

Explosive atmosphere testing and certification





Your challenge

Element Materials Technology is a trusted advisor to the oil & gas, mining and food processing companies looking to deliver products to a global market for use in potentially explosive atmospheres.

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

Our solution

We help with testing and certification for explosive atmospheres across a variety of industries:

- Petrochemical
- Mining
- Aircraft refuelling
- Oil and gas
- Food processing
- Pharmaceuticals

We provide testing and qualification services that allow products to be operated in these hazardous working environments and enable manufacturers to gain access to the global market. Working with the manufacturers of products intended for use in explosive atmosphere from the initial design stage, our Early Stage Qualification (ESQ®) services support them through the highly complex nature of qualification testing and help mitigate delays in time to market. Our ESQ expertise comes from testing thousands of different products every year and allows us to help companies meet critical time-to-market deadlines and limit possible loss in revenue if your product fails to meet the delivery date.

ATEX testing and certification for Europe

As a European Notified Body (NB), and with broad technical experience in the wide-ranging disciplines for the ATEX Directive, Element can help you meet all the testing requirements you need in order to obtain the CE Mark and distinctive European Mark and enable you to distribute your products within the European Union. We can help with product testing and assessment, along with factory inspections and storage of ATEX technical files and we can assist with the key standards for ATEX testing and certification of electrical equipment including:

- EN60079-0 – General requirements
- EN60079-1 – Flameproof equipment
- EN60079-2 – Pressurised equipment
- EN60079-11 – Intrinsically safe equipment
- EN60079-15 – Non-incendive equipment
- EN60079-31 – Dust protected equipment

We can also assist you with ATEX for mechanical equipment, including certification to the following key standards:

- EN13463-1 – General requirements
- EN13463-5 – Protection by construction
- EN13463-8 – Protection by immersion



IECEX testing and certification

The IECEx is an internationally recognised Conformity Assessment System. It is used to facilitate international trade in equipment and services for use in explosive atmospheres, whilst maintaining the required level of safety. It deals with equipment that operates in any environment where there is a risk of explosion due to the materials used within it and is recognised in the following countries:

Europe

- United Kingdom
- Norway
- Denmark
- Slovenia
- Finland
- Italy
- France
- Poland
- Spain
- Germany
- Romania
- Sweden
- Croatia
- Hungary
- Switzerland
- Czech Republic
- Netherlands

Asia & Oceania

- Japan
- China
- India
- Australia
- Korea
- Singapore
- Malaysia
- New Zealand
- Turkey

Middle East & Africa

- United Arab Emirates
- South Africa
- Israel

The Americas

- USA
- Canada
- Brazil

Using IECEx equipment is accepted as the basis for national approval in any of the participating countries. This means manufacturers can reduce costs and time to market using this very effective system.



Hazloc testing and certification

Element can provide explosive atmosphere equipment testing and certification in the UK for the US and Canada. We provide Hazloc assessment beyond equipment testing and certification; additionally we offer manufacturers factory inspections and field evaluations as required by

the applicable explosion protection standards for North America. Only classified equipment may be used in hazardous locations in North America. This equipment is classified using the same criteria as the hazardous location and carries clear marking to this effect. All hazardous location equipment must be certified by a third party Nationally Recognised Testing Laboratory (NRTL) or Standards Council of Canada (SCC) certification body.

We can assist you with US classified area testing and certification including the following key standards:

- ISA12.12.01 – Equipment for Division 2 locations
- UL1203 – Explosion-proof equipment for Division 1 locations
- UL60079-0 – General requirements
- UL60079-1 – Flameproof enclosures
- UL60079-11 – Intrinsically safe equipment

We can also assist with key standards for Canadian classified area testing and certification including the following:

- CSA 22.2 No. 213 - Equipment for Division 2 locations
- CSA 22.2 No. 30 - Explosion-proof equipment for Division 1 locations
- CSA 22.2 No. 157 - Intrinsically safe equipment for use in hazardous locations

Key standards for CSA zoned areas are:

- CSA 22.2 No. 60079-0 - General requirements
- CSA 22.2 No. 60079-1 - Flameproof enclosures
- CSA 22.2 No. 60079-11 - Intrinsically safe equipment

Rest of the world

There are different worldwide certification schemes that define safety levels of products for use in hazardous areas, such as oil and gas, petrochemical, aerospace and military refuelling. Although safety is the driving force behind all the schemes, their product scope, classification of application areas and qualification requirements vary depending on the country of operation. We can help clients obtain local certification that gives access to the global market. Element's testing and certification experts can determine which certification scheme is most suitable for your equipment and help you meet the requirements of global explosive atmosphere protection standards and directives.

Why Element?

Element Materials Technology is BS EN ISO/IEC 17025:2005 and ISO/IEC 17065:2012 UKAS accredited, a Notified Body (NB) for the ATEX Directive, an IECEx Certification Body (ExCB) and an IECEx Testing Laboratory (ExTL).

We have registered test facilities in Europe and the US and a wide range of testing and certification services that help our clients gain access to international markets.



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