

# Explosive Atmospheres

## Understanding DSEAR Regulations

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*Understand more about the dangerous substances and explosive atmospheres regulation, hazardous area classifications and why you may need a DSEAR assessment.*



# What is a DSEAR Assessment?

*The Dangerous Substances and Explosive Atmospheres Regulations (DSEAR) 2002 is a UK law that requires professionals to control and mitigate workplace risks of fire, explosion, and metal corrosion caused by hazardous substances. Applicable to workplaces where dangerous substances are stored, used, or produced, failure to comply with DSEAR can lead to costly fines and work-related injuries.*

## DSEAR Regulations

In many industries, there are explosive or dangerous hazards present, whether continuously, occasionally or rarely. Hazards such as flammable gases, dangers of confined space entry, release of toxic gases and exposure to aggressive chemicals, as examples. In addition, there's direct contact with corrosive substances such as chlorine compounds, sulfuric acid, ammonia, and potassium hydroxide. There are several directives and regulations that offer guidance through this dangerous field – **most importantly ATEX and DSEAR regulations.**

Practitioners need to undertake an **explosion risk assessment** and **hazardous area classification** to determine the accurate ATEX classification and zone. They need to ensure, not only that their equipment meets the safety standard for the zone in which it is used, but also provide suitable warning signs with adequate documentation such as an Explosion Protection Document (EPD). DSEAR bodies can be contracted to undertake an audit to ensure compliance.

## Dangerous Substances

Dangerous substances refer to any substances present at work that could, if not properly controlled, cause harm to people as a result of a fire, explosion or corrosion of metal. They can be found in nearly all workplaces and include such things as solvents, paints, varnishes, flammable gases (such as liquid petroleum gas (LPG)), dusts from machining and sanding operations, dusts from foods, pressurised gases and substances corrosive to metal.

## Do I Need An Assessment?

Whether your work activities create, control or release flammable gases or vapours, such as vehicle paint spraying, exhausting toxic fumes from production activities, or you handle fine organic dusts such as grain flour or wood, a DSEAR audit will ensure you meet the relevant legislation for your industry and reduce the risk of serious injury or explosions.

### Important Information

In line with the ATEX Directive it is strictly the responsibility of the end user to perform or contract a DSEAR risk assessment to ensure that ATEX zones are properly defined in terms recognised by ATEX 2014/14/EU.

Equipment manufacturers and distributors are not ATEX consultants and cannot play any role in the process of determining the risk of explosion and therefore cannot specify the ATEX code or zone for any product supplied.

If you don't provide this information we will ask for it before quoting your industrial fan.

# What's Covered in an Assessment?

**Most DSEAR explosion risk assessments will include the below processes:**

- Initial consultation to assess your requirements and plan the assessment.
- Identify the directives and standards which apply.
- Identify and record the substances that present an explosion hazard and their properties.
- Complete an explosion hazard "area classification" that will list "sources of release" where hazardous substances may be released from equipment deliberately or accidentally, and define the "zones" where they may mix with air and form an explosive atmosphere.
- Complete an "Ignition Risk Assessment" which will identify and analyse the ignition hazards such as sparks and hot parts that could ignite the explosive atmospheres. They will also assess whether the measures in place to prevent ignition conform to ATEX standards. Equipment zones will be identified.
- Putting information on substances, sources of release, zones and ignition hazards in the format required by the international standards
- Provide help with the ATEX Equipment Directive's requirements for Notified Bodies, certificates, quality systems and Declarations of Conformity.
- Provide help with the ATEX Worker Directive's requirements for markings and signs, PPE, instructions, emergency procedures, training and competence, inspections and other organisational measures.
- Help to compile a technical file or explosion protection document with the information required by the directives.
- Provide you a report outlining areas of non-compliance and advice to help you rectify them.

## About Us

We're industrial fan integration experts with over 30 years experience in industrial fans for ATEX, corrosive and industrial air movement.

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## UKCA Ex & DSEAR

With the withdrawal of the UK from the EU, the DSEAR regulations will still apply and current requirements remain in place. The UK Government has introduced the UKCA Ex (UK ATEX) for Ex products placed on the market with a transitional period until 1st January 2025.

## DSEAR Bodies

**Bureau Veritas**  
[www.bureauveritas.co.uk](http://www.bureauveritas.co.uk)  
 0345 600 1828

**Hazardous Area Inspection Services**  
[www.hazardousareinspection.com](http://www.hazardousareinspection.com)  
 01792 897 002

**Dekra**  
[www.Dekra-uk.co.uk](http://www.Dekra-uk.co.uk)  
 0238 076 0722

**SGS**  
[www.sgs.co.uk](http://www.sgs.co.uk)  
 0151 350 6600





## Contact Us

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*Whatever your issue, concern or question, contact our industrial team using the below contact details. Alternatively, visit our website and open a live chat to start discussions.*

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