



## Classification by Group

Explosion proof equipment is classified as below depending on the risk characteristic of explosive gas.

EXPLOSION GROUP FLAMMABLE	FLAMMABLE SUBSTANCE	FLAMMABILITY
I	Methane	
IIA	Acetone, Petrol, Methanol, Propane, Toluene	Low
IIB	Ethylene, City gas	High
IIC	Hydrogen, Acetylene, Carbon sulphide	Very High

## Temperature Class Definition

The temperature class is defined as below depending on the surface temperature of the explosion proof equipment.

The range of Maximum surface temperature per temperature class	
The range of Maximum surface temperature(°C)	temperature class
300-450	T1
200-300	T2
135-200	T3
100-135	T4
85-100	T5
Below 85	T6

## The Ignition Class and Temperature of The Explosive Gas

- 1) If the temperature class gets higher from T1 to T6, the ignition temperature gets lower.
- 2) If the explosion group changes from I to C, the explosion gets bigger.

	T1(G1)	T2(G2)	T3(G3)	T4(G4)	T5(G5)	T6(G6)
I	Methane					
IIA	Acetone, Ethane, Ethyl ethanoate Ammonia, Benzol(Pure) Ethanoic acid, Carbon oxide Methane, Methanol, Propane, Toluene Acetic acid, Ethyl acetate Ethyl chloride, Carbon Monoxide Methylene Chloride Naphthalene, Phenol	Ethanol i-Amyl acetate n-Butane n-Butyl alcohol Ethyl alcohol Cyclohexane Acetic anhydride	Benzine Diesel fuel Aircraft fuel Heating oils n-Hexane Petroleum spirit - Gen Jet propulsion fuel Heating fuel DIN 51603	Acetaldehyde Ethyl ether		
IIB	Town gas, Coal gas (lighting gas)	Ethylene Ethylene oxide	Ethylene Ethylene oxide	Ethyl ether		
IIC	Hydrogen	Ethine(Acetylene)				Carbon disulphide