A Beer Stabilizer Engineered to Improve Brewing Productivity and Sustainability Goals

Today, environmental concerns combined with the demand for higher productivity are placing greater pressures on the brewing industry. Major brewers have made sustainability commitments to reduce the amount of water used in the brewing process, minimize solid wastes, lower CO2 emissions, and reduce their overall environmental footprint. Addressing the demands for greater productivity and improved sustainability, without impacting product yield and quality, can present a significant challenge. Grace has developed the New DARACLAR® 9000HP silica to provide several productivity and environmental benefits for a competitive edge in beer stabilization.

DARACLAR® 9000HP Silica Helps Achieve the Following Key Benefits:

- **Environmental**
  - Decreased water usage during filtration CIP cycles
  - Reduced DE required for filtration and clarification
  - Create less spent filter cake

- **Productivity**
  - De-bottlenecked filtration step
  - Additional capacity without CAPEX
  - Lower beer extract losses
  - Reduce total operating costs

- **Food Safety**
  - Lower risk of leachable metals
  - Reduced risks associated with handling materials containing free crystalline silica

New Solutions to Address Today's Challenges

The brewing industry continues to face new opportunities and challenges. The key challenge for every brewer today is how to reduce environmental impact and enhance productivity without compromising on safety and quality of the beer produced. DARACLAR® 9000HP silica helps brewers in every corner of the world achieve their productivity and environmental goals by specifically delivering incremental filtration throughput and water reduction during filtration CIP cycles per hectoliter of produced beer.

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**Productivity: Throughput +139%**

- **Beer Throughput**
  - Std XG: 2000 hl beer/cycle
  - DARACLAR® 9000HP: 6000 hl beer/cycle

**Sustainability: CIP Cycles -58.2%**

- **Water Used/hl beer (l/hl)**
  - Std XG: 0.04 l/hl
  - DARACLAR® 9000HP: 0.02 l/hl

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Grace has been innovating beer stabilization technologies for over 40 years. With manufacturing facilities in Brazil, Malaysia, Germany and the United States, we are well established to support your global needs, and are focused on delivering solutions to meet your specific challenges. The New DARAACLAR® 9000HP silica can help brewers to reduce water and waste management costs while contributing to minimize carbon footprint.

To learn about how a single brewer achieved his productivity and sustainability goals by implementing DARAACLAR® 9000HP, into his brewing process, download the case study and watch our video at grace.com/beer.

Grace is a leading global supplier of catalysts, engineered and packaging materials, specialty construction and building materials. The company’s three industry leading business segments, Grace Catalyst Technologies, Grace Materials Technologies and Grace Construction Products, provide innovative products, technologies and services that enhance the quality of life.

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Cycle length may be limited by use of either too much or too little filter aide (rapid increase of ∆P). DARAACLAR® 9000HP helps to improve cake permeability at lower DE dosages thus enabling longer filtration cycles.