FOR IMMEDIATE RELEASE

Micromem Technologies Inc. Provides an Update on Executed Manufacturing and Supply Agreements and Ongoing Business Initiatives

TORONTO, NEW YORK, N.Y.—December 15, 2009 — Micromem Technologies Inc., (Micromem, the "Company") (OTC BB: MMTIF, CNSX: MRM) and its wholly-owned subsidiary, Micromem Applied Sensor Technologies, Inc. (**MAST**) (www.mastinc.com), provide the following update on executed manufacturing and supply agreements and other business initiatives, including Unotron, Life Medical Technologies, Inc., and BAE Systems:

1. MAST signed a manufacturing and supply agreement with Unotron Incorporated ("Unotron") in April 2009 at which point it secured an initial purchase order of up to five million units to be delivered over five years with a potential contract value of US$77 million.

   Since April 2009, the Company has worked closely with Unotron and its engineers to develop a fully functional washable keyboard that integrates Micromem's sensor technology. The Company's contracted engineer met Unotron's design team in China in July 2009. Micromem has been working closely with it subcontractor, Soligie Inc., since then to finalize the required printed circuitry for insertion into Unotron's washable keyboard.

   MAST has completed its first shipment of up to 100 test units in December 2009. Unotron will complete product testing and awaits all required third party certifications (FCC, CE, ULC etc.) and, once these are received, Unotron will begin production and will activate the initial purchase order with MAST. Whereas the Company originally projected that it would report revenues under this purchase order in 2009, it now anticipates initial revenues by the end of the first quarter of calendar 2010. It is important to note the delay in product rollout has been in large part due to production and shipping logistics.

   Micromem has advanced Unotron US$200,000 to support the joint development between Unotron and the Company. The funds are advanced as a debenture secured by a first charge on the assets of Unotron USA, bearing interest at 10 percent per annum payable quarterly and maturing on September 30, 2010.

2. LifeMed Technologies Inc. ("LifeMed") has recently finalized the acquisition of all the manufacturing assets and intellectual property relating to its Breast Aware™ breast tumor detection technology. LifeMed and MAST are gearing up to incorporate Micromem's magnetic sensor technology into the current Breast Aware™ product.

Carol Fitzgerald, president of LifeMed and an advisor to MAST, is overseeing the start-up of production activity, which is scheduled for January 2010. Delays in the product launch are in large part due to the delay in LifeMed finalizing its acquisition of the Breast Aware technology.

Micromem previously announced an initial LifeMed purchase order for US$30 million with initial revenues anticipated in 2009. Currently, it anticipates that the initial revenues under this purchase order will be realized in the first quarter of calendar 2010. Recently MAST trademarked its new early breast detection line of products as BreastAware™. The Company is working closely with LifeMed to leverage previous FDA approvals, and it expects to be in a position to launch its first products in Q110.

3. As previously announced, the Company has also been developing its magnetic and sensor technology under an agreement with BAE Systems Microelectronics Centre (BAE Systems) in Nashua, N.H., over the past 18 months, with the objective of bringing Micromem's design to maturity and to begin production.

   Micromem's magnetic memory and sensors have now been fully tested and proven to be functional by BAE Systems, which recently issued an initial draft of a memorandum of understanding to Micromem for the next phase of business development and, ultimately, monetization of the Company's technology.

   Micromem anticipates that an ongoing working relationship with BAE Systems and its customers will be finalized during the first half of calendar 2010, resulting in licensing agreements for the Company.

4. Since June 2009, MAST has continued its development work with Norwegian EM Technology on NEMT'S survey tool for exploration activity in the North Sea. NEMT is developing a unique hydrocarbon and mineral exploration survey system. In extensive field-testing of MAST's highly sensitive, low frequency device, actual performance is exceeding initial expectations. MAST anticipates the release of formal test results shortly. NEMT expects to begin exploration of its licensed area in the North Sea by spring 2010.

Joseph Fuda, president and CEO of Micromem, states, "Looking back over the past 12 months, the Micromem team has made significant strides bringing its technology from research and development into commercialization. The Company has brought a new and emerging technology to market on a limited budget and has managed to succeed where many other companies have failed.

"It has been a very productive last quarter for the Company, and the development work the team has managed to accomplish is extremely encouraging. We anticipate the first quarter of 2010 to be yet another milestone in the Company's history as we begin to generate revenue and move into full-blown production. I am convinced that the future of Micromem -- given the business pipeline we have put in place for 2010 -- will be a very exciting one for both the management and shareholders of our company."

Other updates include:

Silicon Turnkey Solutions, Inc., (STS) a solution provider in the area of specialty assembly, electrical test, qualification, reliability, and product screening, has completed all life cycle testing of MAST's product and will now publish a completed product data sheet. MAST's basic hall sensor is now fully developed and productized. STS completed all high and low temperature and long-term failure analysis, and the product has passed all tests with zero failures.

MAST has entered into a development agreement with NanoOpto, a precision optics nanofabrication company based in Somerset, N.J., that is developing a concentrator for the Company's hall sensor. This is expected to provide between 100 and 200 times improvement in sensitivity to better than 0.1 nT/root Hz. The project is scheduled for completion in the first quarter of calendar 2010.

MAST has worked closely with Nth Degree of Arizona in completing a printable hall sensor via its unique manufacturing process. The process for manufacturing highly dense arrays of the magnetic sensors for the Department of Defense and medical usage is now fully defined.

Third party testing of MAST's oil sensor has proven the device to be both robust and highly accurate in the reading of the time and temperature degradation of motor oil. MAST has entered into an agreement with an end-user to develop a form factor for the oil sensor that will be used in the oil pan plug.

About Micromem and MASTInc

MASTInc is a wholly owned U.S.-based subsidiary of Micromem Technologies Inc., a publicly traded (OTC BB: MMTIF, CNSX: MRM) company. MASTInc responsibly analyzes the specific industry sectors to create intelligent game-changing applications that address unmet market needs. By leveraging its expertise and experience with sophisticated magnetic sensor applications, MASTInc successfully powers the development and implementation of innovative solutions for healthcare/biomedical, natural resource exploration, government, information technology, manufacturing, and other industries. Visit www.micromeminc.com www.mastinc.com.

Safe Harbor Statement

This press release contains forward-looking statements. Such forward-looking statements are subject to a number of risks, assumptions and uncertainties that could cause the Company's actual results to differ materially from those projected in such forward-looking statements. In particular, factors that could cause actual results to differ materially from those in forward looking statements include: our inability to obtain additional financing on acceptable terms; risk that our products and services will not gain widespread market acceptance; continued consumer adoption of digital technology; inability to compete with others who provide comparable products; the failure of our technology; the infringement of our technology with proprietary rights of third parties; inability to respond to consumer and technological demands; inability to replace significant customers; seasonal nature of our business; and other risks detailed in our filings with the Securities and Exchange Commission. Forward-looking statements speak only as of the date made and

are not guarantees of future performance. We undertake no obligation to publicly update or revise any forward-looking statements. When used in this document, the words “believe,” “expect,” “anticipate,” “estimate,” “project,” “plan,” “should,” “intend,” “may,” “will,” “would,” “potential,” and similar expressions may be used to identify forward-looking statements.

The CNSX or any other securities regulatory authority has not reviewed and does not accept responsibility for the adequacy or accuracy of this press release that has been prepared by management.

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Listing: NASD OTC-Bulletin Board - Symbol: MMTIF
CNSX - Symbol: MRM

Shares issued: 89,506,279
SEC File No: 0-26005

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