

National Certificate in Building, Construction and Allied Trades Skills (BCATS)
Teacher Information & Resources

**Demonstrate knowledge of the
exterior plastering industry within
a BCATS environment**

Unit Standard – 25323

Level 2, Credit 2





Teaching and assessment tips

Intent – The intent of the unit standard is that the learner is able to demonstrate basic knowledge of the exterior plastering industry including:

- major industry sectors
- industry work processes
- industry clients, supply and inter-trade relationships
- the impact of regulatory and trade bodies on the industry and
- industry jobs and their training requirements.

Unit standard Interpretation

No more than **2** of the Demonstrate Knowledge units that relate to BCATS industries can be incorporated in the qualification.

A worksheet that covers the assessment requirements for this unit standard is included in this document. Also included are model answers for that worksheet.

Assessment



Assessment of this unit standard consists of:

- Completion of the worksheet

3. Surface preparation is important in exterior plastering, for both solid plastering and PPCS. Complete the following table as to what is done to prepare the listed surfaces.

For solid plastering

Surface	How it is prepared
Solid surface	
Light timber framed buildings	

For PPCS

Surface	How it is prepared
Fibre cement sheets	
Polystyrene	
Solid surface	

4. What are the names of the 3 types of sand and cement plaster coats applied by solid plasterers?

5. If you were applying PPCS plaster to 7.5 or 9mm thick fibre cement sheets with rebated edges, what steps and actions would you take to plaster them?

6. What does EIFS stand for, and how would you go about plastering such a substrate with a PPCS system?

7. In general terms, describe how decorative mouldings are applied.

For solid plastering:



12. Why is it common for manufacturers to offer product training?



13. What is meant by an accredited supply network?

14. List the important trades that come **before** an exterior plasterer on site and note what those trades do that impacts on the plasterer's job.



Name of body	How it impacts on the exterior plastering industry
Building Consent Authorities	
Standards New Zealand	
CINZ	
BRANZ	

Model Answers

1. What are the 2 main sectors of the exterior plastering industry and what types of substrate do they work on?

- i) *Solid plastering - which works on the following types of substrate:*
- *solid substrates - which include concrete, concrete block, stone, brick or any other material that is considered "solid" in form; and*
 - *light timber framed substrates - which include timber framed buildings with some sort of exterior lining to which the plaster layers are applied*
- ii) *Proprietary Plaster Cladding Systems (PPCS) which works on the following types of substrate:*
- *solid substrates - which include concrete, concrete block, aerated concrete or any other material that is considered "solid" in form;*
 - *lightweight fibre cement sheets fixed to a timber frame;*
 - *rebated fibre cement sheets fixed to a timber frame;*
 - *polystyrene sheets fixed to a timber frame; and*
 - *polystyrene blocks - which are a lightweight alternative to concrete blocks that are filled with reinforcing and mortar in a similar way to traditional concrete blocks.*

2. Complete the following and answer the question that follows:

- People who work within the PPCS sector are often referred to as applicators because they "apply" a specific manufacturer's system in order to achieve the finished plastered surface.

Give an example of 2 PPCS manufacturers operating in New Zealand

Any 2 from:

- *Rockcote Systems*
- *Plaster Systems*
- *Sto-NZ*
- *Nu-Age Plaster*
- *Masons Plastabrick Specialized Construction Products*

3. Surface preparation is important in exterior plastering, for both solid plastering and PPCS. Complete the following table as to what is done to prepare the listed surfaces.

For solid plastering

Surface	How it is prepared
Solid surface	<i>Water blasting, sand blasting or scabbling (a process that chips and roughens the surface).</i>
Light timber framed buildings	<i>Checking the lining material has been installed properly, fixing reinforcing mesh, mouldings and flashings, and ensuring construction joints are formed.</i>

For PPCS

Surface	How it is prepared
Fibre cement sheets	<i>Checking that the fibre cement sheets and accessories have been installed properly, masking adjoining areas, installing proprietary beads and flashings, and priming joints.</i>
Poly styrene	<i>Checking that the polystyrene sheets and accessories have been installed properly, masking adjoining areas, and installing proprietary beads and flashings</i>
Solid surface	<i>Washing, water blasting, sand blasting or chemical cleaning.</i>

4. What are the names of the 3 types of sand and cement plaster coats applied by solid plasterers?

- *bond coat;*
- *flanking coat; and*
- *finish coat.*

5. If you were applying PPCS plaster to 7.5 or 9mm thick fibre cement sheets with rebated edges, what steps and actions would you take to plaster them?

Sheet joints (along the rebated edges) are primed and plastered (jointed) with a fibreglass reinforcing tape bedded into a jointing compound to effectively make the entire surface of all the joined sheets one, large monolithic surface.

Modified plaster coats are then applied to the whole surface as per the PPCS manufacturer's specifications.

6. What does EIFS stand for, and how would you go about plastering such a substrate with a PPCS system?

EIFS = Exterior Insulation and Finishing System

The polystyrene substrate is coated all over the surface with a thick layer of modified plaster - the first being a base coat into which a fibreglass reinforcing mesh bedded in. Subsequent modified plaster coats are then applied as per the PPCS manufacturer's specifications.

7. In general terms, describe how decorative mouldings are applied?

For solid plastering: *Decorative mouldings are formed by a process called "running". Running a moulding is done by building up layers of plaster and running a specially shaped profile mould along a rule (that has been temporarily fixed to the face of the building) to form the shape of the mould on the surface of the building. Mouldings can be run in-situ (on the building in its designated position) or on a bench - which will mean that once dry, the moulding can be lifted and fixed to the building*

For PPCS: *When there is the need for some sort of decorative moulding to be applied to a PPCS, they tend to be pieces of pre-formed polystyrene that are stuck onto the building and plastered over. Often these decorative mouldings come "pre-meshed" so that all that needs to happen to them is the application of the finishing coat of plaster.*

8. Explain what is meant by a subcontracting and a direct-to-client relationship for exterior plasterers.

Subcontracting - the exterior plasterer will take instructions from, is paid by, and is responsible to the main contractor or their on site representative.

Example: similar to that on page 8 of student resource

Direct to client - The exterior plasterer client chooses to manage the building process themselves and engage directly with the trades or professions whose skills they need to hire. In this situation, they are working direct for the client and will take instructions from, be paid by, and be responsible to them.

Example: similar to that on page 8 of student resource

9. What is a trade account and what benefit does it extend to the tradesperson AND the supplier?

This is where a manufacturer or supplier agrees to sell trade goods to approved customers on the basis that the customer promises to repay on or before a stipulated date in the future (generally the 20th of the month following invoice).

Trade accounts allow contractors requiring materials the ability to get those materials without having the money up-front - therefore benefiting from the credit given to them by the supply company.

From a supplier perspective, they want repeat business and the ability to be able to sell larger quantities than non-business shoppers might buy when walking in the door.

10. In general terms, explain what is meant by manufacturer guarantee systems and what two levels of guarantee exist?

Manufacturer guarantee systems are written assurances from manufacturers that their goods or services meet a certain standard of quality and durability.

- *Sometimes the manufacturer guarantees only their products/systems to be manufactured to a specific quality level.*
- *Sometimes the manufacturer also guarantees the use of their products/systems in their installed state by a contractor whose work they are prepared to stand behind.*

11. What must happen for a PPCS supplier's product to be specified and used on a building?

In order for a PPCS to be specified and used on a building, it must:

- *go through a BRANZ Appraisal (which is a strict testing regime undertaken by the Building Research Association of New Zealand); and*
- *be signed-off by the Territorial Authority issuing the Building Consent for the work being undertaken.*

12. Why is it common for manufacturers to offer product training?

Because modern construction products and systems have become more complex over time and require specialist knowledge and skills in order to ensure that the finished job meets the required quality standard.

Because PPCS manufacturers have a vested interest in ensuring that their products and systems are installed and applied correctly and they know that technical trade literature is often not read as thoroughly as

it should be. The PPCS manufacturers need to ensure their products are used the way they were designed to be used.

- 13.** What is meant by an accredited supply network?

Where a manufacturer or supplier of products and systems is prepared to stand by certain contractors/applicators work, provided they satisfy the manufacturer's accreditation criteria.

- 14.** List the important trades that come **before** an exterior plasterer on site and note what those trades do that impacts on the plasterer's job.

- *The carpenter or builder who has constructed the framing on which the substrate is fixed (if it is a light timber framed building).*
- *The block-layer (if it is a solid concrete block structure).*
- *The fixer of the substrate - which may or may not be the carpenter or builder (in fact if the substrate is polystyrene, it will be fixed by the Exterior Plastering contractor themselves).*
- *Any trade that will "penetrate" the substrate and plastered surface of the building (such as plumbers and electricians) as they need to have their pipes and cables in place before any plastering work is undertaken.*
- *The joiner who installs the exterior doors and windows.*
- *The scaffolder who provides the working platforms off which the exterior plasterer will work to reach all surfaces off the ground.*

- 15.** List the important trades that come **after** an exterior plasterer on site and note what those trades do that impacts on the plasterer's job.

- *The trades that follow exterior plastering contractors tend to be those that come before them (such as the plumbers, electricians etc) to finish off the work that they started and can only complete once the surface is finished.*
- *Another trade that follows immediately after the exterior plasterer is the painter - who tends to form close relationships with the exterior plasterer as the work of a painter goes hand in hand with the work of a plasterer if indeed the finished surface is going to achieve what has been specified.*
- *There are also other trades that follow - many of whom have not been on the site to date. These trades can affect the weathertightness of the plastered surface if they do not take care with what they are doing. Below are a couple of examples.*

- *Sky television installers or other trades that “fix to” the finished plastered surface can create weaknesses in the surface or allow water to penetrate if they do not install their products properly. All penetrations to the plastered surface must be properly flashed and sealed and there must be sufficient support in the structure behind to take the fixings.*
- *Landscape gardeners must not build-up the gardens to or over the line of the plastered surface or over time, the system will deteriorate and moisture could enter the structure.*

16. Complete the following table about the industry bodies listed below.

Name of body	How it impacts on the exterior plastering industry
WorkSafe NZ	<p><i>The main safety issues that WorkSafe will look out for in the interior systems industry include:</i></p> <ul style="list-style-type: none"> • <i>manual material handling (safe lifting);</i> • <i>safe use of plant, equipment and tools;</i> • <i>working at heights (ie above ground level on scaffolds and ladders);</i> • <i>chemical hazards (cement corrosiveness, PPCS chemical mixes; and</i> • <i>noise.</i>
Ministry of Business, Innovation and Employment (MBIE)	<p><i>MBIE administers the Building Act and Building Code and the Licensed Building Practitioners Scheme. All exterior plastering work needs to be undertaken by someone holding an external plastering licence.</i></p>
Building Consent Authorities	<p><i>The work of the exterior plastering industry does not require an individual building consent, but the jobs they do and the specifications they must meet form part of the approved working drawings and specifications that make up a building consent. Furthermore, their work is often subject to BCA inspection prior to plastering the substrate and once the substrate has been plastered.</i></p>
Standards New Zealand	<p><i>Standards are agreed specifications for products, processes, services, or performance. and New Zealand Standards are used by a range of trades, including that of interior systems, to enhance their products and services, improve safety and quality, and meet industry best practice.</i></p>
CINZ	<p><i>Many PPCS manufacturers also belong to the Claddings Institute of New Zealand (CINZ) who bring together the resources of the many sectors that make up the claddings market.</i></p>
BRANZ	<p><i>BRANZ is an independent and impartial research,</i></p>

	<p><i>testing, consulting and information company providing services and resources for the building industry.</i></p> <p><i>BRANZ produce a series of Good Practice Guides (GPG) to the industry and two of them are specifically related to the exterior plastering industry. They are:</i></p> <ul style="list-style-type: none"><i>• GPG - Stucco</i><i>• GPG - Texture Coated Claddings</i>
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- 17.** List 4 jobs in the exterior plastering industry and describe those they work with and what training they need for the job.

Any 4 jobs and training requirements from pages 18 to 20 of the student resource.

Examples of oral assessment questions

1. What are the 2 sectors of the exterior plastering industry?

Solid plastering;

Proprietary plaster cladding systems (PPCS);

2. What are 2 substrates that a solid plasterer will have to work on?

Solid surfaces;

Light timber framed building.

3. The polystyrene substrate for a modified plaster coating is normally fixed into position by a builder/carpenter. Is this true or false? Why?

False - It's normally fixed by the modified plasterer or a member of his crew

4. Name one New Zealand manufacturer of PPCS products and one New Zealand manufacturer of substrate materials?

PPCS

- Rockcote Systems
- Sto NZ
- Nu-Age Plaster
- Masons Plastabrick
- Specialized Construction Products

Substrates

- Koolfoam Industries (manufacturers of expanded polystyrene [EPS] sheets)
- James Hardie Building Products (manufacturers of fibre cement sheets)
- Hebel (manufacturers of aerated concrete products)
- Superform Building Systems (manufacturers of polystyrene blocks)

5. When is payment due on a trade account?

Generally the 20th of the month following invoice