ATEX Explained

A brief Introduction

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ATEX Zones

- Zones 1 (gas) or 21 (dust)
  (area in which under normal operation a potentially explosive atmosphere can occasionally form)

Picture and table on next slide: [http://www.ecom-ex.co.uk](http://www.ecom-ex.co.uk)
HID ATEX Certified Tags 1/2

- HID Glass Tags and IN Tags are ATEX certified II 2G Ex ia IIA T5 Gb – see [certificates](#)

- Our ATEX marking means:
  - **II** – all other explosive areas (all except mining)
  - **2** – can be used in zones 1 or 21
  (area in which under normal operation a potentially explosive atmosphere can occasionally form)
  - **G** – Gas (as opposed to **D** – Dust)
  - **Ex** – ATEX certified
  - **ia** – intrinsic safety (permitted for zone 0)
    The development of inadmissibly high temperatures, ignition sparks and arcs are avoided due to the restriction of energy in the circuit
  - **IIA** – Explosion group like Propane
  - **T5** – 212° F / 100° C
  - **Gb** – Equipment Protection Level (EPL) = Zone 1 or 21
HID ATEX Certified Tags 2/2

- All HID LogiTag™ are ATEX certified
  II 1G Ex ia IIC T4 Ga and I M1 Ex ia I Ma (mining)

- Our ATEX marking means:
  - II – all other explosive areas (all except mining)
  - 1 – can be used in zones 0 or 20
    (area in which under normal operation a potentially explosive atmosphere is continually present – no human working there)
  - G – Gas (as opposed to D – Dust)
  - Ex – ATEX certified
  - ia – intrinsic safety (permitted for zone 0)
    The development of inadmissibly high temperatures, ignition sparks and arcs are avoided due to the restriction of energy in the circuit
  - IIC – Explosion group like Hydrogen
  - T4 – 275° F / 135° C Max. Temperature
  - Ga – Equipment Protection Level (EPL) = Zone 0 or 20
Whether passive RFID tags need an ATEX certification at all, is not clearly defined by the standard. Any items only need a certification, if they are a potential ignition cause.

Experts say, certification for tags is not mandatory, still an existing certification helps to avoid any doubts when the customer certifies his whole production system (what he always needs to do).

In practice any passive RFID tag is ATEX compliant (because they don’t cause ignitions), but not all of them are certified.

Certified items need to be marked with ATEX Logo and certification string so that on-site it is always obvious that this is a certified equipment.

Mining and non-mining certificates are separate.

ATEX is an European norm, internationally it’s represented by IECEX which is similar, but not identical.

List of ATEX „Notified Bodys“ for certification.
Higher certification also allows for use in lower categories e.g. Zone 0/Hydrogen also includes Zone 2/propane

Temperature value is maximum surface temperature of device (environment + added heat by device operation e.g. Motor which for passive tags = environment). Lower temperature class (T6) is better

Gas and dust are separate certificates

In zone 0 no human is allowed to work, usually these areas are extra protected e.g. by reducing the oxygen level

Higher explosion group e.g. Hydrogen can explode with lower ignition energy, but explosion is very fast. Most industrial damage is caused by lower explosion groups which is slower and burns

 Anything that can burn, can typically also explode if milled to fine enough dust, because the surface exposed to oxygen gets bigger
Questions and Answers