

EMC testing of electrical products





Your challenge

Element Materials Technology is a trusted advisor to manufacturers, distributors, importers and authorised representatives of electronic products to ensure their products are compliant with either industry-specific or legislative EMC standards in Europe or Internationally.

We understand the design challenges to gain compliance faced by companies placing electronic products across multiple territories with differing testing requirements. Element is able to support your testing and compliance needs with a global platform of laboratories and over 60 years of experience. Our network of engaged experts, worldwide capacity and innovative services are designed to meet these challenges by increasing your speed to market, reducing the administrative burden and managing testing costs.

Our solution

We work with manufacturers to understand from the outset the implications of EMC compliance. Through our Early Stage Qualification (ESQ[®]) services, we reduce the risk of non-compliance by applying our understanding of EMC design at the very start of your project. By testing your product during the design process, we increase the likelihood that it will comply on the first attempt and remove the potential for future redesign work and associated costs. Our range of EMC chambers include:

- Heavy equipment semi-anechoic chamber
- Aerospace EMC chambers
- Reverberation chambers
- Military EMC chambers
- Automotive chambers

This makes Element the perfect partner for companies or manufacturers who are looking to design and then distribute their electronic products into a global marketplace. Typically our clients come from:

- Consumer electronics
- Industrial equipment
- Aerospace
- Defence
- Automotive
- Rail
- Oil, gas and petrochemical
- Medical
- Marine
- Power generation



EMC testing for consumer and industrial electronics

We have a global capacity for testing commercial and industrial electronic devices such as:

- IT and office equipment
- Multimedia and audio visual
- Laboratory equipment
- Industrial equipment
- Consumer electronics (white and brown goods)
- Lighting

Our capacity and expertise helps our customers get products to market faster and allows them to confidently publish their Declaration of Conformity that demonstrates compliance with the European EMC Directive for CE Marking.

Our engaged experts help companies satisfy the regulations of 167 different countries around the world, which allows our clients to export and sell their products globally, access new markets and drive growth.

EMC testing for aerospace

Element's EMC testing experts design and deliver both pre-compliance testing as well as the formal qualification EMC test programmes. Our global capacity includes aerospace-specific EMC and reverberation chambers, covering a wide range of susceptibility and emission tests that aerospace components need to endure, including HIRF and indirect lightning strikes while operating in this harsh electromagnetic environment.

Our aerospace EMC testing and qualification services are designed to provide validation, most commonly against the following standards:

- RTCA DO-160 – up to and including revision G
- DEF STAN 59-411
- DEF STAN 59-41
- MIL-STD 461
- MIL-STD 704

EMC testing for defence

With military EMC chambers that range in size from traditional dimensions for small systems up to our enormous heavy equipment semianechoic chamber, we have sufficient space to test the largest land-based platforms.

Our engaged experts respond to meet standard defence validation programmes, CE Marking (electrical equipment) or E Marking (whole vehicles and sub-assemblies) as well as Urgent Operational Requirement (UOR) testing in short timeframes, most commonly against the following standards:

- DEF STAN 59-411
- DEF STAN 61-5
- MIL-STD 461
- MIL-STD 1275

EMC testing for automotive

Element is both UKAS accredited to BS EN ISO/IEC 17025:2005 and registered as a Technical Service with the Vehicle Certification Agency. This allows us to conduct EMC testing and validation of both whole vehicles and their sub-assemblies for civilian, industrial and military vehicles to support E Marking or specific military standards.

Our heavy equipment semi-anechoic chamber is specifically designed for testing cars, plant equipment and military vehicles. It features a large internal space (18m x 14m) and it is floor rated to support up to 70 tonnes. This makes our largest EMC chamber comfortably big enough for any size of military vehicle, bus, articulated lorry or the largest industrial plant.

EMC testing for rail

Element's engaged experts and facilities assist the rail industry by testing their electronic products, rolling stock, signalling equipment, telecommunications and the interoperability of an entire rail infrastructure in line with EN50121 series of standards, as well as all other rail-related legislative and contractual requirements.

When rail products and rolling stock are just too big to be tested at our facilities, Element can conduct EMC testing on the mainline, underground or at the point of installation to ensure that you can deliver qualification of your final product.

Why Element?

Element Materials Technology has a global capacity for EMC testing for aerospace, defence and industrial products and is UKAS accredited to BS EN ISO/IEC 17025:2005.

We are also a Notified Body for CE Marking, including EMC Testing, Low Voltage Directive, machinery, explosive atmospheres and R&TTE, and registered as a Technical Service with the Vehicle Certification Agency.



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