

Complete wax production for jewellery or silverware

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**Overview**

This standard covers the skills to complete wax production for jewellery and silverware following mould being made, before the process of building up wax casting trees. You will produce complex castings using both hot and cold curing processes from complicated rubber moulds such as two part moulds, three part moulds and spiral cutting.

You will also check and fix master patterns, develop wax carving and repairing knowledge as well as understanding non-commercial forms of casting.

You take personal responsibility for your own actions and for the quality and accuracy of the work carried out. You will be able to recognise defects, to determine the action to rectify them and to ensure that the finished work meets the required specification. Whilst taking part in these activities you will need to report any difficulties or problems that you cannot personally resolve and to carry out any subsequently agreed actions

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**Performance criteria***You must be able to:*

1. complete preparatory work for waxing production in line with industry best practice
2. test moulds with a range of materials to ensure components are free of surface defects in line with industry best practice
3. report issues with moulds to mould maker for rectification in line with workplace instructions
4. produce a range of wax components in line with project needs
5. check that the mould will produce a wax that is within a tolerable shrinkage value and free from defects in line with the design specification
6. use safe working practice that reduce risk of injury to self and others and damage to components and equipment in line with health and safety practice
7. seek support and guidance when problems arise in line with workplace instructions
8. check the work for defects in line with the needs of the project
9. take action to rectify any defects or wax repairs detected in line with workplace instructions
10. complete the work to the given specification in line with workplace instructions

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**Knowledge and understanding**

*You need to know and understand:*

1. safety precautions to be taken when handling molten waxes and sharp instruments, including safe transport and storage
2. materials to be used
3. quantities and mixing ratios
4. working life of materials and mixes
5. the importance of preparing materials and equipment before starting wax production
6. the range of products that can be produced
7. what to look for when using first time new mould
8. ways to check waxing results against master models
9. who to ask when moulds require adjustment
10. methods and techniques for the removal of master patterns
11. different types of wax, techniques and tools that are used
12. wax carving and repair techniques
13. mathematical calculations and formulae for wax casting process
14. how to check that finished work meets the specification required
15. common defects and how to rectify them
16. best practice in wax production within chosen jewellery industry
17. who to ask for support and when to do so

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