

1. TITLE OF THE CERTIFICATE (DE) ⁽¹⁾

**Lehrabschlussprüfungszeugnis Oberflächentechnik –
Schwerpunkt Emailtechnik**

⁽¹⁾ in original language

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

**Certificate of Apprenticeship ‘Surface Engineering Specialising in
Enamelling’ (f/m)**

⁽²⁾ This translation has no legal status.

3. PROFILE OF SKILLS AND COMPETENCES**Specialist areas of competence:****Competence area coating processes (all focuses):**

The professional for surface engineering carries out a wide range of activities for the surface treatment and coating of materials such as metals, plastics, wood/MDF and composites. He/she has extensive knowledge of the properties, areas of application and performance of various surface engineering methods, in particular mechanical surface engineering, electroplating, powder coating, enamelling, hot-dip galvanising and thin layer and plasma engineering.

During the incoming goods inspection, the professional assesses the received workpieces, associated order documents and technical drawings. Any deviations or incorrect information shall be identified, documented and communicated by the professional.

The professional for surface engineering selects suitable methods for surface coating depending on the subsequent requirements such as weather, standard, load and customer specifications and prepares the associated materials, tools, machines and equipment. He/she carries out the necessary preparatory steps for coating workpieces, such as chemical and mechanical surface pre-treatment, in accordance with the subsequent coating method and the respective substrate material. In doing so, he/she handles toxic and hazardous substances in compliance with legal and company safety regulations.

When defects or complaints occur, the professional reworks finished products, decoats them and recoats them. He/she prepares finished workpieces for transport, packs them according to customer requirements, picks them according to the order and loads them efficiently and safely into different means of transport. For quality assurance and product traceability, he/she documents all necessary information, such as procedures, tests and test intervals, in a comprehensible manner according to the company's specifications. In addition, the professional carries out standardised sampling for different test methods as well as specified physico-chemical analyses.

Based on his/her specialist knowledge, the professional for surface engineering informs customers about the surface coating methods offered and goes into detail about the surface properties to be achieved, such as adhesion and corrosion resistance. When carrying out work, he/she takes into account relevant legal provisions and technical guidelines, especially for the management, storage and handling of toxic and hazardous substances.

Special-focused professional competence area enamelling:

The professional for surface engineering specialising in enamelling coats workpieces to achieve desired surface properties and suggests suitable processes for this purpose. Based on his/her in-depth knowledge of enamelling, he/she recognises whether workpieces are suitable for the selected enamelling technique and designed accordingly. If necessary, the professional reports the identified problems. As part of the manufacturing process, he/she selects frits and slurries and tests raw materials to be used or adjusted slurries for properties such as fluidity, grinding fineness or thixotropy. If necessary, the professional for surface engineering specialising in enamelling mixes and adjusts RTU (ready-to-use) enamel. He/she changes pre-treatment solutions according to requirements, chemically and electrochemically pre-treats workpieces and prepares them, for example, by applying the slurry. The professional for surface engineering specialising in enamelling enamels workpieces depending on the order using processes such as dipping, flooding or spraying. In this way, he/she produces standardised enamel layers in the form of single or multiple layers.

The professional selects machines or systems for enamelling, taking into account logistical requirements, ensures that they are ready for operation and sets them up. To do this, he/she equips devices and adapts them to the requirements of the workpiece if necessary. The professional for surface engineering specialising in enamelling specifies different parameters, such as pickling and firing times, and operates the machines or systems safely and

properly. He/she ensures the quality of the enamelled coating, monitors the coating process and eliminates any faults. He/she also carries out anticipatory maintenance work on the machines and equipment he/she uses. The professional for surface engineering specialising in enamelling selects suitable procedures for testing enamelled surfaces. He/she inspects surfaces coated with enamel as part of quality assurance and carries out non-destructive and destructive testing procedures, such as coating thickness measurements, adhesive tests and acid resistance tests. He/she documents the results in a professional and standardised manner. When assessing enamelled surfaces, he/she identifies defects, draws conclusions about their origin and supports the optimisation of the manufacturing process.

Interdisciplinary areas of competence:

1. Working in an operational and professional environment
2. Quality oriented, safe and sustainable work
3. Digital work

4. RANGE OF OCCUPATIONS ACCESSIBLE TO THE HOLDER OF THE CERTIFICATE ⁽³⁾

Range of occupations:

Employment in commercial and industrial workshops and production halls for coating metals (e.g. aluminium, stainless steel, cast iron) – especially in the sanitary sector – e.g. by spraying with or dipping in enamel and melting the coating in ovens for the purpose of making it durable.

⁽³⁾ if applicable

(*) Explanatory note

This document has been developed with a view to providing additional information on individual certificates; it has no legal effect in its own right. These explanatory notes refer to the Decision (EU) no. 2018/646 of the European parliament and the Council of 2 May 2018 on a common framework for the provision of better services for skills and qualifications (Europass).

More information on Europass is available at: <http://europass.cedefop.europa.eu> or www.europass.at

5. OFFICIAL BASIS OF THE CERTIFICATE

<p>Name and status of the body awarding the certificate</p> <p>Lehrlingsstelle der Wirtschaftskammer</p> <p>(Apprenticeship Office of the Economic Chamber; for the address, see certificate)</p>	<p>Name and status of the national/regional authority providing accreditation/recognition of the certificate</p> <p>Bundesministerium für Arbeit und Wirtschaft</p> <p>(Federal Ministry for Labour and Economy)</p>
<p>Level of the certificate (national or international)</p> <p>NQF/EQF 4</p> <p>ISCED 35</p>	<p>Grading scale / Pass requirements</p> <p>Overall performance:</p> <p>Pass with Distinction</p> <p>Good Pass</p> <p>Pass</p> <p>Fail</p>
<p>Access to next level of education/training</p> <p>Access to the <i>Berufsreifeprüfung</i> (i.e. certificate providing university access for skilled workers) or a vocational college for people under employment.</p> <p>Access to relevant courses at a <i>Fachhochschule</i> (i.e. university level study programme of at least three years' duration with vocational-technical orientation); additional examinations must be taken if the educational objective of the respective course requires it.</p>	<p>International agreements</p> <p>Between Germany, Hungary, South Tyrol and Austria, international agreements on the mutual automatic recognition of apprenticeship-leave examinations and other vocational qualifications have been concluded. Information on equivalent apprenticeship occupations can be obtained from the Federal Ministry for Digital and Economic Affairs.</p>
<p>Legal basis</p> <ol style="list-style-type: none"> 1. Training Regulation for surface engineering BGBl. II (Federal Law Gazette) No. 99/2022 (company-based training) 2. Curriculum framework (education at the vocational school for apprentices) 3. The present apprenticeship trade replaces the apprenticeship trade surface engineering (Training and Examination Regulation BGBl. II (Federal Law Gazette) No. 192/2000 as amended by BGBl. II (Federal Law Gazette) No. 177/2005), which expired as of April 30, 2022. 	

6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE

1. Training in the framework of the given Training Regulation for surface engineering and of the curriculum of the vocational school for apprentices. Admission to the final apprenticeship examination upon completion of the apprenticeship period specified for the apprenticeship trade concerned. The final apprenticeship examination aims to establish whether the apprentice has acquired the skills and competences required for the respective apprenticeship trade and is able to carry out the activities particular to the learned trade herself/himself in an appropriate manner.
2. Admission to the final apprenticeship examination in accordance with Article 23 (5) of the *Berufsausbildungsgesetz* (Vocational Training Act). An applicant for an examination is entitled to sit the final apprenticeship examination without completing a formal apprenticeship training if she/he has reached 18 years of age and is able to prove acquisition of the required skills and competences by means of a relevant practical or an on-the-job training activity of appropriate length, by attending relevant courses etc.

Additional information:

Entry requirements: successful completion of 9 years of compulsory schooling.

Duration of training: 3.5 years.

Enterprise-based training: Enterprise-based training comprises $\frac{4}{5}$ of the entire duration of the training and focuses on the provision of job-specific skills and competences according to Article 3 (2) of the Training Regulation, BGBl. II (Federal Law Gazette) No. 99/2022, enabling the apprentice to exercise qualified activities as defined by the profile of skills and competences specified above (cf. job profile).

Education at vocational school: School-based education comprises $\frac{1}{5}$ of the entire duration of the training. The vocational school for apprentices has the tasks of imparting to apprentices the basic theoretical knowledge, of supplementing their enterprise-based training and of widening their general education in the framework of subject-oriented part-time instruction.

More information (including a description of the national qualification system) is available at:
www.zeugnisinfo.at and www.edusystem.at

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