



## AIT & Temperature Class

The Auto Ignition Temperature of substances and the Temperature Class of Equipment are related.

The Auto Ignition Temperature of substances is the lowest temperature in which the substance spontaneously ignites in a normal atmosphere without an external source of ignition, such as a flame or spark. This temperature is required to supply the activation energy needed for combustion.

The surface of equipment, to be used in hazardous areas, may not exceed the AIT of the substance that causes the hazardous area. The following temperature classes are known:

Temperature class	Maximum Surface Temp Equipment [°C]	AIT Substance [°C]
T1	< 450	> 450
T2	< 300	> 300
T3	< 200	> 200
T4	< 135	> 135
T5	< 100	> 100
T6	< 85	> 85

Example:

The AIT of 1-Butanol is 343°C. Which temp class may the equipment that is placed in the hazardous area have?

Answer:

The temperature class of the equipment may be T2 to T6 but **not** T1!

The AIT of substances and the needed Temp class of equipment are available from the substance database in Hazcalc.