



## CompEx - Ex12 - Application Design Engineer



### Course Aim

This course aims to certify the competency of 'Application Design Engineers' who are responsible for specifying and selecting electrical equipment in potentially explosive areas, ensuring they can comprehend the risks associated with the hazardous environment and make suitable equipment selections in accordance with the standards in IEC 60079-14.



### Who Should Attend?

This course is suitable for aspiring or experienced application design engineer with a background in selecting Ex-certified electrical equipment for use in environments with potential explosive atmospheres.



### Course Duration

This is a 5 day course.



### Maximum Delegates

Maximum attendees: 10 delegates.



### Certification

Upon successful completion, delegates will be awarded a CompEx Certificate in Core Competence.

This certification is valid for 5 years.



### Pre-Requisites

- To have good knowledge of basic electrical application design practice.
- Delegates are typically expected, at a minimum, to have an HNC/HND (or equivalent) qualification and at least 2 years of experience working in an area that is hazardous.
- A strong working knowledge and recent experience of Instrument and/or Electrical installation application design practices
- Delegates must be familiar and have a good understanding of IEC 60079-14
- It is also advised that candidates are familiar with manufacturer documentation, including data sheets, certificates and similar materials
- Delegates must possess a sponsor letter from their employer confirming the benefit of the Ex12.





## CompEx - Ex12 - Application Design



### Agenda

- Legislation (ATEX/DSEAR/NEC)
- Standards and certification process EN/IECEX/NEC
- Explosive Atmospheres Overview
- Area Classification (Zones & Divisions)
- Ex Equipment and equipment marking
- How Concepts work from a Designers perspective
- ATEX and IECEX Equipment Protection levels
- Assemblies and mixed concepts
- Detailed design and Installation Practices (Electrical and I.S, concepts) in accordance with IEC 60079-14
- Intrinsic Safety System Design in Depth (1 full day on this subject with example test papers and calculations)
- Documentation
- A review of a selection of electrical and I.S. equipment and systems

There are several examinations delegates must carry out which cover both Ex12a and Ex12b learning objectives. This includes the following assessments:

- Core
- Marking
- Standards
- Design