

Why are CEM's microwave vessels the safest on the market?

Each individual vessel is surrounded by our patented, advanced composite sleeve for maximum protection. Over 15 years ago, we used a rigid, plastic material to surround our microwave vessels, just like other microwave laboratory system manufacturers. We quickly came to realize that the plastic material would not hold up if the vessel failed, so we began the search for a better material from which to make the vessel sleeve. We soon developed a stronger, more flexible composite material that would expand in the event of a vessel failure, greatly reducing damage to the microwave and neighboring vessels if an unfortunate event occurred. Other companies have tried to imitate CEM's design, but none offer an alternative that is as durable and safe as our proprietary, advanced-composite vessel sleeve material.



EasyPrep & EasyPrep Plus

The EasyPrep™ and EasyPrep™ Plus vessel options provide users with a durable, high-performance solution for conducting high-temperature, high-pressure reactions in the MARS 6™. As the most robust vessel offering, each Teflon® vessel is not only surrounded by the composite sleeves but also features a reinforced frame, providing an added level of strength for demanding applications. These vessels are ideal for a wide range of synthetic chemistry applications, including zeolite synthesis, metal-organic frameworks (MOFs), and other transformations that require elevated temperature and pressure capabilities.

Maximum Capacity	Vessel Material	Vessel Volume	Maximum Temperature	Maximum Pressure
12 Vessles	Teflon	100 mL	300 °C	800 psi



MARS XPress Plus

The MARSXpress Plus™ provides educators with a safe, cost effective, and convenient solution for incorporating microwave synthesis into the teaching lab. Designed to streamline laboratory workflows, these vessels help reduce student downtime, increase engagement, and maximize instructional time, allowing more material to be covered throughout a single semester. Equipped with a Teflon vessel body and composite sleeve, the MARSXpress Plus vessels are both durable and easy to assemble with just three component pieces. These vessels make it easy to integrate the MARS 6 into larger teaching laboratory settings and provides ample options for increasing synthetic scale.

Maximum Capacity	Vessel Material	Vessel Volume	Maximum Temperature	Maximum Pressure
16 Vessles	Teflon	110 mL	200 °C	200 psi



Open Vessel

The open vessel configuration for MARS 6 allows users the option of utilizing existing, conventional glassware in a scientific microwave. As the most cost-effective way to start performing microwave chemistry, the open vessel configuration permits easy access to the reaction solution for addition or removal of reaction solution, removal of gaseous by-products, application of nonambient atmospheres, and mechanical stirring for viscous reactions. This means chemists can enjoy the flexibility of conventional glassware while benefiting from the heating advantages of microwave technology.

Maximum Capacity	Vessel Material	Vessel Volume	Maximum Temperature	Maximum Pressure
1 Round Bottom Flask	Borosilicate	250 mL – 5 L	Reflux	N/A