MCM Composites Advances Injection Molding Thermoset Services With In-House Tooling

October 01, 2026

MANITOWOC, WI - October 01, 2026 -
MCM Composites, LLC announced this week that it continues to offer full-capacity injection molding thermoset services from its Manitowoc, Wisconsin manufacturing plant, supported by an in-house tool shop and quality lab that keep tooling design, production, and repair under one roof. The announcement underscores the company's ongoing ability to manufacture intricate and large thermoset injection molded parts for the electronics and appliance industries.

The company produces parts ranging in weight from 0.1 grams to 10 pounds using phenolics, alkyds, polyester in both bulk molding compound and sheet molding compound forms, carbon fiber compounds, and other composite materials. Its custom mold shop operates electric and hydraulic injection molding presses with tonnage capacities from 75 tons to 500 tons, configured with degas sequencing, gate cut sequencing, core pull, and runnerless injection compression systems.

MCM Composites holds ISO 9001:2015 registration and maintains dimensional tolerances of plus or minus 0.0015 inches across single-cavity, multi-cavity, family, and insert mold types. Platen sizes range from 18.7 by 20.7 inches to 46.1 by 46.1 inches, allowing the company to accommodate a broad span of part

geometries and production volumes.

"Maintaining tooling design, molding, and maintenance within our own walls is what lets us hold tight tolerances and move quickly when a customer's program changes," said Michael Fredrich, Chief Executive Officer of MCM Composites, LLC. "Thermoset materials perform in environments where many alternatives fall short, and our job is to make that performance repeatable and affordable at production scale."

Thermoset plastics offer properties that distinguish them from engineered thermoplastics and machined metal components, including dimensional stability, mechanical strength, creep resistance, and reliable electric and thermal insulating qualities. The materials also provide sound dampening, a low coefficient of expansion, low flammability, low fluid absorption, and resistance to corrosion. Molded parts formulated from MCM's high-strength thermoset composites can serve as economical alternatives to stamped or formed parts, aluminum extrusions, and other machined components.

A central element of the company's process is its in-house tooling capability. MCM's tooling engineering staff carries experience across mold types and design characteristics such as rising islands, gate cutoff, and cold manifold systems. The company designs each tool to optimize product quality, maximize production efficiency, and minimize product cost, and its fully equipped tool shop repairs and maintains customers' molds. Each mold is reviewed after every production run as part of a regular maintenance schedule.

MCM Composites develops thermoset injection molding programs in coordination with its customers, toolmakers, and tool designers, beginning with initial three-dimensional models of the products. The company's engineering team works with software including AutoCAD, Fusion 360, SolidWorks, MasterCAM, and SpinFire to move parts from concept to production. The manufacturing plant also houses a cool room for storing perishable raw materials and customers' molds, along with the quality lab that supports inspection and testing.

Thermoset injection molded parts produced by the company can deliver superior mechanical performance at temperatures as high as 260 degrees Celsius, a threshold that supports demanding electrical and appliance applications. The process also allows multi-piece part assemblies to be consolidated into a single mold, and the company offers secondary services such as tapping, drilling, coating, and multi-piece assembly.

Post-molding operations available at MCM include deflashing, drilling, gluing, machining, metal insertion, metallizing, painting, post bake, potting, and tapping. These finishing services allow customers to source molded components and downstream operations from a single supplier, reducing handoffs across the supply chain.

The company serves a range of markets that rely on thermoset components, including appliance, aerospace,

defense, electrical, lighting, medical, food and beverage, housewares, pumps, and the fracking and oil field sector, among others. Its portfolio of completed projects spans applications such as oven handles, electrical component housings, and molded assemblies for commercial equipment.

Founded on custom thermoset molding, MCM Composites positions its injection molding thermoset services alongside compression molding, precision insert molding, finishing and machining, engineering, and assembly capabilities. The company reports that its combination of material expertise, press capacity, and in-house tooling is intended to help manufacturers convert metal components to thermoset composites where the material properties provide an advantage.

For more information about the company's capabilities, visit www.mcmusa.net.

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MCM Composites

MCM Composites is a trusted leader in custom molding, providing high-quality solutions to a diverse clientele across the globe

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