Unit 239: Install pre-formed weathering flashings to roofs

# Delivery guide

Unit information

This unit is about interpreting information, adopting safe, healthy, and environmentally responsible work practices, selecting, and using materials, components, tools, and equipment and installing pre-formed lead and/or proprietary flashings to single and double-lap roof coverings with chimneys, abutments, soil and/or vent pipes, junctions, valleys, and openings for new and/or re-roof work.

Learners may be introduced to this unit by asking themselves questions such as:

* What two methods are used to form lead flashings?
* Why is lead used for roof flashings?
* What is the purpose of a lead soaker?

Learning outcomes

1. Understand resource selection
2. Understand working to a contract specification
3. Comply with the given contract information to carry out the work safely and efficiently to the required specification

Suggested resources

British Standards

* BS 5534:2014+A2:2018 *Slating and tiling for pitched roofs and vertical cladding – Code of Practice.*
* BS 8000-6:2013 *Workmanship on building sites – Code of Practice for slating and tiling of roofs and claddings.*
* BS 8000-0:2014 *Workmanship on construction sites: Introduction and general principles.*

Websites

* [Roof Tile Association Roof Tile Association](https://rooftileassociation.co.uk/) | Home
* [National Federation of Roofing Contractors (NFRC) | Technical Bulletins](https://www.nfrc.co.uk/knowledge-hub/NFRC-publications)
* [LSTA | Rolled Lead Sheet – The Complete Manual](https://leadsheet.co.uk/service/rolled-lead-sheet-the-complete-manual/)

Textbooks

* Health and Safety Executive (5th edition) HSG33 *Health and safety in roof work* (2020) Norwich: The Stationery Office.

ISBN 978-0-71766-722-2

* Building Regulations Conservation of Fuel and Power: *Approved Document L1B: conservation of fuel and power in existing dwellings*, 2010 edition. Newcastle Upon Tyne: RIBA Bookshops.

ISBN 978-1-85946-744-2

* Building Regulations Conservation of Fuel and Power: Approved Document L2B: conservation of fuel and power in existing buildings other than dwellings, 2010 edition. Newcastle Upon Tyne: RIBA Bookshops. ISBN 978-1-85946-746-6

| **Learning outcomes** | **Criteria** | **Delivery guidance** |
| --- | --- | --- |
| 1. Understand resource selection | * 1. Characteristics of the resources | * Learners to know the differences between codes of sheet lead. * Learners to know the purpose and use of anti-patination oil. * Learners to know the differences between proprietary flashings and how they are fixed. * Learners to know the differences between mortar and exterior grade mastics for pointing flashings. * Learners to know about Glass Reinforced Plastic (GRP) and other pre-formed open/dry valley liners. * Learners to know the pitch limitations relating to roof window flashings. * Learners to understand where size and pitch of roof can influence the valley detail. * Learners to know the minimum laps for flashings used at different roof pitches. * Learners to know the common defects such as splits, cracks, misshaped materials and general damage caused during the manufacturing process or by poor manual handling/transport. * Learners to know about repair materials such as specialist fixing kits, clips and adhesives and how they are used to repair broken components. |
| * 1. Use of resources | * Learners to know the correct codes of lead flashings for soakers, valleys, saddles, chimney flashings and other penetrations. * Learners to know the differences between proprietary flashing kits for windows, soakers, valleys, saddles, chimney flashings and other penetrations. * Learners to know how to select appropriate quantities from given information. * Learners to know the purpose of the resources and how they are used on the roof. * Learners to ensure that resources cover the following range: general areas, eaves, abutments, openings (roof lights/windows), dry and/or wet fix verges, ridges, hips and valleys. * Learners to know how to identify and report defective materials, how to report shortages and how to correctly transport, handle, store and protect materials. |
| * 1. Organisational procedures to select resources | * Learners to demonstrate knowledge and understanding of drawings, specifications, Manufacturers’ Technical Information (MTI), job cards and other working instructions from the employer. * Learners to know how to use the internal storage systems when selecting materials from their own yard or compound. * Learners to demonstrate knowledge and understanding of site compounds when selecting materials on-site. * Learners to know to organise deliveries direct to site. * Learners to know to use plant and tool hire shops when specialist equipment is required. * Learners to know to use a range of resources, including sheet lead and pre-formed flashings, lead and proprietary soakers, anti-patination oil, and exterior grade mastic for pointing in relation to types, quantity, quality and sizes. |
| * 1. Hazards | * Learners to understand Risk Assessment Method Statements (RAMS) relating to: * working at height * potential accidents associated with installing the materials and components, particularly when handling lead and solvents * safe manual handling when moving, loading and unloading materials * safe use of hand tools when hammering and cutting. |
| 1. Understand working to a contract specification | * 1. Methods of work | * Learners to know how to position materials and components to working instructions. * Learners to know how to cut sheet lead and pre-formed flashings. * Learners to demonstrate knowledge of dressing and bossing flashings. * Learners to demonstrate knowledge of pointing joints with mortar or exterior grade mastic. * Learners to demonstrate knowledge of applying anti-patination oil to newly laid lead. |
| * 1. Tools and equipment | * Learners to know how and where in the contract the following tools are used: * lead dresser for flattening and shaping flashings * nylon roller for shaping proprietary apron flashings/window kits * tin snips for cutting flashings to shape and size * chisels for additional chasing out or installing wedges into brick joints * lump hammers and wooden mallets for general use * knee pads for protection whilst kneeling on the roof or crawler * measuring tape/rule for measuring and cutting and for all dimensional positioning of materials and components (pencil and/or marker pens) * trowel for pointing brickwork joints * bucket for transporting mortar * mastic gun for applying exterior grade mastic to brickwork joints. |
| 1. Comply with the given contract information to carry out the work safely and efficiently to the required specification | * 1. Demonstration of work skills | * Learners to practically demonstrate how to check: * that the lead is dressed neatly and closely without splits or damage * that lead inserts into brickwork are securely fixed with lead wedges * the correct positioning and securing of soakers where required * that the anti-patination oil is applied evenly and to MTIs * that openings and penetrations are neatly finished * that proprietary flashings are fixed neatly and in line with MTIs * that the measuring and cutting of materials and components is accurate * that nails are correctly applied * that the finished installation of the materials and components demonstrates a clear understanding of the manufacturers’ and/or work instructions. |
| * 1. Use and maintain hand tools, power tools and ancillary equipment to install pre-formed lead and/or proprietary flashings to single and double-lap roof coverings to given working instructions relating to the following: * chimneys * abutments * soil and/or vent pipes * junction saddles * valleys * openings (roof lights/windows) | * Learners to know how to ensure the safe use and maintenance of hand tools, portable power tools and ancillary equipment, including regular inspection and replacement where appropriate. * Range to include using tools and equipment to install pre-formed flashings to chimneys, saddles, valleys, abutments, openings and penetrations to general areas and vertical surfaces, for both double- and single-lap roof coverings. |