

## Employer Responsibilities Under ATEX(99/92/EC) Workplace Directive & DSEAR

Provisions	DSEAR (UK)	ATEX 99/92/EC	Guidance
Assess the risks and identify the required control measures	Reg 5	Article 4.1	HSE ACOP's L138 & L136
Implement the required technical and organisational control and mitigation measures including suitable emergency planning.	Reg 6, Schedule 1	Article 3	HSE ACOP L138
Classify the areas where potentially explosive atmospheres may exist into hazardous area zones	Reg 7 Schedule 2	Article 7.1	IEC/EN 60079-10 IEC/EN 61241-10 Industry Codes
Mark the classified areas using the appropriate warning signs (EX)	Reg 7 Schedule 4	Article 7.3	
Inspect, assess, modify or replace the equipment on the basis of the potential of the equipment to create a source of ignition	Reg 5 / 6 Schedule 1	Article 3 / 4.1	IEC/EN 60079-17 IEC/EN 60079-14 IEC/EN 60079-19
Ensure appropriate training is provided to personnel at risk, and others who may be affected (i.e. visitor, Contractors),	Reg 9	Annex II 1.1	
Create, maintain and review an Explosion Protection Document (EPD – ATEX User Directive Only), containing evidence of compliance. The documentation should include an effective equipment inspection maintenance regime	Reg 5	Article 8	HSE ACOP's L134-L138
Regularly review and audit the areas and systems to ensure that they remain effective	Reg 5	No direct, specific reference	HSE ACOP L138
New Plant and facilities used for the first time must have the overall explosion safety verified by a competent person prior to first use	Reg 7(4)	Annex II 2.8	HSE ACOP L138

Note 1: DSEAR Reg 11 99/92/EC 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 for that workplace

### Zones and Equipment Categories

Zones		Broad Definitions of Zones (for guidance only)	ATEX Equipment Category	Equipment Integrity Requirements
Gases and Vapours	Dusts			
0	20	Explosive atmosphere is present continuously, for long periods or frequently	1	Equipment must be safe under normal operation, expected and rare malfunction
1	21	Explosive atmosphere is likely to occur occasionally under normal operation	2	Equipment must be safe under normal operation, expected malfunction
2	22	Explosive atmosphere may occur under abnormal operation and persist for a short period only	3	Equipment must be safe under normal operation

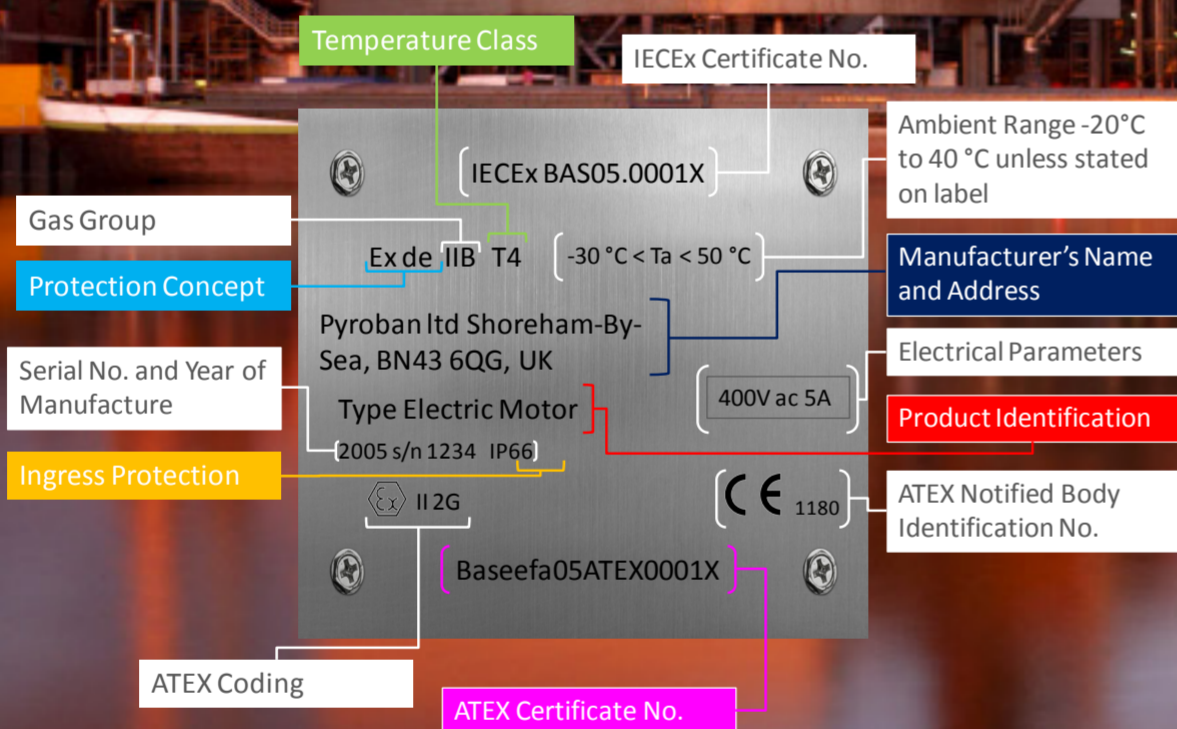
The higher the probability of an explosive atmosphere occurring and persisting, the higher the integrity requirements of the equipment to be installed. The relationship between zones and categories can be varied following a full risk assessment.

### Ingress Protection (IP)

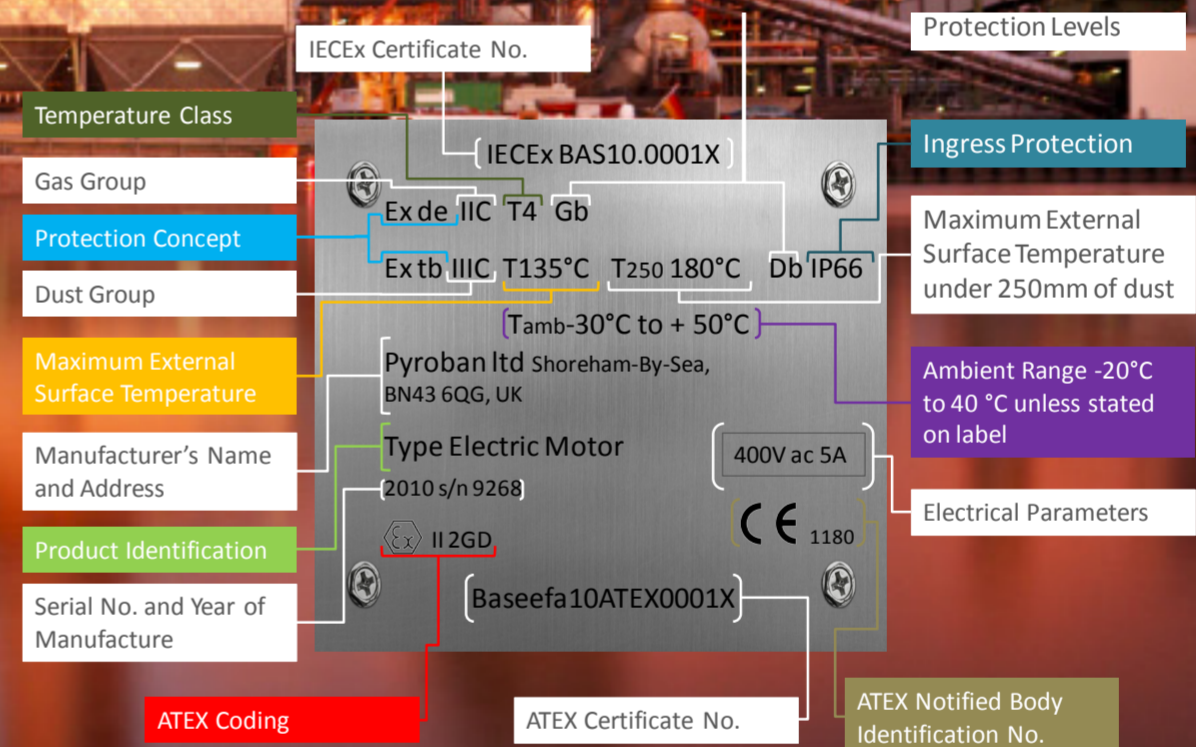
Type of Protection		IP Rating
Dust	Dust Protected	IP5x
	Dust Tight	IP6x
Water	Protection against - splashing water	IPx4
	Protection against - water jets	IPx5
	Protection against - powered water jets	IPx6
	Protection against - temporary immersion	IPx7
	Protection against - continuous immersion	IPx8

Hazardous area equipment typically requires a minimum IP rating of IP54 but may be assessed and tested to higher ratings. See EN 60529 for full definitions of IP ratings.

### Old Label Equipment Markings



### New Label Equipment Markings



Temperate 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

Gas Groups	
Gas Group	Representative Test Gas
I	Methane (Mining only)
IIA (Least easy to ignite)	Propane
IIB	Ethylene
IIC (Most easy to ignite)	Hydrogen

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

Dust Groups	
Dust Group	Group Description
IIIA	Combustible Flyings
IIIB	Non-Conductive Dust
IIIC	Conductive Dust

EU Explosive atmosphere symbol	ATEX Coding	Gas	Dust
Equipment group	II 2 GD	0	20
		1	21
		2	22

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Legal Compliance • Risk assessment & area classification • Equipment and Installation Management