

Breakthrough Technology for 'Impossible to Mold' Materials to Provide Extreme Thermal

A red circular logo with the white text "X2F" inside.

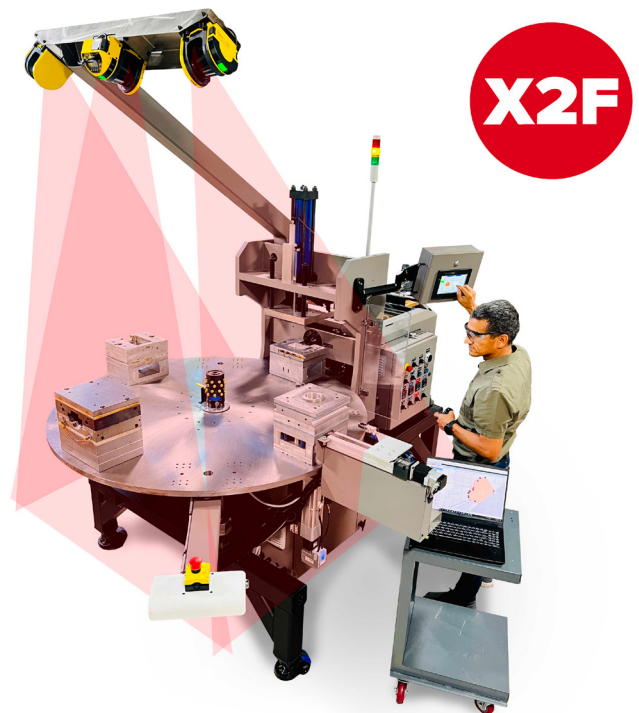
Denver, Colorado, November 7, 2022

Krayden is proud to announce that we have joined into a partnership with [X2F](#). X2F offers a groundbreaking molding technology that provides step change improvement in thermal properties for protecting critical electronics and batteries. X2F can uniquely process and mold highly filled materials that are "impossible to mold" today with conventional approaches and deliver 10-20X higher thermal conductivity. The technology provides a superior approach to potting and conformal coating when more thermal management is needed, which can improve performance of the end products significantly.

In their recent collaboration with [Covestro](#), X2F launched a thermally conductive polycarbonate heat-sink that was 49% lighter and less expensive than traditional cast aluminum versions for automotive lighting applications. Additionally, the X2F technology was able to mold in the electronic board, which is not possible with other approaches, and eliminates fasteners & thermal pastes to dramatically streamline production.

X2F's ability to mold thermally conductive materials has applications far beyond heat sinks. Thermal management is critical for superior performance in batteries, motors, and printed circuit board applications. With this partnership, Krayden and X2F can offer industry leading materials with best-in-class molding technology.

The X2F technology uses a patented approach called Controlled Viscosity Molding (CVM) to consistently deliver challenging materials to the mold cavity and over electronic components at low pressure. CVM conducts electrically generated heat to the resin to bring it to a known viscosity without shearing. X2F's extruders are designed specifically for the Extrude to Fill ("X2F") process. Once the polymer melts reach known viscosity, we extrude the polymer at low velocity and build to pack pressure.



"This innovative technology is a game-changer for OEMs, brand owners, and material manufacturers. It provides a new approach to thermal management that the industry has needed for years. X2F system dramatically streamlines production, reduces manufacturing times, and provides added performance over other techniques," said Antonio Aceves, VP Strategy & Business for X2F.

Wayne Wagner, President of Krayden, said, "We are truly proud of this partnership with X2F, and plan to leverage their expertise in molding thermally conductive materials. They are a perfect complement to our own company culture and approach to business."

About Krayden:

Krayden, based in Denver CO., is an engineered solutions distributor of adhesives, sealants, and specialty chemicals. Partnered with industry leaders like 3M, Dow, Henkel, and other leading suppliers, Krayden serves a wide array of global companies in the Aerospace, Transportation, Energy, Electronics and General Industrial markets. For more information, visit <https://krayden.com/>

X2F.com



ABOUT X2F:

X2F, based in Loveland, CO., is commercializing a new category of molding technology that leverages controlled viscosity and a patented pulse-packing approach to create high-value components for a variety of industries. X2F's process uses advanced materials previously thought impossible to mold and achieves complex product geometries with improved operational efficiencies. The technology creates entirely new paradigms in product design, tooling, and material science for molded parts.

Initial target applications include over molding of delicate electronics and circuitry, highly filled engineering resins, and polymer-based optics with improved properties. The company has financial backing from Atlas Innovate with senior advisors that include the former CEOs of General Motors and Dow Chemical. For more information, visit www.x2f.com.

