

NEC vs IEC Hazardous Area Classification

NEC Class I, Division 2	IEC Zone 2
<p>Definitions</p> <p>Location in which ignitable concentrations of flammable gases, vapors, or liquids are present within the atmosphere under abnormal operating conditions.</p> <p>Temperature Class Equivalencies</p> <ul style="list-style-type: none"> • T1 (450°C) • T2 (300°C) • T2A (280°C) • T2B (260°C) • T2C (230°C) • T2D (215°C) • T3 (200°C) • T3A (180°C) • T3B (165°C) • T3C (160°C) • T4 (135°C) • T4A (120°C) • T5 (100°C) • T6 (85°C) <p>Gas Group Equivalencies</p> <ul style="list-style-type: none"> • Group A <ul style="list-style-type: none"> ◦ Acetylene • Group B <ul style="list-style-type: none"> ◦ Hydrogen • Group C <ul style="list-style-type: none"> ◦ Ethylene • Group D <ul style="list-style-type: none"> ◦ Methane (Natural Gas) 	<p>Definitions</p> <p>Area in which an explosive gas atmosphere is likely to occur during abnormal operation and, if it does occur, will persist for a short period only.</p> <p>Temperature Class Equivalencies</p> <ul style="list-style-type: none"> • T1 (450°C) • T2 (300°C) • N/A • N/A • N/A • N/A • T3 (200°C) • N/A • N/A • N/A • T4 (135°C) • N/A • T5 (100°C) • T6 (85°C) <p>Gas Group Equivalencies</p> <ul style="list-style-type: none"> • Group IIC • Group IIC • Group IIB • Group IIA

API RP 14F, 5th Edition, Sec. 4.4.1 – “Equipment approved for locations classified as Zone 0, Zone 1, or Zone 2, is permitted in a Division 2 location of the same Group (or a Group having more onerous requirements, see 4.6.3.2), provided that the surface temperature of the equipment, as indicated by its Temperature Class, is below the auto-ignition temperature of any gas or vapor that may be present. Relevant types of Zone rated equipment are described in API 14FZ.”