

Under the VinylPlus sustainability program Baerlocher's Ca-based stabilisers set new industry standards

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When Joerg Froehlich set out to reinvent the one-pack PVC stabiliser for window profile extrusion, the Baerlocher technical product manager knew he faced a rough road ahead.

“With Baeropan Ca/Zn TX melt pastilles we developed new concepts for a new era of lead-free stabilisation,” Froehlich says. “Industry has gone from heavy metal to eco-friendly products in the last 10 years.”

But industry was at first reluctant to make the shift. “In the past, lead products were offered as easy-to-use melt products besides powders and compressed granules,” he says. Lead-free calcium-based melt products were difficult to scale up from lab to production, “because you had to heat them up to 120 Celsius, and you had the risk of cross-reaction or unwanted side-reactions between the ingredients.”

“It was sometimes trial and error, sometimes controlled screening,” Froehlich notes. It took up to 5 years to develop, “small-scale in the lab, then larger trials in a pilot plant. In the meantime, we sampled customers and got feedback. The exciting step came when we succeeded in the first successful plant trials.”

Years in the making, the new one-pack arrived at the right time.

“We saw regulations coming,” Froehlich says. “Therefore our industry started a voluntary commitment, Vinyl 2010, then Vinyl Plus, committing to a total phase-out of Pb by the end of 2015.”

Baeropan TX is designed without colour boosting co-stabilizers which could react with water treatment chemicals in the cooling system. That eliminates reddish brown-coloured deposits in the extrusion tooling and improves the working environment.

“The development of Baeropan TX was driven by the main aspect of our company's mission,” Froehlich explains. “In order to help our customers to ensure their competitiveness, we always strive to support them to optimise their existing production processes and to anticipate future challenges.”

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