

Conveyor belts for general purpose use — Electrical and flammability safety requirements

The European Standard EN 12882:2001 has the status of a
British Standard

ICS 53.040.20; 13.220.40

National foreword

This British Standard is the official English language version of EN 12882:2001. It supersedes BS 490-3:1991 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/67, Conveyor belts, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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This British Standard, having been prepared under the direction of the Materials and Chemicals Sector Policy and Strategy Committee, was published under the authority of the Standards Policy and Strategy Committee on 27 February 2002

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Conveyor belts for general purpose use - Electrical and flammability safety requirements

Courroies transporteuses à usage général - Prescriptions de sécurité électrique et protection contre l'inflammabilité

Fördergurte für allgemeine Anwendung - Elektrische und brandtechnische Sicherheitsanforderungen

This European Standard was approved by CEN on 12 November 2001.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 188 “Conveyor belts”, the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2002, and conflicting national standards shall be withdrawn at the latest by June 2002.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EC Directive(s).

For relationship with EC Directive(s), see informative annex ZA, which is an integral part of this standard.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Annex A is informative.

Introduction

During the preparation of this European Standard, the hazards which have been identified as being directly related to the use of conveyor belts are:

- a) hazards associated with the discharge of static electrical energy;
- b) hazards associated with the impingement of small naked flames on the cover and/or carcass of a conveyor belt at rest;
- c) hazards caused by the stalling of a conveyor belt and the continued operation of the driving mechanism causing localized heating of the conveyor belt through contact with the driving drum or cylinder or some other source of frictional heat;
- d) hazards caused by the propagation of a flame along a belt which has been exposed to a relatively high energy source such as a fire;

The risk, or probable rate of occurrence of these hazards and the degree of harm they can cause will vary depending upon the particular circumstances of the application or site of application, which are many and varied. Consequently the level of safety required will vary from one application to another, depending upon the risks judged to be pertinent.

The hazards listed above should not be taken as the only properties affecting safety in operation. Other aspects such as Health or Environmental requirements should be considered. Depending on the individual end use requirement, these other factors can affect the category of belt selected and additional safety precautions may need to be employed.

This European Standard is therefore designed to enable the user to select the category of conveyor belt most suited to the particular circumstances of the application.

1 Scope

This European Standard specifies electrical and flammability safety requirements for general purpose conveyor belts not intended for use in underground installations and a means of categorizing conveyor belts in terms of the level of safety sought in their end use application. This European Standard does not provide electrical safety requirements for volume resistance which may be measured by the methods in EN 1637 and which is relevant to some types of light conveyor belts.

NOTE Directive 94/9/EC concerning equipment and protective systems intended for use in potentially explosive atmospheres can be applicable to the type of machine or equipment covered by this European Standard. The present standard is not intended to provide means of complying with the essential health and safety requirements of Directive 94/9/EC.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 292-2	Safety of machinery - Basic concepts, general principles for design - Part 2 :Technical principles and specification.
prEN 619	Continuous handling equipment and systems - Safety and EMC requirements for equipment for mechanical handling of unit loads.
prEN 620	Continuous handling equipment and systems - Safety and EMC requirements for fixed belt conveyors for bulk materials.
EN 873	Light conveyor belts - Principal characteristics and applications.
EN 1554:1998	Conveyor belts - Drum friction testing.
EN 1637	Light conveyor belts - Test methods for the measurement of the electrical resistances.
EN 1718	Light conveyor belts - Test method for the measurement of the electrostatic field generated by a running light conveyor belt.
prEN 12881-1:1997	Conveyor belts - Fire simulation flammability testing - Part 1: Propane gallery tests.
EN 20284	Conveyor belts - Electrical conductivity - Specification and method of test (ISO 284:1982).
EN 20340	Conveyor belts - Flame retardation – Specifications and test method (ISO 340:1988).