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**ELECTRICAL APPARATUS FOR USE IN THE
PRESENCE OF COMBUSTIBLE DUST.
PART 2-1: TEST METHODS - METHODS FOR
DETERMINING THE MINIMUM IGNITION
TEMPERATURES OF DUST**

National Standards
Authority of Ireland
Dublin 9
Ireland

Tel (01) 807 3800
Tel (01) 807 3838

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NORME EUROPÉENNE
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English version

**Electrical apparatus for use in the presence of combustible dust
Part 2-1: Test methods - Methods for determining
the minimum ignition temperatures of dust**

Matériels électriques destinés à être
utilisés en présence de poussières
combustibles
Partie 2-1: Méthodes d'essai
Méthodes de détermination de la
température minimale d'inflammation de
la poussière

Elektrische Betriebsmittel zur Verwen-
dung in Bereichen mit brennbarem Staub
Teil 2-1: Untersuchungsverfahren
Verfahren zur Bestimmung der
Mindestzündtemperatur von Staub

This European Standard was approved by CENELEC on 1998-09-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

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 CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 31 Electrical apparatus for explosive atmospheres. The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC EN 50281-2-1 on 1998-09-01.

This European Standard was prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and supports the essential health and safety requirements of the EC Directive 94/9/EC.

The following dates have been fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 1999-09-01
- latest date by which national standards conflicting
with the EN have to be withdrawn (dow) 1999-09-01

Annexes designated "normative" are part of the body of the standard.
In this standard, annexes A and B are normative.

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Introduction

This European Standard describes methods for determining the minimum ignition temperature of dust for the purpose of selecting electrical apparatus. These are:

- Method A: Dust layer on a heated surface at a constant temperature (clause 4);
- Method B: Dust cloud in a furnace at a constant temperature (clause 5).

Method A determines the minimum ignition temperature of a **dust layer** on a prescribed heated surface.

Method B determines the minimum ignition temperature of a **dust cloud** within a prescribed heated furnace.

The test methods are of a general nature, and may be used for purposes of comparison, but in certain industrial situations further tests may be necessary.

The methods for determining the minimum ignition temperatures are not suitable for use with recognized explosives, for example, gunpowder, dynamite, or mixtures of substances which may, under some circumstances, behave similarly.

Where there is doubt, an indication of the existence of a hazard due to explosive properties may be obtained by testing a very small quantity of the dust on a surface at 400 °C or higher, located remotely from the operator.

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