Explosion proof classifications

Code number of test centre	Test house	Country
0589	Bam	D
0158	DMT	D
0102	PTB	D
0344	KEMA	NL
0600	EECS	UK
0518	SCS	UK
0499	SEE	LUX
0402	SP	S
0163	LOM	SP
0081	LCIE	F
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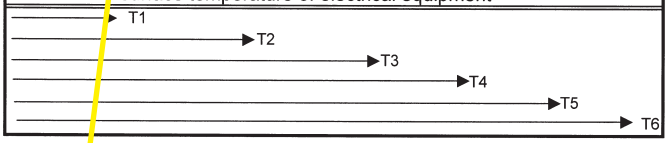
Examples of categorisation of gases and vapours in temperature classes and explosion protection subgroups

Availabel use of the device	subgroup for protection types "d" "i" "n"	gas and vapour					
IIA	IIA	Amonia Methane Ethane Propane	Ethyalcohol Cyclohexan n-Butane	Kerosin allg. aviationfuel n-Hexan	Acetaldehyd		
IIB	IIB	Acrylnitril Stadtgas	Ethylen Ethylenoxid	Ethylenglycol Schwefelwasser- stoff	Ethylether		
IIC	IIC	Hydrogen	Acetylen Ethin				Kohlen- disulfit

Ignition temperature range of mixture

T1	T2	T3	T4	T5	T6
max 450°C	max 300°C	max 200°C	max 135°C	max 100°C	max 85°C

Permissable surface temperature of electrical equipment



CE 0102 Ex II 2G EEx d IIC T4 PTB 01 ATEX 1234 U

inflammable materials	the presence of the potentially explosive atmosphere	devision of explosiv areas	required marking for electrical equipment	
			divece groupe	category
Gases & Vapors	may be present continuosly or for a long period of time	zone 0	II	1G
	may exist some of the time by normal operation	zone 1	II	2G or 1G
	is not likely to exist by normal operation	zone 2	II	3G or 2G or 1G
Dusts	may be present continuosly or for a long period of time	zone 20	II	1D
	may exist some of the time by normal operation	zone 21	II	2D or 1D
	may not likely exist by normal operation	zone 22	II	3D or 2D or 3D
Methane Dust	--	Mining	I	M1
	--	Mining	I	M2 or M1

Special conditions	
Condition	Mark
Electrical device can be used without special conditions	-
Attention to special conditions of use	X
Ex-part that is not certificated for single use. To reach CE-konformitie it must be integrat into complet system	U

Protection principle	Protection Types	Marking	Availabel use of the device at zone	VDE	CENELEC	IEC
				General requirements VDE 0171 part 1	General requirements EN 50014	General requirements 60079-0
preventing ignition of inflammable gas outside the enclosure	Flameproof enclosure	EEx d	1 or 2	VDE 0171 part 5	EN 50018	60079-1
avoidance of spark and high temperature	Increased Safety	EEx e	1 or 2	VDE 0171 part 6	EN 50019	60079-7
Ex- atmosphere cannot reach ignition supplies	Encapsulation	EEx m	1 or 2	VDE 0171 part 9	EN 50028	60079-18
reduce power of energie, thermal and spark effekts under critical conditons	Intrinsically Safe	EEx i	0 , 1 or 2	VDE 0171 part 7 & 8	EN 50020	60079-11