

1. TITLE OF THE CERTIFICATE (ES)

Certificado de Profesionalidad de nivel 2 en
QUIT0109 OPERACIONES DE TRANSFORMACIÓN DE POLÍMEROS TERMOESTABLES Y SUS COMPUESTOS

2. TRANSLATED TITLE OF THE CERTIFICATE (EN)

Professional Certificate Level 2 in
QUIT0109 PROCESSING THERMOSETTING POLYMERS AND THEIR COMPOSITES 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 carry out the operations for manufacturing resin moulds, prepare and handle thermosets and polymer matrix composite materials, to obtain mixtures following the formulas and specifications marked, and process these mixtures; being responsible for the commissioning of the installations, machines and manufacturing tools, first-level maintenance, and the quality of the materials and products, while maintaining at all times the conditions of safety and prevention of occupational and environmental risks. This general competence is divided into the following **skills units** (UC):

- Process polymer matrix composite materials and thermosets (UC0332_2).
- Prepare machines and installations for polymer processing (UC0326_2).
- Construct and prepare models and moulds for thermosetting polymers (UC0333_2).
- Carry out finishing operations on processed polymers (UC0331_2).

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

- Processing of composite thermosetting polymer matrix materials (MF0332_2).
- Preparation of machines and installations for the processing of polymers (MF0326_2).
- Construction and conditioning of models and moulds for thermosetting polymers (MF0333_2).
- Finishing of processed polymers (MF0331_2).
- Practical training at the workplace in processing thermosetting polymers and their composites operations (MP0152)

(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:

- Employ the thermoset processing systems and polymer matrix composites in optimum conditions of safety and occupational and environmental risk prevention.
- Interpret the diagrams, plans and templates used in obtaining a mould or model.
- Assemble, disassemble and adjust moulds, matrices and heads of equipment in polymer processing and moulding machines, identifying the main dimensions of the piece to be obtained and reasoning what effects they have on constructing the mould or matrix and the work carried out on these dimensions.
- Prepare the finishing installations (printing, serigraph, pad printing, metalizing, painting and others) for semi-finished products.
- Carry out mechanised operations and/or joins on semi-finished pieces.
- Assemble parts and package finished articles for shipping.
- Take samples to control the quality of chemical products.
- Identify the safety measures and occupational and environmental risk prevention measures related to the processing of thermosets and polymer matrix composites.
- 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 polymer processing industries, auxiliary automotive or domestic appliance companies, production plants of raw materials for industry of polymer matrix composites and thermosets; and in laboratories, research centres and technical offices in related industries. The most pertinent occupations and positions are:

- Plastic and rubber processing machine operator.
- Machine operator for the manufacture of plastics, in general.
- Plastic moulding machine operator, in general.
- Plastic extrusion machine operator.
- Plastic injection moulding and welding machine operator.
- Plastic calendaring machine operator.
- Extrusion machine operator (plastics)
- Plastic laminating machine operator.
- Rotational mould coating machine operator (plastics).
- Plastic finishing machine operator.
- Plastic regenerating machine operator.
- Plastic high vacuum metallisation machine operator.
- Plastic panel preparation machine operator.
- Checker of products manufactured using plastic materials.
- Plastic printing machine operator.
- Plastic toy manufacturing operator.
- Packager of metal, rubber or plastic objects on a conveyer belt.
- Operator of chemical electrolysis equipment.
- Plastic welding machine operator.
- Synthetic resin manufacturing machine operator.
- Thermo-plastic grinder operator.
- Polyester mould and model constructor.
- Resin mould machine operator.
- Operator of machines for processing thermosets and polymer matrix composite materials.
- Assembler of articles made of composite materials.
- Manual composite material operator.

The holder of this professional certificate has recognition of the basic level training in labour risk prevention, according to Annex IV of the Royal Decree 39/1997 of 17 of January approving the Labour Risks Prevention Act.

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

5. OFFICIAL BASIS OF THE CERTIFICATE

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 719/2011 of 20 May, establishing ten professional certificates in the professional family Chemicals, which are included in the National Repertoire of Professional Certificates, and updating the professional certificate established as Appendix III of Royal Decree 1970/2008 of 28 November. (Appendix V, Code: QUIT0109)

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	77	390
Practical training at the workplace	23	120
Total duration of training leading to the certificate		510

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

National Europass Centre: 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

