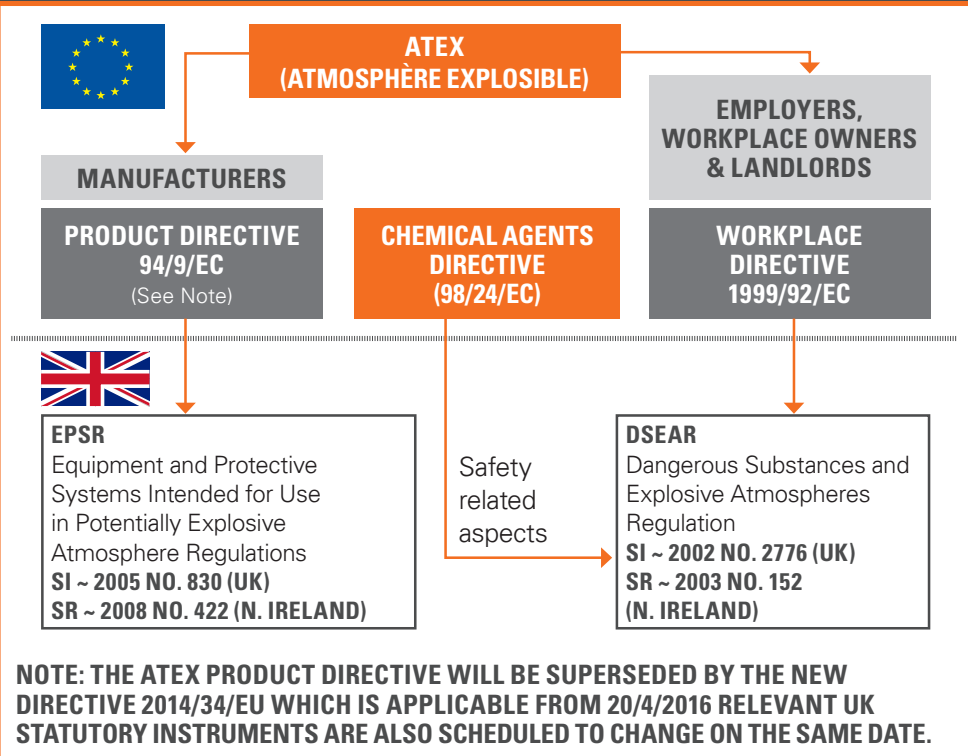




3 ATEX AND DSEAR: GUIDANCE FOR END USERS



RELATIONSHIP BETWEEN EUROPEAN AND UK LEGISLATION



ATEX WORKPLACE DIRECTIVE AND DSEAR COMPLIANCE OVERVIEW

PROVISIONS	DSEAR (UK)	ATEX 1999/92/EC	GUIDANCE
Assess the risks and identify the necessary control measures	Reg 5	Article 4.1	HSE ACOP L138
Implement the necessary technical and organisational measures including suitable provision for accidents, incidents and emergencies.	Reg 6, Schedule 1	Article 3	HSE ACOP L138
Classify the areas where potentially explosive atmospheres may exist into zones	Reg 7, Schedule 2	Article 7.1	EN 60079-10-1 EN 60079-10-2 Industry Codes
Mark the classified areas using the appropriate warning signs	Reg 7, Schedule 4	Article 7.3	
Inspect, assess, modify or replace the equipment on the basis of the level of risk and the ability of the equipment to create a source of ignition	Reg 5 & 6, Schedule 1	Article 3 & 4.1	EN 60079-14 EN 60079-17 EN 60079-19
Ensure personnel at risk, and others who may be affected, receive appropriate training	Reg 9	Annex II 1.1	
Create and maintain an Explosion Protection Document (EPD-ATEX 99/92/EC requirement only) or equivalent document referencing the necessary information (UK only) for the identified hazardous areas. Documentation must include an effective equipment maintenance and inspection regime	Reg 5	Article 8	HSE ACOP L138 EN60079-17
Regularly review and audit the areas and systems to ensure that they remain effective	Reg 5	No specific reference	HSE ACOP L138

Note 1: DSEAR Reg 7(4), ATEX 99/92/EC, Annex II 2.8 Prior to new plant and facilities being used for the first time, the overall explosion safety shall be verified by a competent person
Note 2: DSEAR Reg 11 Article 6, where workers from several undertakings are present in same workplace, the employer responsible for that workplace must co-ordinate the health and safety measures

ZONES AND EQUIPMENT CATEGORIES

Zones	BROAD DEFINITIONS OF ZONES (FOR GUIDANCE ONLY)	ATEX EQUIPMENT CATEGORY	EQUIPMENT INTEGRITY REQUIREMENTS
0	Explosive atmosphere is present continuously, for long periods or frequently	1	Equipment must be safe under normal operation, expected and rare malfunction
1	Explosive atmosphere is likely to occur under normal operation, occasionally	2	Equipment must be safe under normal operation, expected malfunction
2	Explosive atmosphere is unlikely to occur in normal operation and, if it does, will persist for a short period only	3	Equipment must be safe under normal operation.

The higher the probability of an explosive atmosphere occurring and persisting, the higher the integrity requirements of the equipment to be installed. The relationship between zones and categories can be varied following a full risk assessment

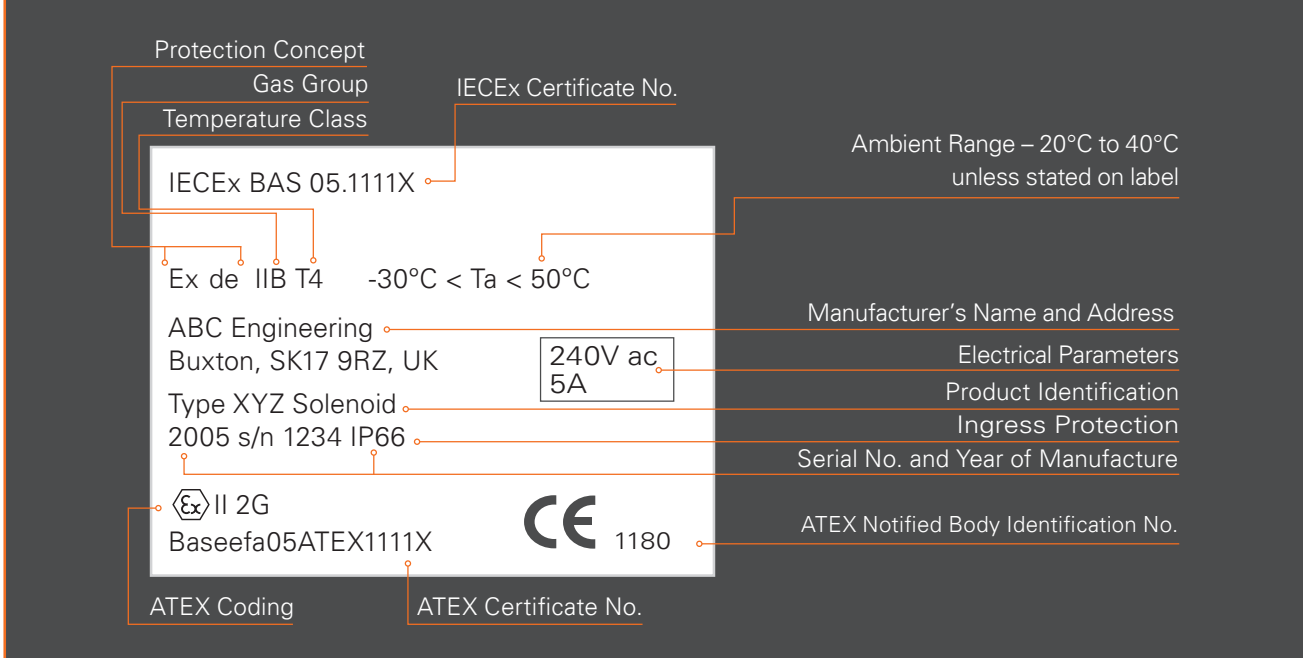
RELEVANT STANDARDS AND GUIDANCE

AREA OF GUIDANCE	STANDARD OR APPROVED CODE OF PRACTICE (ACOP)
General Guidance DSEAR Compliance	ACOP L138 Dangerous Substances and Explosive Atmospheres. Available as free download from http://www.hse.gov.uk/pubns/books/l138.htm
Hazardous Area classification	EN 60079-10-1 – Classification of hazardous areas for explosive gas atmospheres EN 60079-10-2 – Classification of areas where combustible dusts are or may be present
Electrical installation of equipment	EN 60079-14 Explosive atmospheres – Part 14: Electrical installations design, selection and erection
Electrical Equipment inspection	EN 60079-17 Explosive atmospheres – Part 17: Electrical installations inspection and maintenance
Non electrical equipment ignition hazard assessment	EN 13463-1 Non-electrical equipment for potentially explosive atmospheres. Basic method and requirements <i>Note: This standard relates to new equipment but is useful for retrospective assessment of existing equipment</i>
Electrostatics	PD CLC/TR 60079-32-1: Explosive atmospheres Part 32-1: Electrostatic hazards, guidance (See part 32-2 for testing).

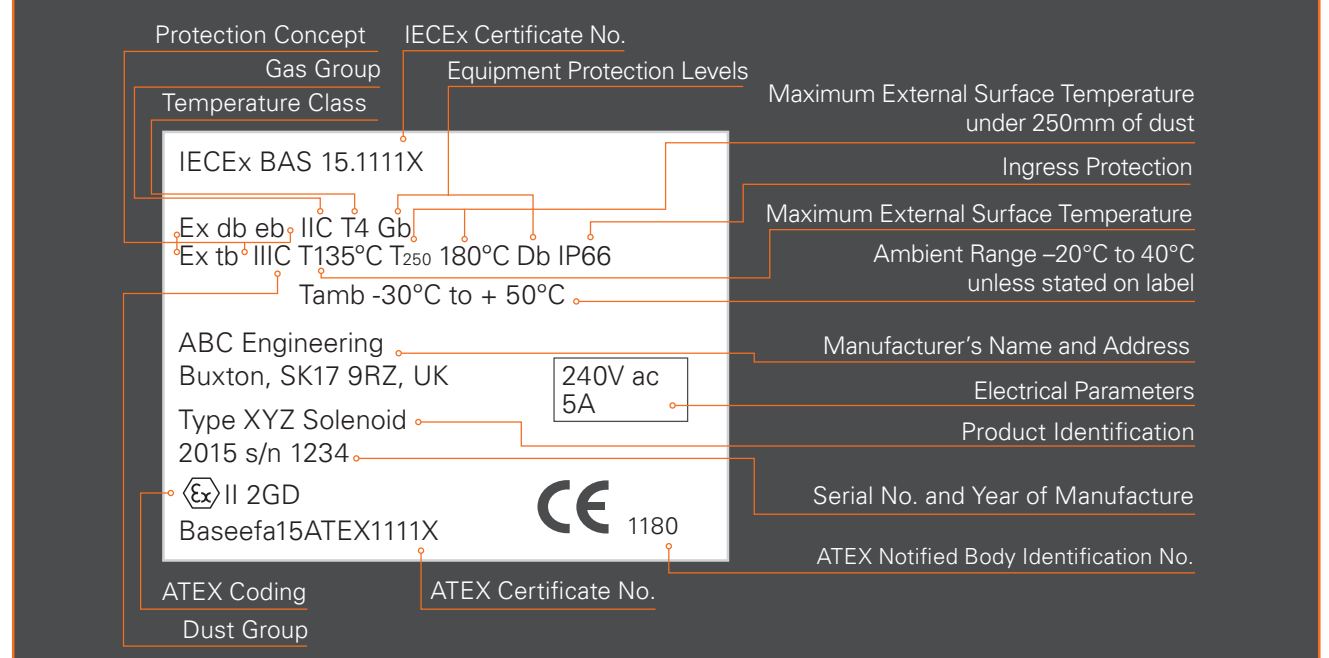
ATEX CODING



OLDER LABEL EQUIPMENT MARKINGS



NEWER EQUIPMENT LABEL MARKINGS



GAS GROUPS

GAS GROUP	REPRESENTATIVE TEST GAS
I	Methane (mining only)
IIA	Propane
IIB	Ethylene
IIC	Hydrogen

Gases are classified according to the ignitability of gas-air mixture. Refer to EN 60079-20-1 for classification of common gases and vapours.

DUST GROUPS

DUST GROUP	REPRESENTATIVE TEST DUST
IIIA	Combustible flyings
IIIB	Non-conductive dust
IIIC	Conductive dust

TEMPERATURE CLASS

T CLASS	MAXIMUM SURFACE TEMPERATURE
T1	450°C
T2	300°C
T3	200°C
T4	135°C
T5	100°C
T6	85°C

EQUIPMENT PROTECTION LEVEL

EQUIPMENT PROTECTION LEVEL	ZONE
Ga	0
Gb	1
Gc	2
Da	20
Db	21
Dc	22
Ma	Energised*
Mb	De-energised*

*G=gas, D=dust, M=mining *in presence of explosive atmosphere*

INGRESS PROTECTION (IP)

TYPE OF PROTECTION	IP RATING
Hazardous area equipment typically requires a minimum IP rating of IP54 but may be assessed and tested to the higher ratings below:	
Dust	Dust Protected
Dust	Dust Tight
Water	Protection against – splashing water
Water	Protection against – water jets
Water	Protection against – powered water jets
Water	Protection against – temporary immersion
Water	Protection against – continuous immersion

See IEC/EN 60529 for full definitions of IP ratings.

SGS BASEEFA SERVICES

- ATEX and IECEx equipment/component certification
- IECEx Certificate of Personnel Competence
- IEC 61508 certification
- Quality system approval
- Assistance with DSEAR (ATEX user directive) Implementation
- Training and Technical advice
- IECEx Service facility Certification
- Technical file storage
- Testing

SGS BASEEFA LIMITED

SGS Baseefa Ltd,
Rockhead Business Park,
Staden Lane, Buxton, SK17 9RZ

tel. +44 (0)1298 766600
fax. +44 (0)1298 766601
e-mail: baseefa@sgs.com
www.sgs.co.uk/sgsbaseefa



WHEN YOU NEED TO BE SURE

