



ATEX 137

(DIRECTIVE 1999/92/EC)

Datasheet

With the introduction of European Directive 1999/92/EC in Jan 2000 the future of health and safety in the process industry was changed. This Directive sets the minimum requirements for improving the health and safety for the protection of workers potentially at risk from explosive atmospheres. (15th individual Directive within the meaning of article 16(1) of Directive 89/391/EEC – Official journal L23, 28.01.2000)

EMPLOYERS OBLIGATIONS

The implication of ATEX 137 are that the employer shall ensure the health and safety of workers by taking all organisational and/or technical measures to prevent the formation of explosive atmospheres, or where the nature of the activity precludes this to remove sources of ignition, and mitigate the detrimental effects of an explosion. Where necessary these measures shall be combined and/or supplemented with measures to prevent the propagation of explosions.

Looking at the wording you have to consider what measures can be used to comply with this broad statement.

Organisational measures could include:-

- Permit to work systems.
- Operator training with regard to explosion protection.
- Written instructions for operators in hazardous areas.
- Emergency evacuation procedures.

Technical measures could include:-

- Explosion relief systems to include bursting panels and isolation devices.
- Control of static electricity.
- Suitable dust extraction and collection.
- Proper selection of electrical and non-electrical equipment.

Most of these points would be identified if an adequate **explosion risk assessment** is undertaken. This is an explicit requirement of ATEX 137, Article 4 wherein “The employer shall assess the specific risks from explosive atmospheres taking account at least of :-

- The likelihood that explosive atmospheres will occur and their persistence.
- The likelihood that ignition sources, including **electrostatic discharges**, will be present and become active and effective.
- The installations, **substances used**, processes and their possible interactions.
- The scale of the anticipated effects.”

It is also required that the explosion risks shall be assessed overall. Places that are or can be connected via openings to places in which explosive atmospheres may be present shall be taken into account. Annex II (2.8) also qualifies this by stating that such verification must be carried out by persons competent in the field of explosion protection as a result of their experience and/or professional training.

ATEX 137 Article 7 and Annex I, require that **hazardous areas be classified** and allocated zone coding. Such areas need to be identified with a new mandatory sign (Fig. 1).



Fig. 1 Sign indicating where explosive atmospheres may occur. (ATEX 137, Annex III)

Annex IIB specifies that equipment must be suitable for gases/vapours, mist and/or dust as appropriate for the hazardous zones they are used in. Such equipment will have to show appropriate markings (Fig. 2) to ensure compliance.

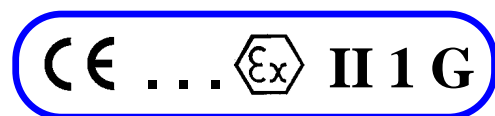


Fig. 2 ATEX equipment marking.

Perhaps the most important element of ATEX 137 is the mandatory requirement in Article 8 to demonstrate through an **Explosion Protection Document** that:-

- Explosion risks have been determined and assessed.
- Adequate measures will be taken to attain aims of the Directive.

- Hazardous areas have been classified into zones and appropriate signs displayed.
- Workplace and work equipment is designed, operated and maintained with due regard for safety.
- Procedures are in place for the safe use of equipment.

This document must be prepared **before** commencement of work and revised and republished as necessary.

Obviously the format and style of this document may differ within each EU Member State as this Directive is incorporated within their own regulations, but the content is clearly defined.

IMPLEMENTATION

Member States of the EU had until 30th June 2003 to introduce suitable national regulations to cover this Directive which is implemented in two stages. The first stage had a deadline of 30th June 2003 and applies to all *new, modified, extended or restructured* workplaces. The second stage applies to any existing workplace in use before 30th June 2003, which must comply no later than 30th June 2006.

THE PATH TO COMPLIANCE

There is no off-the-shelf solution to your compliance needs. All process safety industries have either different processing techniques or plant layout, often a legacy of

previous production requirements, subsequently enhanced or rationalised.

So what do we know? We know you will need to undertake an explosion risk assessment and hazardous area classification. You will also need to ensure equipment meets the safety standard for the zone it is used in, suitable warning signs are put in place and that an adequate Explosion Protection Document is prepared.

Part of this process of compliance will be to undertake a preliminary assessment of your company and carry out an internal audit to ensure you have safety data for all the materials you use in your processes. After that, with suitable training and/or professional guidance, undertake detailed assessment of your plant and produce an explosion protection document.

With the need for adequate benchmarking and realistic budgeting for compliance, it is essential that work starts as soon as possible on preparing your company.

For further advice talk to us at Chilworth Technology as we have already undertaken ATEX audits for a number of international pharmaceutical and chemical companies. We would be happy to discuss our four-phase approach to ATEX 137 compliance.

faxback

Please faxback to Marketing on +44 (0)23 8076 7866

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My particular interests are:-

- | | | | |
|---|--------------------------|------------------------------------|--------------------------|
| ATEX audits | <input type="checkbox"/> | Dust/Gas/Vapour Explosion..... | <input type="checkbox"/> |
| Electrostatic Hazards / Problems | <input type="checkbox"/> | Hazardous Area Classification..... | <input type="checkbox"/> |
| Runaway Chemical Reaction Hazards | <input type="checkbox"/> | Emergency Relief Vent Sizing | <input type="checkbox"/> |
| Regulatory Testing | <input type="checkbox"/> | HAZOP..... | <input type="checkbox"/> |
| Incident Investigation / Expert Witness | <input type="checkbox"/> | Training..... | <input type="checkbox"/> |

I would a FREE and confidential talk to a consultant about a process safety matter

I would like a FREE visit from a consultant next time one is in my area

For further information phone Systems at Chilworth Technology on +44 (0)23 8076 0722