



# Class 1 Division TWO

Groups A, B, C & D

# CI/D2

## Flammable Gases & Vapors

1. Volatile flammable liquids or flammable gases are handled, processed or used, but the hazardous liquids, vapors or gases will normally be confined within closed containers or closed systems from which they can escape only in the event of accidental rupture or breakdown of containers or systems, or as a result of abnormal equipment operation.
2. Ignitable concentrations of gases or vapors are normally prevented by positive mechanical ventilation and which might become hazardous through failure or abnormal operations of ventilating equipment.
3. Adjacent to a Class I, Division 1 location, and where ignitable concentrations of gases or vapors might occasionally be communicated unless such communication is prevented by adequate positive-pressure ventilation from a source of clean air, and effective safeguards against ventilation failure are provided.

## Class 1 Groups

### Group A

- Acetylene

### Group B

- Hydrogen
- Butadiene
- Ethylene Oxide
- Propylene Oxide
- Acrolin

### Group C

- Ethylene
- Cyclopropane
- Ethyl Ether

### Group D

- Propane
- Acetone
- Ammonia
- Benzene
- Gasoline
- Hexane
- Methanol
- Naptha
- Natural Gas
- Ethanol
- Butane
- Toluene

## GAS & VAPOR

### Volatility Temperature Chart

Gas Type by Volatility	Typical Self Ignition
Carbon Disulphide	90°C / 194°F
Ethyl Nitrate	90°C / 194°F
Butane	287°C / 548°F
Acetylene	300°C / 572°F
Ethyl Acetate	425°C / 797°F
Acetone	465°C / 869°F
Benzene	498°C / 928°F
Hydrogen	500°C / 932°F
Industrial Methane	535°C / 995°F
Carbon Monoxide	605°C / 1,121°F
Ammonia	650°C / 1,202°F

## T - RATING CHART

T-CODES		MAX Surface Temperature
NEC 505	NEC 500	
T1	T1	450°C / 842°F
T2	T2	300°C / 572°F
	T2A	280°C / 536°F
	T2B	260°C / 500°F
	T2C	230°C / 446°F
	T2D	215°C / 419°F
T3	T3	200°C / 392°F
	T3A	180°C / 356°F
	T3B	165°C / 329°F
	T3C	160°C / 320°F
T4	T4	135°C / 275°F
	T4A	120°C / 248°F
T5	T5	100°C / 212°F
T6	T6	85°C / 185°F