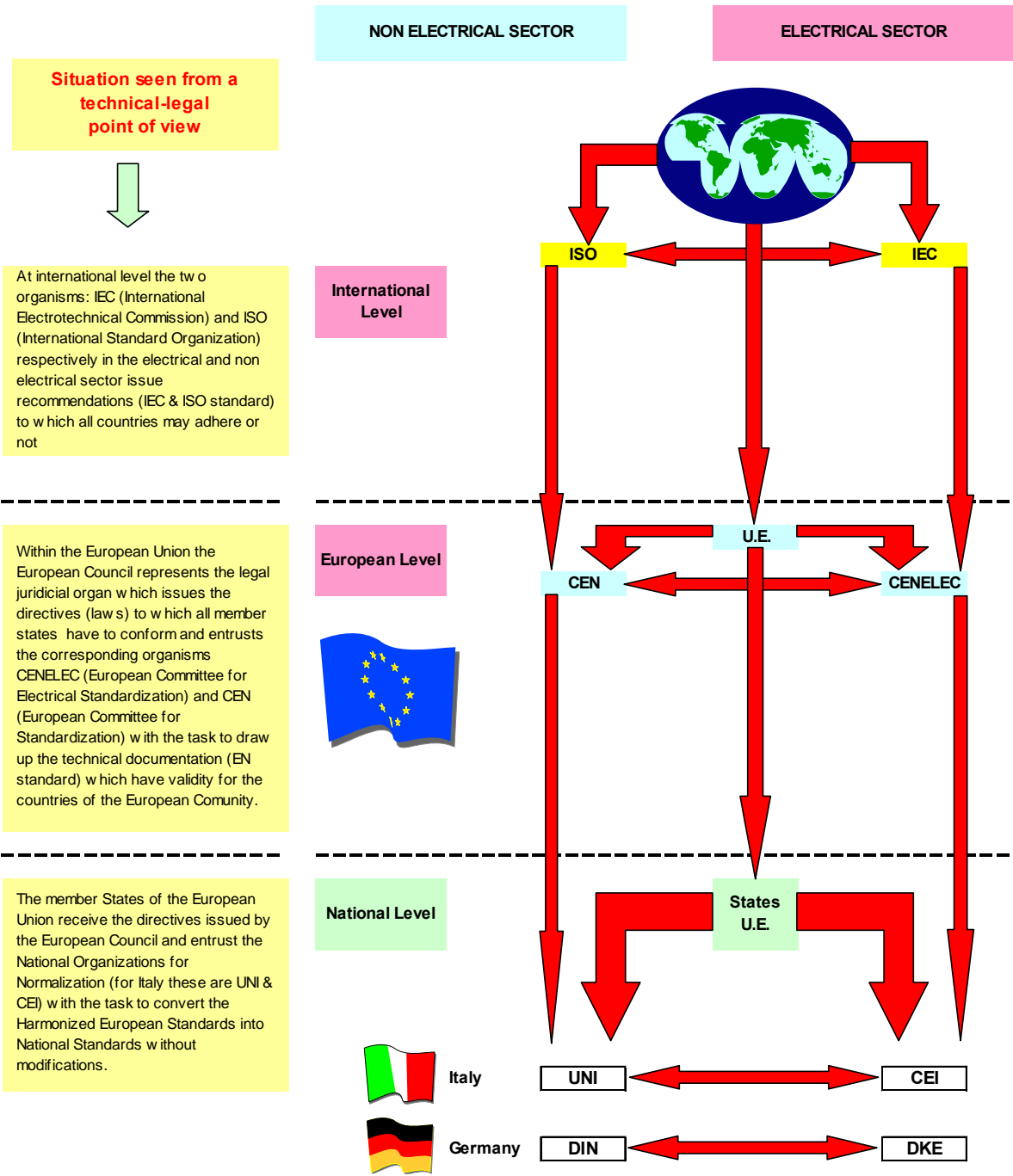







RULES TO BE APPLIED TO AREAS EXPOSED TO EXPLOSION RISK



ATEX codification key of Univer products for use in atmospheres
ATEX marking examples:


CE		II 2 GD c T4 T135°C -10°C ≤ Ta ≤ +60°C X	Mechanic Equipment
CE		II 2 GD E Ex nA II T5 T100°C -20°C ≤ Ta ≤ +75°C X	Electric Equipment
CE		II 2 GD E Ex ia IIC T5 T100°C -20°C ≤ Ta ≤ +75°C X	Electric Equipment
Mechanic Equipment	Electric Equipment	Description	
CE	CE	CE Mark	
		EX mark – (approved for use in potentially explosive atmospheres)	
II	II	Equipment Group I = used in mines II = used in all other EX atmospheres	
2GD	2GD	Equipment Categories G = GAS D = DUST 2G = Used in area 1 2GD = Used in area 21 3G = Used in area 2 3GD = Used in area 22	
	E	Equipment approved by CENELEC	
	EX	Anti-explosion equipment	
c	nA (ia)	Primer protection type nA=Equipment not causing sparks b= Controlled primer sources c= Designed keeping in mind the safety principles d= Flameproof case e= Increased safety fr= Vapour-tight encapsulation ia= Intrinsic safety 1 or 2 events ib= Intrinsic safety 1 event k= Liquid encapsulation m= Encapsulation o= Immersion in oil p= Pressure encapsulation q= Sand filling	
	II	Explosion Group (* See below Different types of gas have different ignition temperatures (a few examples)	
		Group	Type of GAS
			Ignition temperature
			540° C
			485° C
			630° C
			515° C
			556° C
			595° C
		A (*)	605° C
			470° C
			365° C
			370° C
			270° C
			240° C
			140° C
			170° C
			90° C
		II	425° C
		B (*)	429° - 440° C
			305° C
		II	102° C
		C (*)	560° C

(*) II = for all types of gas of group II if the protection degree allows it, ex. "nA" see standard EN 50021

(*) IIA = for all types of gas of group IIA if the protection degree allows it, ex. "ia" see standard EN 50020

(*) IIB = for all types of gas of group IIA if the protection degree allows it, ex. "ia" see standard EN 50020

(*) IIC = for all types of gas of group IIA – IIB – IIC if the protection degree allows, it ex. "ia" see standard EN 50020

Mechanic Equipment	Electric Equipment	Description																																																
T4	T5	Temperature classes (gas)																																																
		Maximum surface temperature which can be reached by an equipment for potential use in explosive gaseous atmosphere (depending on the type of gas).																																																
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ATEX

Term which originates from the abbreviation of
ATmospheres **EX**plosibles
(Explosive atmospheres)

WHAT ARE WE TALKING ABOUT

The standard **94/4/CE** has been created in order to harmonize the laws of the single European States relating to equipment-components as well as the respective protection systems for use in potentially explosive atmospheres. At the beginning known as ATEX 100 and at present named again **ATEX 95** it is the European directive which establishes the minimum safety standard requisites requested for equipment-components.

The directive has been included in the national laws of the member States and applied to the sale and the free commerce of equipment-components and protection systems foreseen for use in potentially explosive atmospheres. It has been **in force as from July 1st 2003**.

In the case of **UNIVER SpA** this directive **refers mainly to the suppliers** of equipment and components.

The directive **99/92/CE** establishes the minimum requisites for the safety of the workers, the defence of their health which might be at risk in potentially explosive atmospheres.

At the beginning known as ATEX 118 and presently renamed **ATEX 137**, this directive concerns mainly constructors and staff for servicing and maintenance of installations working in conditions of potentially explosive atmospheres.

For the equipment of **new construction** the directive is valid as from **July 1st 2003**.

As far as the adaptation of already **existing equipment** is concerned, a transitory adaptation period with expiry **December 31st 2005** has been established.

AIM OF ATEX

The aim of ATEX is to minimize accidents due to explosions;
in Europe every year a few thousands of explosions happen due to dust
and gas mixtures during storage and handling operations
of ignitable substances.

The damage caused by these explosions is estimated in an amount
exceeding **320.000** Euro distributed as follows:

34% wood industry
13 % metal-mechanic industry
11% plastics industry
8% pharmaceutical industry
34% other minor sectors

HOW?

With the application of the European Directives.

**99/92/CE SOCIAL
DIRECTIVE ATEX 137**



**94/9/CE PRODUCT
DIRECTIVE ATEX 95**



THE DIRECTIVES IN DETAIL

It is the **constructor's** concern to draw up the documentation relating to the protections against potential explosions as well as the estimation of the installation risks in compliance with **ATEX 137, Directive 99/92/CE**



Regarding:

- Classification of the areas
 - Temperature classes
 - Explosion groups (gas)
 - Ambient temperature

It is up to the **supplier** of the equipment and components (Univer SpA) to classify them in compliance with **ATEX 95, Directive 94/9/CE**



Regarding:

- Classification of the equipment depending on the categories
 - Temperature classes
 - Explosion groups (Gas)
 - Ambient temperature

Area Gas	Area Dust	Applications	Equipment Group	Equipment Category	Applications
0		Continuous - Frequent	I	M1	Mines
	20	Over long periods	I	M2	
1		Occasional	II		All other application areas except mining
	21				
2		Rarely -	II	1G	Gas, Mixed, Vapour
	22	Over short periods	II	1D	Dust
			II	2G	Gas, Mixed, Vapour
			II	2D	Dust
			II	3G	Gas, Mixed, Vapour
			II	3D	Dust