

## Produce enamelled surfaces using advanced techniques

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### Overview

This standard covers the skills to use different styles of enamelling to produce decorative surfaces using advanced techniques such as cloisonné, champlevé, basse-taille, plique-à-jour and use of foils. You will learn these techniques by exploring their potential in a range of surfaces, for example, on three dimensional shapes, convex surfaces, concave surfaces and castings. You will also be able to produce multiple pieces from a design.

In producing enamelled products, you will be required to work to instructions and to use a range of hand and machine tools.

You will be expected to take personal responsibility for the quality and accuracy of the enamelling and the specifications required. You will need to be able to recognise any defects, determine the appropriate action to rectify them and to ensure that the finished work is completed to the given specification which may include timescales.

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### Performance criteria

*You must be able to:*

1. complete a wide range of **advanced enamelling** in line with different project needs
2. enamel on a range of **metals** in line with industry best practice
3. enamel to a range of complex designs in line with industry best practice
4. enamel covering a range **\*of \*advanced techniques** in line with industry best practice
5. complete initial checks that the completed enamelling is dimensionally accurate and proportionally correct in line with the needs of the project
6. check the work for defects in line with project needs
7. take action to rectify any defects detected in line with industry best practice
8. complete the work to the given specification in line with workplace instructions
9. produce multiples of a given design using casting, photo etching and die stamping techniques in line with industry best practice

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## Knowledge and understanding

*You need to know and understand:*

1. safety precautions to be taken when enamelling surfaces
2. methods to illustrate and communicate ideas for enamelling designs
3. enamelling requirements to given designs
4. fabrication processes for given designs
5. firing temperatures for different metals and enamel
6. hazards associated with enamelling procedure
7. how to make, harden, temper and sharpen tools for cutting and carving techniques
8. advanced etching techniques
9. how to check work pieces for dimensional accuracy
10. finishing process for both enamels and metals
11. sequence of application to remove enamels
12. how to produce multiples of given designs using a wide range of techniques
13. how to check that the enamelling meets the needs of the specification
14. best practice in enamelling within chosen industry
15. the importance of following the given specification and timescales
16. common defects and ways to rectify these

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**Scope/range**

1. **Advanced enamelling** surfaces can include the following:

1. three dimensional shapes
2. convex surfaces
3. concave surfaces
4. castings, die stampings, and photo etched surfaces
5. repair and restoration

2. Enamel **metals** include:

1. silver
2. gold

3. **Advanced techniques** such as:

1. cloisonné
2. champlevé
3. basse-taille
4. plique-à-jour
5. use of foils

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