JUSTIFICATION FOR SOLE SOURCE
(Simplified Procedures - MPT to ≤ SAT)

Purchase Request/Document number: 1301392710

The requiring activity is the Mechanical and Nuclear Engineering Department, United States Naval Academy, Annapolis, Maryland; the contracting activity is NAVSUP Fleet Logistics Center (FLC) Norfolk, Contracting Dept. The supplies described herein are being solicited on a sole source basis and competition is precluded in accordance with FAR 12.102(a) for reasons indicated below. There are no substitutes available for the supplies.

Restricted to the following source.

☒ **Supply:**

Original Manufacturer Name:	ADMET
Contractor (if diff from above):	
Cage Code:	1RQL1

Description of the supplies or services required, the estimated price/cost, and required delivery date or period of performance.

The requirement is for the procurement of a single advanced fatigue testing system, including the ADMET eXpert 4902 testing hardware, an ADMET 1000 series load cell, MTESTQuattro data acquisition software and controller, an ASTM E1012 alignment fixture, and dedicated gripping assemblies (GFX-2.2-CT 2.2 kN capacity grip bodies and grips specific to ASTM D639 type V tensile specimens). These components are required to support material characterization, advanced additive manufacturing testing, fatigue analysis research, and instructional use within the USNA ECW TEAM Makerspace Additive Manufacturing Lab. The new equipment must also be reconfigurable with a large baseplate, allow the load cell to be mounted on either the fixed or moving actuator, and capable of 10+ million cycles at a stroke length <1mm. The following items are required for a complete system package for the ADMET eXpert 4902 2.2kN Capacity Dual Column Electrodynamic Table Top Fatigue Testing System with MTESTQuattro Controller & Software:

- ADMET eXpert 4902 testing hardware with stroke length of at least 40mm (1.57 in), load capability of at least 2.2kN (500lbf), dynamic capability of 15Hz, and greater than 10^7 cycles of continual use <1mm displacement.
- MTESTQuattro controller, software and user interface
- Reconfigurable baseplate (minim size 19.5x16 inches) with threaded attachment points for mounting custom samples.
- Adapter package with option to mount load cell on either arm.
- ADMET 1000 series load cell with 2.2kN (500lbf).
- GFX-2.2-CT, Fatigue Grip Bodies, 2.2 kN Capacity with custom grip inserts for coated (electroplated) and uncoated ASTM D638 Type V samples.
- Live online training sessions on system operation
- 1 year factory warranty / technical support

The Independent Government Estimate for this requirement is:

The required delivery date is: 30 September 2026

In conclusion, the requested supplies represent the minimum requirements of the government.

Describe in detail why only this source(s) can furnish the requirements to the exclusion of other sources.

An ADMET eXpert 4902 fatigue tester machine will support advanced additive manufacturing testing and research with USNA Makerspace Additive Manufacturing Lab. The system will enable advanced research initiatives regarding fatigue analysis, hands-on learning, and innovation across engineering, design, and materials science disciplines. Providing access to the fatigue testing machine will enrich faculty-led research and offer students experiential learning opportunities aligned with modern manufacturing and prototyping techniques regarding fatigue resistance properties of particular additively manufactured materials.

☒ The supplies or services must be compatible in all aspects (form, fit and function) with existing systems presently installed/performing. Describe the equipment/function you have now and how the new item/service must coordinate, connect, or interface with the existing system.

The required fatigue testing system must be compatible with MTESTQuattro data acquisition software and controller for specialized fatigue analysis. The USNA characterization lab already uses MTESTQuattro software for teaching and training and so the new equipment needs to match this software training. Additionally, ADMET universal testing systems are currently used by USNA and utilize MTESTQuattro software. By continuing to use the same type of test system controller, any ongoing training requirements/expenses are limited, future calibrations are more efficient, and test procedures & test data can be shared across multiple test systems for overall teaching and research. The use of another manufacturer's fatigue testing system would severely impact the USNA Mechanical and Nuclear ngineering Department's mission by potentially producing test results with significant errors. Additionally, the use of another manufacturer's equipment would require the re-development of curriculum, retraining of faculty and staff, and would prohibit data sharing and collaborative analysis among other USNA departments.

☒ A patent, copyright or proprietary data limits competition.

The required MTESTQuattro data acquisition software is proprietary to ADMET, Inc. and is essential to data sharing and collaborative test result sharing among other departments at the USNA. By continuing to use the same type of test system controller, any ongoing training requirements/expenses are limited, future calibrations are more efficient, and test procedures & test data can be shared across multiple test systems for overall teaching and research.

Other information to support a sole source action:

The requested system is uniquely suited for academic use due to its specific testing capabilities, necessary adapters, and integrated software workflow—all of which are essential for enabling faculty-led research and hands-on student training in modern manufacturing and prototyping techniques. No other known system provides this combination of features and ECW MakerSpace integration.

TECHNICAL/REQUIREMENTS CERTIFICATION: 1301392710

I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS COMPLETE AND ACCURATE TO THE BEST OF MY KNOWLEDGE. I UNDERSTAND THAT THE PROCESSING OF THIS SOLE SOURCE JUSTIFICATION PRECLUDES THE USE OF FULL AND OPEN COMPETITION.

Signature

Date

Requiring Activity

I HEREBY DETERMINE THAT THE CIRCUMSTANCES JUSTIFYING ONLY ONE SOURCE IS REASONABLY AVAILABLE APPLIES TO THE CONTRACT ACTION.

Contracting Officer Signature Date

NAVSUP Fleet Logistics Center, Norfolk Contracting Department