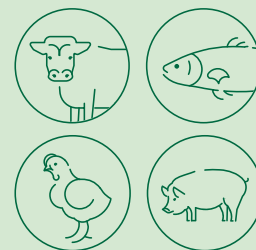


EASTMAN

Animal nutrition



Eastman Keitex™ 131L

hygiene enhancer for feed raw materials

At Eastman, we continuously strive to protect feed against *Salmonella* while also maintaining the lowest product application rate. We seek to provide performance with only one application, which helps us create cost-effective solutions for our customers. This resulted in the innovative Eastman Keitex™ 131L.

Keitex 131L is a high-performance feed hygiene enhancer from Eastman. It is formulated with carefully selected, single esterified acids. It effectively controls *Salmonella* and other harmful microbes in high-risk feed materials, including soy, rapeseed, sunflower and cereals. It is proven to significantly reduce *Salmonella* levels, improving feed hygiene and shelf life and ensuring feed safety and quality.



Key benefits

Effective pathogen control: Combats *Salmonella* in feed materials, demonstrating significant 3 log reduction efficacy against *Salmonella* spp. contamination

Highly concentrated: Contains 93% active ingredients in a nearly water-free liquid solution, maximizing efficiency

Versatile applications: Effective against gram-negative and gram-positive bacteria, ensuring comprehensive hygiene across various feed materials

Flexibility: Can be applied for both post-contamination and preventive applications to reliably protect feed quality

Ensures the continuity of your operations: Use of Eastman Keitex 131L in feed materials helps you ensure safer feed supply and reduce disruptions, sanitation issues and storage costs

Supports animal health: Maintains the nutritional quality of feed

Key technical features

Synergistic formula: Combines selected esterified and single fatty acids, including formic acid, for targeted and cost-effective pathogen control

Lower metal corrosion: Exhibits a more than 80% lower corrosion rate than traditional acid blends, prolonging equipment life

Surface tension benefits: Provides proven superior surface tension benefits, improving distribution through the feed material and enhancing application effectiveness

Proven efficacy

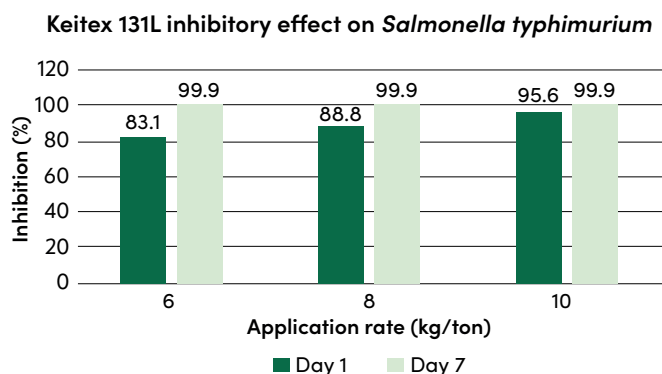
Keitex 131L inhibitory effect on *Salmonella typhimurium*

Study facts

- Rapeseed meal, heat-treated and inoculated with 6 log *S. typhimurium*

Conclusion

- The inhibitory effect on *Salmonella* was > 99.9% (> 3 log reduction) for all application rates at day 7 in this recontamination test; a clear dose and time response were observed, with > 80% reduction at 6 kg/ton after 1 day.



Corrosion rate of carbon steel under different conditions

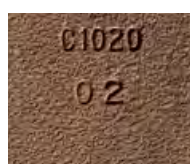
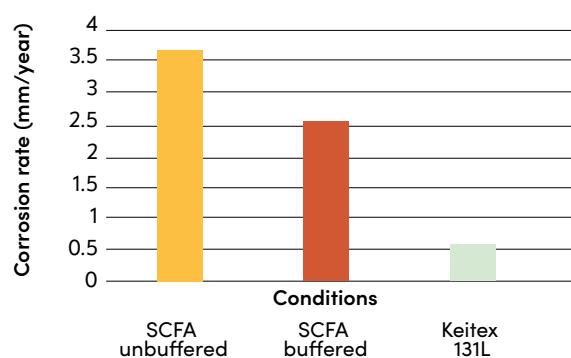
Study facts

- **Tested materials:** Short-chain fatty acids (SCFA) unbuffered, SCFA buffered and Keitex 131L

Conclusion

- Keitex 131L significantly reduces the corrosion rate of carbon steel compared to both unbuffered and buffered SCFA conditions.

Corrosion rate of carbon steel under different conditions



30% reduction in corrosion

>80% reduction in corrosion

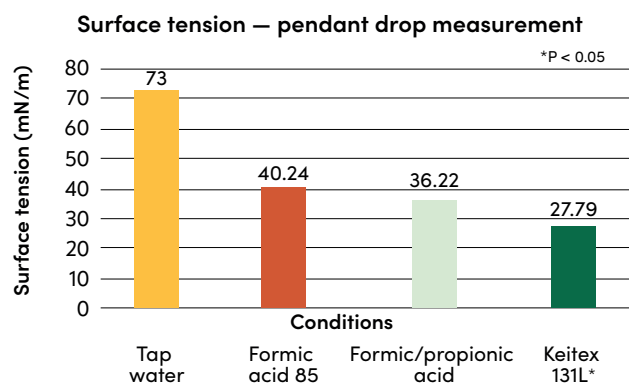
Surface tension of Keitex 131L

Study facts

- **Tested materials:** Tap water, formic acid 85, formic/propionic acid and Keitex 131L
- **Surface tension measurements:** Pendant drop method and contact angle method

Conclusion

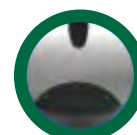
- Keitex 131L exhibits the best surface-tension result in both the pendant drop measurement and the contact angle method. This ensures:
 - **Excellent spread and coverage:** Homogeneous distribution on the feeds
 - **Consistent and even application**
 - **High-efficacy performance:** Superior surface tension produces uniform spread and consistent coating of feed, enhancing contact with the active agent and supporting the zero-*Salmonella* target



Tap water, 108°



Formic acid, 83°



Keitex 131L, 59°

Enhance your feed hygiene

Choose Keitex 131L for proven pathogen control, increased productivity and safer production.

Scan the QR code to contact an Eastman representative for more information.

