FESTO

Declaration

Date
10 May 2016

Replacement of directive 94/9/EC with directive 2014/34/EU

Directive 94/9/EC was replaced by directive 2014/34/EU on the 20th of April, 2016.

The scope of directive 2014/34/EU is identical to that of 94/9/EC. The state-of-the-art for the evaluation of the ignition hazard of non-electrical products has not changed to date either.

For this reason, confirmations, declarations and certificates concerning the use of non-electrical devices in potentially explosive atmospheres issued thus far in accordance with directive 94/9/EC shall retain their validity until further notice.

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Date
July, 15. 2015

for the use of equipment not subject to mandatory approval in potentially explosive atmospheres

- Simple mechanical products without moving parts do not have own sources of ignition. They do not therefore fall within the scope of application of the EU Directive 94/9/EC.

  Examples of products without own sources of ignition are (list does not claim to be complete):
  - Mounting components
  - Assembly and connection components
  - Sub-bases or manifolds
  - Pneumatic fittings, couplings and distributors (exception: Tapered ISO R threads with PTFE coating)

- The following mechanical products/product groups include moving parts.
  They can be used in zones 1, 2, 21 and 22 if the products are assessed by the user in accordance with DIN EN 13463-1 during the course of an ignition hazard evaluation of his system.

  - AND/ OR blocks
  - Quick exhaust valves
  - Vacuum generators (pneumatically)
  - Mechanically actuated valves
  - Cylinder signal generators
  - Flow control/ silencers

  Allowance must be made for possible ignition sources which are created through the installation or use of the products, such as:
  - Impacts or frictional processes acting on the products or their connecting components may generate mechanical sparks or hot surfaces.
  - Charge-generating processes in the environment may cause the products to become electrostatically charged.
  - Stray electric currents in sections of installations may result in potential differences if conductive objects are not connected to the equipotential bonding system or if there is no electrical connection to installation components.
  - The devices may only be operated with compressed air. Compressed air must not be drawn in from potentially explosive atmospheres.
  - Out-flowing exhaust air and leaks may stir up dust deposits, thus resulting in a potentially explosive atmosphere.

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- Pneumatic tubing with low electrical conductivity may become electrostatically charged even when used as intended if contaminated compressed air is led through. However, depending on the zone in which the tubing is used, the static electricity may not represent an effective ignition source if the following conditions are met (see EN 60079-0:2012).

Zone	Equipment Protection level	Maximum permissible tubing diameter [mm] depending on explosion group		
		IIA	IIB	IIC
0	EPL Ga	3	3	1
1	EPL Gb	30	30	20
2	EPL Gc	30	30	20

For Zones 20, 21 and 22 or equipment protection levels Da, Db and Dc, there are no corresponding specifications in standards regarding limitation of diameter. Since the minimum ignition energy of dust clouds is greater than that of gases in explosion group IIA, it is recommended that, in potentially explosive dust atmospheres, the permissible diameters of non-conductive tubing should be selected in accordance with the specifications for zones 0, 1 and 2 for gases in explosion group IIA.

Tubing of larger diameter can be used. Before this is done, a safety assessment must be carried out, and if necessary protection must be provided in the application against electrostatic charges and discharges. This is the responsibility of the operator.

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