IEC System for certification to standards relating to equipment for use in Explosive Atmospheres (IECEx System)

Application to become an ExTL in the IECEx Certified Equipment Scheme

IECEx ExTL application for <Insert body name>

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

CONTENTS

[**Introduction** 4](#_Toc127537725)

[1 Application introduction 4](#_Toc127537726)

[2 Description of the testing laboratory 4](#_Toc127537727)

[3 List of standards for scope 4](#_Toc127537728)

[4 Additional Information 4](#_Toc127537729)

[5 Number of test reports issued 4](#_Toc127537730)

[6 Participation in IECEx Proficiency Testing Program 5](#_Toc127537731)

[7 Declaration 5](#_Toc127537732)

[8 Endorsement of Member Body 5](#_Toc127537733)

[Annex A Requested scope for IECEx Certified Equipment Scheme 6](#_Toc127537734)

[A.1 Current standards 6](#_Toc127537735)

[A.2 Superseded standards 7](#_Toc127537736)

[Annex B Overall Organisation Chart 9](#_Toc127537737)

[Annex C Organisation Chart of ExTL 10](#_Toc127537738)

[Annex D 11](#_Toc127537739)

[(normative) 11](#_Toc127537740)

[Additional information to be provided by a testing laboratory in applying for acceptance as an ExTL 11](#_Toc127537741)

[D.1 Testing laboratory contact details 11](#_Toc127537742)

[D.2 ExTL site contact details 11](#_Toc127537743)

[D.3 Senior management 11](#_Toc127537744)

[D.3.1 Senior executives 11](#_Toc127537745)

[D.3.2 Quality management system representatives 11](#_Toc127537746)

[D.3.3 Principal contact 11](#_Toc127537747)

[D.3.4 Organization chart 11](#_Toc127537748)

[D.4 Employees 11](#_Toc127537749)

[D.4.1 Total numbers 11](#_Toc127537750)

[D.4.2 Ex testing personnel 11](#_Toc127537751)

[D.4.3 Professional qualifications 11](#_Toc127537752)

[D.5 Equipment 11](#_Toc127537753)

[D.6 Test facilities and services 12](#_Toc127537754)

[D.6.1 Testing services 12](#_Toc127537755)

[D.6.2 Existing recognitions 12](#_Toc127537756)

[D.6.3 Subcontract work 12](#_Toc127537757)

[D.7 Other information 12](#_Toc127537758)

[D.7.1 Relations with other organizations 12](#_Toc127537759)

[D.7.2 Other information 12](#_Toc127537760)

[D.8 Quality management policy 12](#_Toc127537761)

[D.8.1 Quality policy 12](#_Toc127537762)

[D.8.2 Responsibility and authority 12](#_Toc127537763)

[D.8.3 Unqualified staff 12](#_Toc127537764)

[D.8.4 Internal audits 12](#_Toc127537765)

[D.9 Work instructions 12](#_Toc127537766)

[D.9.1 Access to documentation 12](#_Toc127537767)

[D.9.2 Change management 12](#_Toc127537768)

[D.9.3 Process control 12](#_Toc127537769)

[D.9.4 Document and data control 13](#_Toc127537770)

[D.9.5 Obsolete data 13](#_Toc127537771)

[D.10 Personnel 13](#_Toc127537772)

[D.10.1 Professional standards 13](#_Toc127537773)

[D.10.2 Training 13](#_Toc127537774)

[D.11 Test equipment and calibration 13](#_Toc127537775)

[D.11.1 Accuracy of measurements 13](#_Toc127537776)

[D.11.2 List of test equipment and calibration status 13](#_Toc127537777)

[D.11.3 Test environment 13](#_Toc127537778)

[D.11.4 Calibration procedures 13](#_Toc127537779)

[D.11.5 Reference standards 13](#_Toc127537780)

[D.12 Testing procedures 13](#_Toc127537781)

[D.12.1 Procedures 13](#_Toc127537782)

[D.12.2 Environments 13](#_Toc127537783)

[D.12.3 Environmental Testing 13](#_Toc127537784)

[D.12.4 Access Control 14](#_Toc127537785)

[D.12.5 Deficiencies Detection 14](#_Toc127537786)

[D.13 Handling and storage 14](#_Toc127537787)

[D.13.1 Instructions 14](#_Toc127537788)

[D.13.2 Storage Areas 14](#_Toc127537789)

[D.13.3 Storage Methods 14](#_Toc127537790)

[D.13.4 Inspection 14](#_Toc127537791)

[D.13.5 Access to Storage 14](#_Toc127537792)

[D.13.6 Samples Storage 14](#_Toc127537793)

[D.14 Records 14](#_Toc127537794)

[D.14.1 Records System 14](#_Toc127537795)

[D.14.2 Observations and Calculations 14](#_Toc127537796)

[D.14.3 Records Assurance 14](#_Toc127537797)

[D.15 Test reports 14](#_Toc127537798)

[D.15.1 ISO/IEC 17025 Requirements 14](#_Toc127537799)

[D.15.2 Arrangements with ExCBs 14](#_Toc127537800)

[D.16 Preparedness for assessment 15](#_Toc127537801)

[D.16.1 Requirements confidence 15](#_Toc127537802)

[D.16.2 Assessment Date 15](#_Toc127537803)

[D.16.3 Special Urgency 15](#_Toc127537804)

[Annex E Proficiency Testing Program 16](#_Toc127537805)

**Introduction**

This document specifies requirements for an application to become an IECEx Testing Laboratory (ExTL) in the IECEx Certified Equipment Scheme. The document supersedes and replaces F-009, Edition 3.0

This document has been published to align with IECEx Edition 8.1 and later Editions by transferring the details of Annex A from F-003 into this document (as Annex B required completion of Annex C, the contents of Annex C of IECEx 02, Edition 8.0 have been included in this Form as a new Annex D)

# Application introduction

………………………………………………………………………………….(name of Applicant ExTL)

makes the following application in accordance with 11.2.3 of IECEx 02.

# Description of the testing laboratory

|  |  |
| --- | --- |
| Name of the laboratory. |  |
| Organisation chart(s).  *[Include in Annexes B and C]* |  |
| The legal status of the laboratory. |  |
| The address(es) at which it carries out its operations. |  |
| The means by which the laboratory will demonstrate compliance with ISO/IEC 17025. |  |
| The documents available for providing supporting information, for example with regard to existing accreditation. |  |
| The relationship between the laboratory and the Ex Certification Body(ies) used in the course of its work (including the case where the testing laboratory is integral with the Certification Body). |  |
| The responsibilities concerning assessment and testing\*. |  |

\*An explanation of how the laboratory is recognised at national level

# List of standards for scope

In Annex A, note the Standards (in the third column), including the latest edition, to which the laboratory intends to conduct tests. These will form the scope of the ExTL when accepted.

NOTE All standards requested for the ExTL scope must also be in the scope of (at least one of) the associated ExCB(s).

# Additional Information

The information required in Annex D of this Form

# Number of test reports issued

Number of test reports issued in preceding two years for each type of protection covered by the standards listed in Annex A.

NOTE This information is required to understand the level of experience that the applicant ExTL has in conducting testing for each of the types of protection.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Standard numbers | Type of protection or other identifying information | Number of issued test reports (for last 2 years) | | Total |
|  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  | *[Add extra rows where required]* |  |  |  |

# Participation in IECEx Proficiency Testing Program

Information should be provided in Annex E on participation in the IECEx Proficiency Testing Program.

The above shall indicate completion of one or more programs as required by OD 202, or the means by which the applicant proposes to demonstrate satisfactory compliance with past programs, for example by demonstrating tests on program artefacts.

NOTE It is anticipated the bodies will have prior/current involvement in IECEx or similar proficiency testing programs to satisfy the requirements of ISO/IEC 17025. Lack of involvement in proficiency testing can be expected to result in additional time for the initial assessment to witness additional tests.

# Declaration

The laboratory undertakes to abide by the Rules and Procedures laid down in Publication IECEx 02.

(Signature)

(Name)

(Role)

(Date)

# Endorsement of Member Body

Endorsement of the IECEx Member Body

(Signature)

(Name)

(Role)

(Name of country, which may be the country of the ExTL or of the associated ExCB)

(Date)

1. Requested scope for IECEx Certified Equipment Scheme
   1. Current standards

| Number  *Add other Standards*  *or later Editions*  *as required* | Title | Comments |
| --- | --- | --- |
| IEC 60079-0  Edition 7.0 | Explosive atmospheres - Part 0: Equipment - General requirements |  |
| IEC 60079-1  Edition 7.0 | Explosive atmospheres - Part 1: Equipment protection by flameproof  enclosures “d” |  |
| IEC 60079-2  Edition 6.0 | Explosive atmospheres - Part 2: Equipment protection by pressurized enclosure “p” |  |
| IEC 60079-5  Edition 4.1 | Explosive atmospheres - Part 5: Equipment protection by powder filling “q” |  |
| IEC 60079-6  Edition 4.1 | Explosive atmospheres - Part 6: Equipment protection by liquid immersion “o” |  |
| IEC 60079-7  Edition 5.1 | Explosive atmospheres - Part 7: Equipment protection by increased safety "e" |  |
| IEC 60079-11  Edition 7.0 | Explosive atmospheres - Part 11: Equipment protection by intrinsic safety “i” |  |
| IEC 60079-13  Edition 2.0 | Explosive atmospheres - Part 13: Equipment protection by pressurized room "p" and artificially ventilated room "v" |  |
| IEC 60079-15  Edition 5.0 | Explosive atmospheres – Part 15: Equipment protection by type of protection "n" |  |
| IEC 60079-18  Edition 4.1 | Explosive atmospheres – Part 18: Equipment protection by encapsulation “m” |  |
| IEC 60079-25  Edition 3.0 | Explosive atmospheres – Part 25: Intrinsically safe electrical systems |  |
| IEC 60079-26  Edition 4.0 | Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga |  |
| IEC 60079-28  Edition 2.0 | Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation |  |
| IEC 60079-29-1  Edition 2.1 | Explosive atmospheres - Part 29-1: Gas detectors – Performance requirements of detectors for flammable gases |  |
| IEC 60079-29-4  Edition 1.0 | Explosive Atmospheres – Part 29-4: Gas detectors - Performance requirements of open path detectors for flammable gases |  |
| IEC/IEEE 60079-30-1  Edition 1.0 | Explosive atmospheres – Part 30-1: Electrical resistance trace heating – General and testing requirements |  |
| IEC 60079-31  Edition 3.0 | Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t" |  |
| IEC TS 60079-32-1  Edition 1.1 | Explosive atmospheres - Part 32-1: Electrostatic hazards, guidance  (may be used for testing purposes but not for issuing an IECEx Certificate of Conformity) |  |
| IEC 60079-32-2  Edition 1.0 | Explosive atmospheres - Part 32-2: Electrostatics hazards - Tests  (may be used for testing purposes but not for issuing an IECEx Certificate of Conformity) |  |
| IEC 60079-33  Edition 1.0 | Explosive atmospheres – Part 33: Equipment protection by special protection “s” |  |
| IEC 60079-35-1  Edition 1.0 | Explosive atmospheres – Part 35-1: Caplights for use in mines susceptible to firedamp – General requirements – Construction and testing in relation to the risk of explosion |  |
| IEC 60079-35-2  Edition 1.0 | Explosive atmospheres – Part 35-2: Caplights for use in mines susceptible to firedamp – Performance and other safety-related matters |  |
| IS0 80079-36  Edition 1.0 | Explosive atmospheres - Part 36: Non-electrical equipment for explosive atmospheres – Basic method and requirements |  |
| ISO 80079-37  Edition 1.0 | Explosive atmospheres - Part 37: Non-electrical equipment for explosive atmospheres – Non electrical type of protection constructional safety “c” control of ignition source “b”, liquid immersion “k” |  |
| ISO/IEC 80079-49  Edition 1.0 | Explosive atmospheres - Part 49: Flame arresters – Performance requirements, test methods and limits for use | ISO/IEC 80079-49  Edition 1.0 |
| IEC TS 60079-39  Edition 1.0 | Explosive atmospheres - Part 39: Intrinsically safe systems with electronically controlled spark duration limitation |  |
| IEC TS 60079-40  Edition 1.0 | Explosive atmospheres - Part 40: Requirements for process sealing between flammable process fluids and electrical systems |  |
| IEC TS 60079-42  Edition 1.0 | Explosive atmospheres - Part 42: Electrical safety devices for the control of potential ignition sources from Ex-Equipment  (may be used for testing purposes but not for issuing an IECEx Certificate of Conformity) |  |
| IEC TS 60079-46  Edition 1.0 | Explosive atmospheres – Part 46 - Equipment assemblies |  |
| IEC 62784  Edition 1.1 | Vacuum cleaners and dust extractors providing equipment protection level Dc for the collection of combustible dusts - Particular requirements |  |
| IEC 62990  Edition 1.0 | Workplace Atmospheres – Part 1: Gas detectors – Performance requirements of detector for toxic gases |  |
|  |  |  |
|  | *[add other Standards as required]* |  |

NOTE: Acceptance for the latest edition of a Standard will also enable you to carry out assessment and testing to earlier editions the standard.

* 1. Superseded standards

The following superseded standards may form part of a laboratory’s scope, generally for historical reasons.

| Number  *Add other Standards*  *as required* | Title | Comments |
| --- | --- | --- |
| IEC 60079-27  Edition 2.0 | Explosive atmospheres – Part 27: Fieldbus intrinsically safe concept (FISCO) |  |
| IEC 61241-0  Edition 1.0 | Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements |  |
| IEC 61241-1  Edition 1.0 | Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosure “tD” |  |
| IEC 61241-4  Edition 1.0 | Electrical apparatus for use in the presence of combustible dust - Part 4: Protection by pressurization "pD" |  |
| IEC 61241-11  Edition 1.0 | Electrical apparatus for use in the presence of combustible dust – Part 11: Protection by intrinsic safety 'iD' |  |
| IEC 61241-18  Edition 1.0 | Electrical apparatus for use in the presence of combustible dust - Part 18: Protection by encapsulation "mD" |  |
| IEC 62013-1  Edition 2.0 | Caplights for use in mines susceptible to firedamp - Part 1: General requirements - Construction and testing in relation to the risk of explosion |  |
| IEC 62013-2  Edition 2.0 | Caplights for use in mines susceptible to firedamp - Part 2: Performance and other safety-related matters |  |
| ISO 16852  Edition 2 | Flame arrestors - Performance requirements, test methods and limits for use |  |
| IECEx DS2015/001A  2015 10 09 | Equipment assemblies |  |

1. Overall Organisation Chart
2. Organisation Chart of ExTL

(normative)

Additional information to be provided by a testing laboratory  
in applying for acceptance as an ExTL

* 1. Testing laboratory contact details

Applicant's name and address.

Contact person’s name and contact details (for example, email address)

Telephone No.

Telefax No.

* 1. ExTL site contact details

Testing laboratory name and address (if different from paragraph 1).

Telephone No.

Telefax No.

* 1. Senior management
     1. Senior executives

Names and titles of the senior executives of the test laboratory and of the assessment and testing laboratories for which recognition is being sought.

* + 1. Quality management system representatives

Name and title of the person responsible for the quality management system in the testing laboratory.

* + 1. Principal contact

Name and title of the principal contact nominated by the testing laboratory, and of his deputy.

* + 1. Organization chart

Operating departments of the testing laboratory for which recognition is being sought. (Show on a separate sheet to be attached either as a list or as an organization chart of the testing laboratory).

* 1. Employees
     1. Total numbers

Total number in testing laboratory.

* + 1. Ex testing personnel

Total number in the testing laboratory for which recognition is being sought.

* + 1. Professional qualifications

Total number of professionally qualified staff (see also ISO/IEC 17025) in the area for which recognition is being sought.

* 1. Equipment

List on a separate sheet the major items of test equipment available for use in the area for which recognition is being sought.

* 1. Test facilities and services
     1. Testing services

List on a separate sheet the testing services for which recognition is being sought, indicating for each service any limits between which it will operate, and the published specifications against which the testing will be performed.

* + 1. Existing recognitions

If recognition by other bodies or authorities is held in the area for which recognition is being sought, please give details.

* + 1. Subcontract work

What type of testing is to be subcontracted in respect of the recognition being sought?

* 1. Other information
     1. Relations with other organizations

Document, where applicable, how the testing laboratory may be related to external organizations or to components within its own parent organization.

* + 1. Other information

Give any other information which you consider could be of assistance to the assessment team (on a separate sheet if necessary).

Yes/No Particulars  
 (where appropriate)

* 1. Quality management policy
     1. Quality policy

Are policy and procedures for the operation of the testing laboratory contained in a document such as a quality manual?

* + 1. Responsibility and authority

Has the person responsible for quality management the responsibility and authority to identify quality problems and initiate effective solutions?

* + 1. Unqualified staff

Does the quality manual contain procedures for the supervision of any unqualified staff (see also ISO/IEC 17025)?

* + 1. Internal audits

Is there a prescribed audit procedure for checking quality management functions?

* 1. Work instructions
     1. Access to documentation

Are manuals, work instructions and regulations to be used by staff readily available?

* + 1. Change management

Is there a system for updating, implementing and recording changes to these documents?

* + 1. Process control

Are documents available for each assessment and testing operation?

* + 1. Document and data control

Are documents and reference data maintained in an up‑to‑date condition?

* + 1. Obsolete data

Is obsolete data promptly removed from documents, etc.?

* 1. Personnel
     1. Professional standards

Have standards of professional ability, skills and job descriptions been prescribed where necessary?

* + 1. Training

Are training methods applied to attain and maintain skills with due attention to quality requirements?

* 1. Test equipment and calibration
     1. Accuracy of measurements

Does the quality management system specify that the equipment is of accuracy compatible with the assessment and testing undertaken?

* + 1. List of test equipment and calibration status

Is a record maintained of all test equipment, including calibration results?

* + 1. Test environment

Are facilities and appropriate environments provided for calibration, handling, control, storage and maintenance of all testing and measuring equipment?

* + 1. Calibration procedures

Are there documented procedures for calibrating all equipment and reference standards which include method, periodicity, sealing after calibration, etc.?

If not, explain calibration system used.

* + 1. Reference standards

Are reference standards used for calibration traceable to national or international standards of measurement?

* 1. Testing procedures
     1. Procedures

Are testing methods and procedures recorded which are not called up in specifications, manuals, etc.?

Yes/No Particulars  
 (where appropriate)

* + 1. Environments

Are the environments in which tests are conducted and results recorded suitable to ensure their accuracy?

* + 1. Environmental Testing

Do environmental testing facilities exist?

* + 1. Access Control

Is there control of access to the assessment and testing areas?

* + 1. Deficiencies Detection

Is there a prescribed system for detecting deficiencies in testing and their causes, and for correcting unfavourable trends?

* 1. Handling and storage
     1. Instructions

Are work and inspection instructions prescribed and implemented for the handling, storage and return to the client of materials and samples?

* + 1. Storage Areas

Are appropriate storage areas arranged to prevent deterioration or damage to the products concerned?

* + 1. Storage Methods

Are storage methods prescribed, including special environments?

* + 1. Inspection

Are there procedures for the inspection of samples in storage?

* + 1. Access to Storage

Are storage areas accessible only to authorized persons?

* + 1. Samples Storage

Is provision made to ensure that all samples to be stored or returned to the client are adequately identified and labelled?

* 1. Records
     1. Records System

Is there a prescribed system for recording the method and results of assessment and testing activities?

* + 1. Observations and Calculations

Are observations and calculations recorded and stored as to provide a permanent test record?

* + 1. Records Assurance

Are there arrangements for ensuring that records are current, complete, accurate and held confidential where required?

* 1. Test reports
     1. ISO/IEC 17025 Requirements

Do test reports contain all the information required for such by ISO/IEC 17025?

* + 1. Arrangements with ExCBs

Is the testing laboratory prepared to make arrangements to send copies of test reports to the ExCB granting recognition, where required, on a strictly confidential basis?

* 1. Preparedness for assessment
     1. Requirements confidence

Are you satisfied that you can meet all the requirements prescribed herein?

* + 1. Assessment Date

At what date will the assessment and testing laboratory be ready for assessment?

* + 1. Special Urgency

Is there any special urgency for assessment?

If so, what is the reason?

Applicant's name:

Signature of person authorized to sign for the applicant:

(Title)

Date

1. Proficiency Testing Program

Program: PTB Ex PT Scheme <note if involved in any other program>

|  |  |  |  |
| --- | --- | --- | --- |
| IECEx Proficiency Testing program | Program years | Participated?  Y/N/NA | Comment on results |
| Program 1 "Explosion pressure" | 2011-2012 |  |  |
| Program 2 "Spark ignition" | 2011-2012 |  |  |
| Program 3 "Flame Transmission" | 2013-2014 |  |  |
| Program 4 "Temperature Classification" | 2013-2014 |  |  |
| Program 5 "Electrostatic Charge" | 2015-2016 |  |  |
| Program 6 "Intrinsic Safety" | 2015-2016 |  |  |
| Program 7 "Explosion Pressure" | 2017-2018 |  |  |
| Program 8 "Pressurized Enclosure" | 2017-2018 |  |  |
| Program 9 “Battery Testing” | 2019-2020 |  |  |
| Program 10 “Tests of Enclosures” | 2019-2020 |  |  |
| Program 11 "Flameproof Joints" | 2021-2022 |  |  |
| Program 12 "Small Component Temperature” | 2021-2022 |  |  |

NOTE N/A would normally apply when the relevant standard is not in the scope of the laboratory.