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TECHNICAL SPECIFICATION

Explosive atmospheres –
Part 48: Portable or Personal Electronic Equipment – Guide for the use of equipment without a certificate for use in Hazardous Areas

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FOREWORD

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IEC TS 60079-48 has been prepared by subcommittee 31J: Classification of hazardous areas and installation requirements, of IEC technical committee 31: Equipment for explosive atmospheres. It is a Technical Specification.

The text of this Technical Specification is based on the following documents:

Draft	Report on voting
31J/347/DTS	31J/352/RVDTS

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Technical Specification is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 60079 series, published under the general title *Explosive atmospheres*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

Suitable portable or personal equipment might not be commercially available with a certificate for use in hazardous areas, but might be needed for operational or health and safety reasons or could commonly be used as personal items. The acceptance of equipment without a certificate for use in hazardous areas would depend on the user organization policies and risk or needs assessment.

This document is intended to assist users in understanding the potential for ignition from such equipment. This guidance could be further limited by regulations in some countries.

This document addresses hazards relevant to portable and personal electronic equipment such as, spark ignition, hot surfaces, mechanically generated sparks, static electricity, radio frequency, ultrasonic energy, and optical radiation.

EXPLOSIVE ATMOSPHERES –

Part 48: Portable or Personal Electronic Equipment – Guide for the use of equipment without a certificate for use in Hazardous Areas

1 Scope

This part of IEC 60079, which is a Technical Specification, provides guidance for an owner or operator for the use of portable or personal electronic equipment to be used in hazardous areas requiring Equipment Protection Level (EPL) Gb, Gc, Db, or Dc that are not otherwise commercially available with a certificate.

NOTE 1 This document is not intended to be used for certification purposes for equipment to be used in hazardous areas.

NOTE 2 Examples of some of these types of equipment are provided in Annex A.

NOTE 3 EPLs are derived from the hazardous area zones based on an additional risk assessment. The default relationship without a risk assessment in IEC 60079-14 is Zone 1 as EPL Gb, Zone 2 as EPL Gc, Zone 21 as EPL Db and Zone 22 as EPL Dc.

This document does not apply to:

- equipment that is electrically connected to fixed equipment or fixed wiring during use in the hazardous area, for example a lead light connected to the premises wiring system by a plug and socket,
- portable or personal equipment with a certificate for use in a hazardous area,
- transportable equipment,
- portable or personal equipment used in Group I applications,
- battery powered tools, such as drills and saws,
- portable or personal equipment used in areas requiring EPL Ga or Da equipment, or,
- medical devices.

NOTE 4 Devices which are implanted in the body are not exposed to atmosphere and are therefore not subject to hazardous area requirements, for example, pacemakers. The risk from other medical devices external to the body is beyond the scope of this document.

This document does not address other considerations involving the use of portable or personal electronic equipment for other aspects of safety, for example, creation of a distraction from important work tasks, radio frequency interference with measurement and control equipment, or medical issues.

This document supplements the guidance in IEC 60079-14 regarding the use of personal or portable equipment without a certificate for use in hazardous areas.

NOTE 5 IEC 60079-14 requires that equipment with a certificate for hazardous areas should be used where possible and equipment without a certificate for hazardous areas should be subject to a risk assessment.

NOTE 6 It is not a requirement of this document that equipment is evaluated for fault conditions since this would be beyond the ability of the end user assessment.

2 Normative References

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For undated references the latest edition of the referenced document (including any amendments) applies.

IEC 60079-10-1, *Explosive atmospheres – Part 10-1: Classification of areas – Explosive gas atmospheres*

IEC 60079-10-2, *Explosive atmospheres – Part 10-2: Classification of areas – Explosive dust atmospheres*

IEC TS 60079-32-1, *Explosive atmospheres – Part 32-1: Electrostatic hazards, guidance*