Temperature-Matched Chemistry

OVERVIEW

Efficient air removal is essential in molded fiber and paper-based manufacturing processes. Dissolved and entrained air can disrupt fiber bonding, drainage, and forming consistency—leading to production losses, sheet defects, and reduced strength. Deaerator technologies are designed to minimize these issues by enabling consistent wet-end operation and cleaner system performance.

TEMPERATURE MATTERS

It is important to note that all deaerators perform differently at different temperatures. Selecting a formulation optimized for the specific operating temperature range of your system is critical to achieving consistent results.

- **Low-temperature systems (<40°C):** require faster-acting, high-dispersibility formulations.
- **Moderate to high-temperature systems (50°C+):** benefit from persistent, stable emulsions that maintain activity through extended dwell times.

PERFORMANCE ADVANTAGES

- Enhanced deaeration and foam control across the system
- Improved drainage and fiber mat formation
- Increased molded part strength and consistency
- Reduced downtime and cleaner operation
- Compatibility with most sizing and additive programs

APPLICATION GUIDANCE

Deaerator dosage and addition points should be optimized through trial under actual mill conditions. Typical addition areas include the fiber recovery, thick stock, or vacuum water systems. Best results are obtained when the product is added early to allow full air release before forming.

BEST PRACTICES

- Maintain product within its recommended temperature range.
- Avoid over-mixing or high-shear pumps that can reintroduce air.
- Periodically review system temperature and flow changes to ensure continued compatibility.

SUMMARY

Choosing the right deaerator for your operating temperature can significantly enhance process stability, product quality, and efficiency. Tailored chemistry delivers measurable value in molded fiber manufacturing—helping producers achieve higher yield, lower costs, and more consistent product performance.