

ATEX OVERVIEW

As of 1 July 2003, mandatory compliance to two European Directives came into effect for all member states. Known as ATEX, from the French – Atmospheres Exposable, these directives set down the Essential Health and Safety Requirements (EHSR's) associated with the equipment used in and for people who work in potentially explosive atmospheres.

REGULATIONS

ATEX Directive 94/9/EC, also known as ATEX95 or ATEX 100a, is a so called 'New Approach Directive' giving the EHSR's and conformity assessment procedures which must be applied by the manufacturer to equipment and protective systems intended to be used in potentially explosive atmospheres.

In parallel to 94/9/EC is the so called 'Use Directive' 1992/92/EC, this deals with the minimum requirements for improving the safety and health protection of workers potentially at risk from explosive atmospheres. It sets out the responsibilities of employers.

Both are concerned with the potential risks arising from fire and explosion in areas where flammable substances may exist all of the time or some of the time under normal operating conditions. These are areas where flammable materials are manufactured, stored, used or in which they may be present under abnormal conditions.

What is meant by flammable substance?

Flammable substances include, any substance or preparation that due to its properties or the way it is used can cause harm to people from fires and explosions

Examples; Petrol, LPG, paints, varnishes, solvents, acetylene gas, natural gas, butane gas.

Also, dust which when mixed with air could cause an explosive atmosphere, e.g. dust from milling and sanding, grain elevators.
Flammable substances can be found in varying quantities in most work places.

What is an explosive Atmosphere?

An explosive atmosphere is an accumulation of gas, mist, dust or vapour mixed with air, when, under certain conditions of pressure and temperature has the potential to catch fire or explode.

**Where do the regulations apply?**

The Regulations apply at most workplaces within the European Community and other countries where the regulations have been voluntarily accepted where flammable substances are stored, used or can be created.

Examples are Chemical Processing, spraying of paint or varnishes, fuel storage and filling, milk drying, flour production, railways, airports, fuel storage and handling yards, fireworks and vehicles that transport any of the above.

When do the regulations apply?

The regulations apply from the 1st July 2003 to new workplaces or work places which undergo modifications, extensions or restructuring after July 2003. Existing workplaces must comply by 30th June 2006

Work equipment in use before 30th June 2003 can continue to be used provided it complies with the legislation in force at that time.

e.g. 'Ex' equipment which is suitable for the application and complies with a harmonised European standard is acceptable.

The products must be removed from circulation by the 30th June 2006.

UNDERSTANDING THE MARKINGS

Category / Code	Interpretation/Information
<u>Industry Group</u> II 1 G EEx ia IIB T1	I = Mining (<i>below ground</i>) II = General (<i>above ground</i>)
<u>Zone of Application</u> II 1 G EEx ia IIB T1	1 = Category (old Zone 0) or UL Div1 2 = Category (old Zone 1) or UL Div2 3 = Category (old Zone 2) or UL Div2
<u>Type of Hazard</u> II 1 G EEx ia IIB T1	G = Gas D = Dust
<u>ATEX Certification</u> II 1 G EEx ia IIB T1	E = Certified to CENELEC Std Ex = Explosion Protected
<u>Method of Protection</u> II 1 G EEx ia IIB T1	ia = for use in Zone 0, 1 & 2. ib = for use in Zone 1 & 2
<u>Gas Group</u> II 1 G EEx ia IIB T1	IIA = Gas Group IIB = Gas Group IIC = Gas Group
<u>Temperature Class</u> (Maximum Surface temperature) II 1 G EEx ia IIB T1	T1 = Temp Code 450 C T2 = Temp Code 300 C T3 = Temp Code 200 C T4 = Temp Code 135 C T5 = Temp Code 100 C T6 = Temp Code 85 C

Gas Group	Information
Group I	<i>for mines susceptible to methane</i>
Group II	<i>For explosive gases in locations other than mines group II is divided into 3 sub groups IIA, for atmospheres containing propane or gases containing an equivalent hazard IIB for atmospheres containing ethylene or gases containing an equivalent hazard IIC for atmospheres containing hydrogen or gases of an equivalent hazard</i>
Other Hazards	
	<i>Metals including Aluminium, Magnesium (Div 1 only)</i>
	<i>Carbonaceous Dust = Coal, Carbon Black, Coke</i>
	<i>Dust not included in E & F including Wood, Plastic, Flour, Starch, Grain Dust</i>



In addition to the standard ATEX markings and ratings, it is important to note that there is a standardised rating scheme for the protection of the enclosures.

This rating system is called the Ingress Protection Code (or IP Code) It is identified by the letters IP followed by two Characteristic numbers. The first number identifies the degree of protection against solid foreign objects and the second number to liquids.

It is as follows:

IP Codes (Ingress Protection)

First Digit No	Degree of Protection Solid	Second Digit No	Degree of Protection Liquid
0	No Protection	0	No Protection
1	Protection against ingress of large foreign bodies 50mm dia	1	Protection against drops of condensed water
2	Protection against ingress of medium solid foreign bodies 12.5mm dia	2	Protection against drops of liquid falling at an angle of 15 degrees
3	Protection against ingress of medium solid foreign bodies 2.5mm dia	3	Protection against drops of liquid falling at an angle of 60 degrees
4	Protection against ingress of medium solid foreign bodies 1.0mm dia	4	Protection from liquid splashed from any direction
5	Protection against ingress of dust in an amount sufficient to cause equipment malfunction	5	Protection against jets of water
6	Complete protection against the ingress of dust	6	Protection against strong jets of water or conditions found on a ships deck
		7	Protection against intermittent immersion in water
		8	Protection against strong indefinite immersion in water under specific pressure



ATEX Products



Our ATEX Products include

- STR65082 STYLUS**
- STR65682 STYLUS REACH**
- STR44800 VULCAN**
- STR44406 FIRE VULCAN**
- STR90055 SURVIVOR DIVISION II**
- STR90054 SURVIVOR DIVISION I**
- STR67554 2AA PRO POLYMER**
- STR62504 3N LED PRO POLYMER**
- STR68554 4AA XENON PROPOLYMER**
- STR68504 4AA LED PROPOLYMER**
- STR33554 3C XENON PROPOLYMER**
- STR33504 3C LED PROPOLYMER**

**ATEX APPROVED PRODUCTS**

Part Number	Description	Approval	Sugg UK List
65082	Stylus Penlight Torch Black/White LED	II 1G EEx ia IIC T1	
65682	Stylus Reach Flexi-lite Black/White LED	II 1G EEx ia IIB T1	
67554	2AA Xenon Propolymer-Orange	II 2G EEx ia IIB T4	
68504	4AA LED Propolymer-Orange	II 2G EEX ib e IIB T4	
33554	3C Xenon Propolymer-Orange	II 2G EEx ib e IIB T4	
33504	3C LED Propolymer-Orange	II 2G EEx ib e IIB T4	
90054	Survivor Zone 1 Rechargeable w/ac/dc Charger-Orange	II 2G EEx e ib lib T3	
90055	Survivor Zone 2 Rechargeable w/ac/dc Charger-Orange	II 3G EEx nL IIC T3	
44501	Vulcan Vehicle Mount Rechargeable Lantern	II 3G EEx n AL IIC T4	
44800	Vulcan Standard System Rechargeable Lantern	II 3G EEx n AL IIC T4	
44405	Fire Vulcan Vehicle Mount Rechargeable Lantern	II 3G EEx n AL IIC T4	
44406	Fire Vulcan Standard Rechargeable Lantern	II 3G EEx n AL IIC T4	