

ATEX Belts for Explosive Atmospheres



Materials in gas or dust form can become flammable or combustible even if they are normally not. This may create a potentially explosive environment. Explosions can cause material damage, injuries to workers, and in the worst case a fatal accident.

Equipment in these environments can only be used safely if they comply with specific regulations. Since July 2003 these are documented in European legislation: the ATEX directives. The object is not only to prevent an explosion, but also to minimise the effects of an occurring explosion. The guidelines specifically include non-electrical components, like a belt used in a conveyor system.

Initially the law was only mandatory for new and changed equipment (electrical and non-electrical, including components). However, since June 2006 existing equipment must also be compliant.

ATEX consists of two directives:

- ATEX 137 Worker Protection Directive 99/92/EC for users to protect workers from the risks through organizational and technical measures. Measures are e.g. a risk assessment and ATEX 95 compliant equipment.
- ATEX 95 Equipment Directive 94/9/EC for manufacturers of equipment and components. Depending on the category, equipment must be certified by a notified body to obtain an EC Type Examination Certificate and marked with the 'Ex' mark. A self assessment may also be sufficient.

As a world-wide manufacturer of process and conveyor belts, Ammeraal Beltech takes the responsibility for health and safety of workers in hazardous areas and offers an extensive ATEX product range. ATEX qualified belts are developed using the most modern techniques, based on high quality materials and expert knowledge. The belts are suitable to be used in the most common potentially explosive zones.

Conveyor Belting and ATEX



Gas, vapours and dust can form explosive atmospheres with air.

Risk areas in the food industry include powders, pips, fish, grain, coffee, cocoa, carrot, malt, tea, tomato, wheat, sugar etc. In non-food industries these may be aluminium, brake dust, rubber, jute, cork, leather, paper, powder, textiles, fibres, peat, cellulose, wood and animal feeds. In all these industries numerous process and conveyor belts are used.

A belt conveyor is an electrical installation. The belt itself is part of the conveyor but it is a non-electrical component. As soon as it is built into a conveyor however, it is not just a plain component. Due to the continuous separation and slippage of the contact surfaces of belt and conveyor, the moving surface can acquire a considerable charge of static electricity or overheating. This can become an ignition hazard. This is why measures are always taken to prevent electrostatic build-up and the risk of uncontrolled discharge, such as antistatic or high conductive belts, use of electric conductive materials and sufficient earthing of the conveyor.

The ATEX certification of the complete installation is the responsibility of either the Original Equipment Manufacturer or the end user. The lowest classified component defines the category of the entire device. Conveyors (electrical) must meet category 2 or 1. The built-in belt can be of category 3 (as being a non-electrical component) as long as it is built-in correctly and suitable for the application. Consequently the conveyor can get the certification.

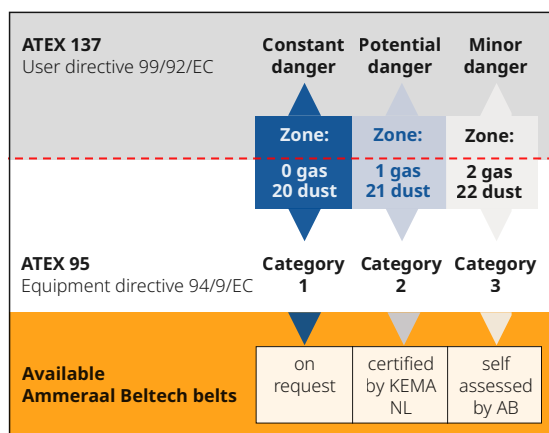


Category 3 is in fact sufficient for belts, but for ease and comfort a number of Ammeraal Beltech belts are examined by a notified body resulting in a category 2 declaration. Instant replacement of a belt in an existing installation certified for category 2 can only be done with a belt certified for this category. Belts for category 1 equipment need not to be certified because the customer is doing this in the process of certification of the conveyor.

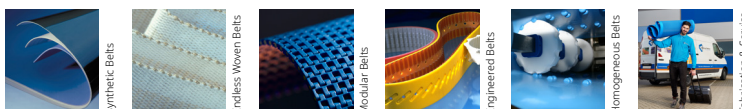
ATEX distinguishes between two explosion groups:

- Group I for underground mines;
- Group II for other industries.

ATEX directives for Group II Non-mining



Ammeraal Beltech supplies belting for application in risk manufacturing areas in many market segments. The belts are either certified for category 2 by the Dutch notified body 'KEMA' (approval number KEMA 05ATEX2164U) or self-assessed for category 3. All belt accessories (e.g. tracking ropes, carriers, Bordoflex corrugated sidewalls and Amseal closed belt edges) are also approved for ATEX environments.



Expert advice and quality solutions for all your belting needs.
ammeraalbeltech.com

Ammeraal Beltech
P.O. Box 38
1700 AA Heerhugowaard
The Netherlands

T +31 (0)72 575 1212
info@ammeraalbeltech.com

ammera.com

This information is subject to alteration due to continuous development. Ammeraal Beltech will not be held liable for the incorrect use of the above stated information. This information replaces previous information. All activities performed and services rendered by Ammeraal Beltech are subject to general terms and conditions of sale and delivery, as applied by its operating companies.