

## 1. TITLE OF THE CERTIFICATE (ES)

**Certificado de Profesionalidad de nivel 2 en  
IEXM0409 EXCAVACIÓN SUBTERRÁNEA CON EXPLOSIVOS**

## 2. TRANSLATED TITLE OF THE CERTIFICATE (EN)

**Professional Certificate Level 2 in  
IEXM0409 UNDERGROUND BLASTING OPERATIONS  
(This translation has no legal status)**

## 3. PROFILE OF SKILLS AND COMPETENCES

The holder of this certificate will have acquired the **general competence** to excavate and prepare underground areas for the extraction of mineral ores or the construction of underground civil engineering works, by techniques of drilling and blasting, and support the galleries and tunnels, in accordance with the regulations on occupational risk prevention and environmental protection. This general competence is divided into the following **skills units** (UC):

- Carry out underground drilling (UC0417\_2).
- Carry out underground blasting (UC0418\_2).
- Support galleries and tunnels with props, beams and anchors (UC0419\_2).
- Carry out concrete projection (UC0420\_2).

The professional skills are acquired through the **learning outcomes** defined within the related Training Modules (MF):

- Underground drilling (MF0417\_2).
- Underground blasting (MF0418\_2).
- Support for galleries and tunnels with frames, beams and anchors (MF0419\_2).
- Concrete projection (MF0420\_2).
- Practical training at the workplace in underground blasting operations (MP0160)

(See legal basis for all learning outcomes information acquired by the holder of this Certificate in each MF).

As a reference the learning outcomes include in the Practical training at the workplace that complete and reinforce the learning outcomes acquired in the other training modules, are:

- Take part in the work, collaborating in drilling operations.
- Collaborate on the work, handling the material needed for underground blasting.
- Take part in the work, collaborating in supporting galleries.
- Take part in the company's working processes, following the rules and instructions established at the workplace.

## 4. RANGE OF OCCUPATIONS ACCESSIBLE TO THE HOLDER OF THIS CERTIFICATE

The holder of this certificate may work in companies dedicated to underground excavation, supporting and consolidation of earth, either with or without the use of the excavated materials. The holder may work in the sectors of extractive and construction industries, mainly in: extraction of energy minerals (anthracite, pit coal, lignite and peat); extraction of uranium and thorium ore; extraction of metals; extraction of non-metal and non-energy minerals (limestone, anhydrite and chalk, sands and clays, minerals for compost and chemicals, gem salt and others); special underground civil engineering work (construction of tunnels for roads, railways, underground railways, etc.); underground excavations for the construction of supply networks (gas, oil, water and others, including sewage systems). The most pertinent occupations and positions are:

- Miner, in general.
- Gallery construction and maintenance miner.
- Coal and other mineral extraction miner.
- Powder monkey.
- Drill machine operator (mines).
- Soutirage miner.
- Jerry man.
- Drill runner.

## 4. RANGE OF OCCUPATIONS ACCESSIBLE TO THE HOLDER OF THIS CERTIFICATE

### Requirements for exercising the profession:

The professional activity of blasting with explosives is subject to regulation by the competent government authority. "Formación preventiva para el desempeño del puesto de trabajo" (Preventive training for the job) specified in the Complementary Technical Instruction (ITC 02.1.02) of the General Regulation on Mining Safety Rules, approved by Royal Decree 863/1985 of 2 April. Specific authorisation for the use of explosives, granted by the functional area of Industry and Energy of the corresponding Government Delegation, pursuant to the Explosives Regulation.

## 5. OFFICIAL BASIS OF THE CERTIFICATE

### Name and status of the national/regional authority providing accreditation/recognition of the certificate

The Ministry of Employment and Social Security or the corresponding autonomous regional administration within the scope of its competence, in the name of the King. The certificate is valid throughout Spain.

### Level of the certificate

The Professional Certificate Level 2 of the National Repertoire of Professional Certificates corresponds to level 3 of the International Standard Classification of Education (ISCED-P 2011).

The European Qualification Framework (EQF) level:

### Grading scale/Pass requirements

The grading scale and pass level of the training modules are expressed on a scale of 0 to 10. The minimum score for a pass is 5 in every training module including a pass in the practical training at the workplace module.

The grading system is as follows:

- FAIL: 0 to 4.9
- PASS-SATISFACTORY: 5 to 6.9
- PASS-GOOD: 7 to 8.9
- PASS-EXCELLENT: 9 to 10

### Access to next level of education/training

This Professional Certificate Level 2 gives access to Professional Certificate Level 3 within the same professional area and family.

For validation purposes, the educational authorities will recognise the professional module or modules of the VET diplomas corresponding to the skills units included in the training modules of this certificate.

### Legal basis

Royal Decree 713/2011 of 20 May, establishing twelve professional certificates in the professional family Extraction Industry, which are included in the National Repertoire of Professional Certificates, and updating the professional certificates established in Royal Decree 1217/2009 of 17 July. (Appendix VII, Code: IEXM0409)

## 6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE

This certificate may be acquired by:

1. Training: Completion with a pass grade of the face-to-face or online training programme.
2. Recognition of the professional skills acquired through professional experience or non-formal training (prior learning): Completion of a process of skills evaluation and accreditation in all the skills units making up the professional certificate.
3. Dual training: Completion of a training and apprenticeship contract, which may range from 1 year (or 6 months, if stipulated as such in the collective agreement) to 3 years, during which effective working time is combined with time dedicated to training under the training programme for the professional certificate.

The training method (number 1 above) requires successful completion of the training modules and the practical training at the workplace:

Description of vocational training received	Percentage of total programme (%)	Duration (hours)
Training modules	88	570
Practical training at the workplace	12	80
<b>Total duration of training leading to the certificate</b>		<b>650</b>

### Entry/access requirements:

- Compulsory Secondary Education Diploma (Lower secondary education); or
- Professional Certificate Level 1 in the same professional area.
- If neither of the above or higher certifications are held, a pass in the key skills tests.

**Additional information:** Professional certificates are instruments for official accreditation of the professional qualifications in the National Catalogue of Professional Qualifications for all economic activities, within the scope of the labour administration. The National Repertoire of Professional Certificates is divided into three qualification levels (Level 1, Level 2 and Level 3), and by sectors into 26 professional families and 102 professional areas. More information is available at: [www.sepe.es](http://www.sepe.es)

National Europass Centre: [www.oapee.es](http://www.oapee.es)

(\*) **Explanatory note:** This document is designed to provide additional information about the specified certificate, but has no legal status in itself. The format of the description is based on the following texts: Council Resolution 93/C 49/01 of 3 December 1992 on the transparency of qualifications; Council Resolution 96/C 224/04 of 15 July 1996 on the transparency of vocational training certificates; and Recommendation 2001/613/EC of the European Parliament and of the Council of 10 July 2001 on mobility within the Community for students, persons undergoing training, volunteers, teachers and trainers.

More information is available at: <http://europass.cedefop.eu.int>

## Information on Professional Certificates of the Map of Qualifications and Vocational Training in Spain

