KEBO Specialty Chemicals

Less foam.
Lower consumption.
Lower costs.
Better performance.

How **KEBOSPUM PP** optimizes potato processing.

A practical report for decision makers in technology and purchasing.

In industrial potato processing, an imperceptible disruptive factor can have major consequences: **Foaming.**

This business study demonstrates that the right defoamer solution **reduces costs** and **ensures process stability** while **preventing energy losses.**

Defoamer use in potato processing during the production of French fries.

The requirement

Optimal foam control across all process steps.

In the industrial processing of potatoes into French fries, the interplay of plant-based ingredients, intensive water flow and air supply regularly leads to the formation of foam.

Especially soluble proteins, oligosaccharides, and other surface-active substances from the potato reduce the surface tension of the water and promote the formation of stable foam caps.

These foam-forming mechanisms occur independently of the specific process stage – they always follow the same physico-chemical principles:

- **Release of plant substances (e.g., during crushing or heating)**
- **Contact with water and air (e.g., during rinsing or conveying processes)**
- **Accumulation of dissolved substances through water reuse**

Relevant processes with typical foam formation:

Washing facilities	Cutting facilities
Blanching facilities	Transport and supply water
Packaging facilities with water circulation	CIP cleaning systems

Therefore, the targeted use of a high-performance defoamer is essential to keep processes stable, hygienic, and economical.

The solution

Fighting foam systematically with a precise, high-performance, and reliable solution.

KEBOSPUM PP

Special defoamer for the potato and starch industry.

Effective even at low temperatures of 10–40 °C, perfectly matched to the typical process conditions.

- **Targeted destruction & long-lasting prevention of foaming**

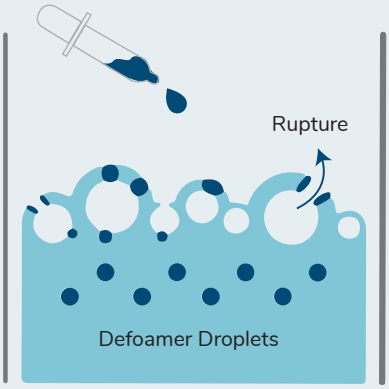
  Works effectively against foam caused by plant components such as proteins, starch, and extracellular oligosaccharides.

- **Rapid foam destabilization**

  Specially designed active ingredients tailored to the potato processing process destabilize the foam lamella. They effectively destroy the existing foam (foam knock-down) and prevent it from re-emerging (foam hold-down).

- **Effective stability – for smooth processes and consistent product quality**

  Ensures constant process conditions and prevents quality fluctuations during the washing, cutting, blanching, and cooking steps in industrial potato processing.



HALAL CONTROL

Ideal for the reliable control of foam: without compromising on food safety and process stability.

Practice

speaks for itself.

A **potato processor** with an annual output of approximately 200,000 tons of raw potatoes produces frozen products such as French fries, hash browns, and croquettes. The different varieties – Agria, Fontane, Lady Amarilla, and Romina – are processed in batches, and they may react differently to foam formation.

Dosing systems: 16 automatic dosing points, further dosing manually, depending on the actual amount of foam.

Production process and foam formation.

Foaming occurs at several points along the processing chain, in particular due to the release of plant components (starch, proteins, and oligosaccharides).

Two main areas are affected:

1. Potato washing

Potato pre-washing from approx. 20°C to 30°C room temperature

- Cause of foaming: Dirt, starch, and proteins are already released during the pre-washing of the potatoes.
- Technical framework: Pre-washing at 30°C with water treatment in the cycle.
- Washing drum throughput: 40 t/h
- Water is treated internally and returned

2. Potato processing

Cutting, draining, and blanching

Cause of foam: intensive cell disintegration during cutting and thermal disintegration during blanching processes; the released starch and proteins form stable foam.

Process areas for the use of a defoamer:

- Washing drum (20°C)
- Cutting systems (approx. 30°C)
- Two-step blanching process (up to 80°C)
- Two water transport systems (30°C)

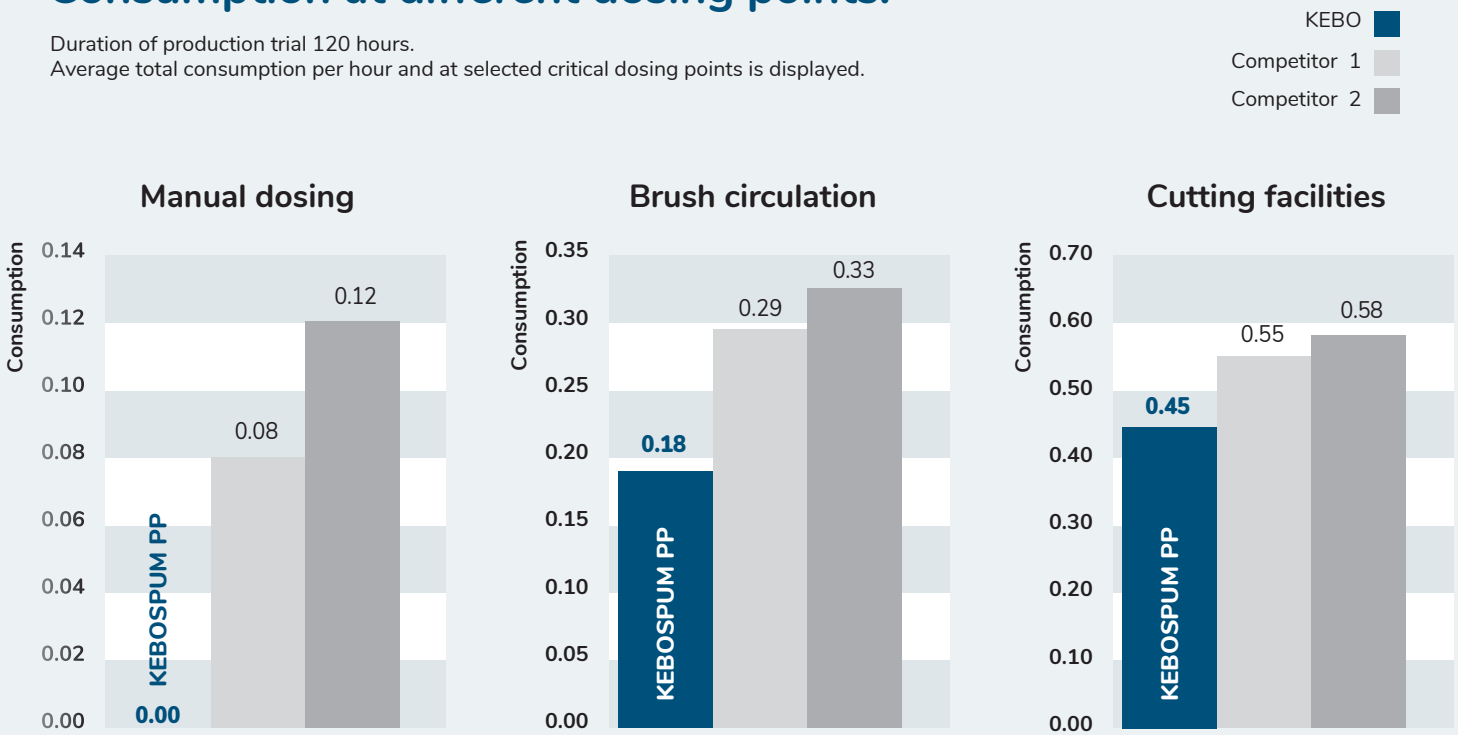
The figures

Process stabilization made measurable.

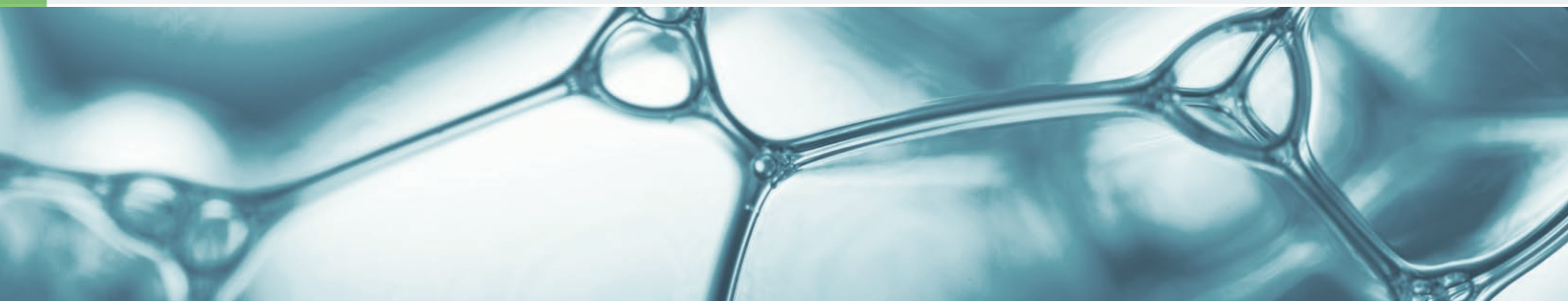
The following overview shows the results during the field trial and changeover.

Consumption at different dosing points:

Duration of production trial 120 hours.
Average total consumption per hour and at selected critical dosing points is displayed.



By switching to **KEBOSPUM PP, costs can be reduced, production interruptions avoided,** and **more efficient processing** realized!



Conclusion

Practice shows the effect.
KEBOSPUM PP ensures control over the process.

Using KEBOSPUM PP in potato processing confirms:

Targeted foam reduction in critical process areas – e.g., in washing drums, cutting systems, or blanching units – not only improves process stability but also reduces chemical consumption and operating costs.

- **Up to 40% less defoamer consumption** compared to the customary products on the market
- **Reliable foam degradation** even in sensitive areas such as the water meter
- **Optimized management of water and chemicals** efficient dosing option
- **Less manual additional dosing** – more predictability and reliability in operation

The combination of coordinated cleaning and dosing technology results in a **stable production process,** even when working with different potato varieties and varying starch loads.

KEBO stands for application- and solution-oriented process support with proven products.

Whether pre-washing, cutting, or blanching:

We think in a process-oriented way always with you in mind.

Visit our website

and find out more

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