

Commercial vinyl



Supporting:

***LMFFL3302A: Install commercial vinyl
floor coverings***

***LMFFL3303A: Install resilient floor
coverings using custom designs and
decorative finishes***



Workbook

Name:

Commercial vinyl

Workbook

Containing learning activities and assignments for the units of competency:

LMFFL3302A: Install commercial vinyl floor coverings

LMFFL3303A: Install resilient floor coverings using custom designs and decorative finishes

The assignment templates are also available in an electronic 'Word' version, downloadable from the Flooring technology website at:

www.flooringtech.com.au



Developed by Workspace Training for the 2012-2013
Workplace English Language and Literacy (WELL) Program
Flooring Technology resource development project
The resource is now managed by Manufacturing Skills Australia



ISBN: 978-1-925087-01-7

Funded under the Workplace English Language and Literacy Program by the Australian Government through the Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education

© Commonwealth of Australia 2013



CC BY-NC-SA

This work is copyright. Except where otherwise indicated, and save for the Commonwealth Coat of Arms, the Department has applied the Creative Commons Attribution-Noncommercial-Share Alike 3.0 Australia Licence to this work.

The Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education must be attributed as the author of the Department's copyright material.

As far as practicable, material for which the copyright is owned by a third party has been clearly labelled. The Department has made all reasonable efforts to ensure that this material has been reproduced in the print-based resources and accompanying website with the full consent of the copyright owners.

Requests and enquiries concerning the Department's copyright material should be addressed to:

The Legal Branch

Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education
GPO Box 9839 Canberra ACT 2601

Email: legalservices@innovation.gov.au

Questions about the design and content of the resource itself should be addressed to the project manager:

David McElvenny

Workspace Training

PO Box 1954 Strawberry Hills, NSW, 2012

Email: david@workspacetraining.com.au

Table of contents

Introduction	1
Part 1 Learning activities.....	3
Section 1: Resilient basics	5
Section 2: General laying techniques.....	8
Section 3: Borders, features and coving	11
Part 2 Assignments.....	15
Assignment 1	17
Assignment 2.....	21
Assignment 3.....	25
Practical demonstrations	27

Introduction

Commercial vinyl is a 'learning unit' from the Flooring Technology training resource. It supports the following competencies from the *Certificate III in Flooring Technology* (LMF31208):

- LMFFL3302A: Install commercial vinyl floor coverings
- LMFFL3303A: Install resilient floor coverings using custom designs and decorative finishes

To be assessed as competent, your assessor will use a range of methods to check your understanding of the concepts presented in the Learner guide for this unit and your practical ability to install commercial vinyl floor coverings.

These may include:

- written assignments
- practical demonstrations
- on-the-job discussions about how you go about particular activities
- learning activities undertaken while you're progressing through the unit
- examples of installations you have undertaken
- log book or work diary.

Literacy, numeracy and computer skills

Literacy is the ability to read and write. To complete this qualification, you will need sufficient literacy skills to produce a range of workplace documents. You will also need the skills to be able to read and understand documents such as order forms, installation instructions, project briefs and safe operating procedures.

Numeracy is the ability to work with numbers. Flooring installers need to do lots of measure-ups and calculations, so there will be many opportunities for you to learn and practise your numeracy skills.

When it comes to completing the written assignments for this qualification, a certain level of literacy ability is required to read the questions and write down your answers. There will also be times when you are asked to generate documents on a computer.

Obviously, it's important that you clearly understand what the assignment is asking you to do, and that your work is a good reflection of what you really know. So if you're having trouble reading the questions, writing down your answers, or using certain computer programs, make sure you speak to your trainer before you hand the assignment in.

There are various ways your trainer can help you. For example, they may be able to ask the assignment questions verbally and help you to write down your answers. They may also be able to show you sample answers to similar questions, which will let you look at the way they're written and give you hints on how to write your own. You may also be allowed to do the assignment with the assistance of another person.

Applying for RPL

RPL stands for **Recognition of Prior Learning**. It is a form of assessment that acknowledges the skills and knowledge you have gained through:

- on-the-job experience
- formal training in other courses
- life experience, through your hobbies or other outside activities.

If you believe that you are already competent in some or all of the skills covered in this unit, ask your assessor about how to apply for RPL.

Using this workbook

All of the lessons in the Learner guide for this unit have learning activities at the end. Their purpose is to provide discussion points and questions to help reinforce your understanding of the concepts being presented.

There are also a range of assignments, which appear at the end of each section. These are designed to test your knowledge of the subject matter and ability to submit written responses in an acceptable format.

This workbook reproduces all of the learning activities and assignments in a format that lets you handwrite your answers to the questions.

Note that your trainer may ask you to produce a computer-generated document for all of the formal assignments, either printed out in hard copy or submitted electronically. To do this, go to the website version of the unit and look for the *Assignment* link in each section. This will allow you to type your answers into the 'Word' document and then either print it out or email it direct to your trainer as an attachment.

You may also be asked to share your learning activity answers electronically, especially if you are undertaking this unit by distance learning and are linked up with fellow students in other locations. This might be done through group emails or via a social networking site such as Facebook. In these cases, you should use the website resource rather than this workbook.

Part 1

Learning activities



Section 1: Commercial vinyl basics

Structure of vinyl flooring

1. Identify one brand name product for each of the four types of vinyl flooring described in this lesson. Also name the manufacturer of the product.

Example	Brand	Manufacturer
1		
2		
3		
4		

2. Which of these products have you installed?

--

3. What type of projects they were used in?

--

Types of adhesives

Choose two floor covering products that are designed for different purposes and get a copy of the manufacturer's installation instructions.

Check that the two products specify different types of adhesive.

For each product, answer the following questions in the table provided:

1. What is the brand name and who is the manufacturer of the flooring?
2. What adhesive brand name is recommended for laying the flooring?
3. What type of adhesive is it – that is, what category does it fall into?

Flooring brand	Flooring manufacturer	Adhesive brand	Adhesive type

Planning and preparation

1. What is the maximum RH allowed in a slab when measured with a surface mounted hood?

2. What is the maximum RH allowed when measured with an in-situ probe?

3. What installation procedures can you follow if the RH is above these levels?

Handling and conditioning

Go to the web link below to see the video clip: 'Altro handy hint – turning over a length of Safety Flooring without any lifting'. Watch the clip and answer the following questions.

<http://www.youtube.com/watch?v=c8t0vSqr0W8>

1. When the demonstrator doubles the flooring over, he rolls the top layer several times before lifting the bottom layer up over the top. How many times does he suggest you should roll the top layer before you lift the bottom layer up?

2. Underneath the video clip there are some viewers' comments. One entry asks: 'Does it work for linoleum?' What advice does Altro Flooring give, and why is it necessary to use a slightly different technique for linoleum?

Basic cutting and fitting

Go to the web link below and select: 'Vinyl sheet installation video – Part 2':

http://www.armstrong-aust.com.au/commflrpac/aus/ep/au/vinyl_video_library.html

The installer demonstrates how to use a recess scribe at 7 mins 35 seconds into the video. Have a look at this excerpt and then answer the following question:

What setting does the narrator recommend that you use between the over pin and the under guide?

Section 2: General laying techniques

Applying an adhesive

Go to the web link below and select: 'Vinyl sheet installation video – Part 2':

http://www.armstrong-aust.com.au/commflrpac/aus/ep/au/vinyl_video_library.html

Watch the section called 'Adhesive', which starts at 5 min 10 seconds into the clip.

The narrator says that acrylic sheet vinyl adhesives contain two types of resin in the compound – a 'tackifier resin' and a 'primary resin'.

1. What is the purpose of the tackifier resin?

2. What is the purpose of the primary resin?

Problems with adhesives

Have a look at the 'Adhesive problems and causes' table in the Learner guide.
Describe one or two of the examples you've seen, using the table below.

Description of problem	Type of flooring	Other details

Heat welding equipment

Follow the links below to the two video clips. Watch the videos and then answer the questions.

1. 'Master Turbo groover'

<http://www.youtube.com/watch?v=qbg2WH3tS9c>

(a) What blade sizes are available for the Turbo groover?

(b) Which blade size is factory fitted?

2. 'Welding floor with Leister Unifloor'

<http://www.youtube.com/watch?v=vSe94CQzRS4>

There is a range of nozzles available for different types of floors. What types of floors are the following three nozzles used for?

Nozzle	Floor type
Standard	
Pressed	
Air knife	

The welding process

Go to the web link below and select: 'Vinyl sheet installation video – Part 3'. Watch the first 2 minutes of the video and then answer the questions.

http://www.armstrong-aust.com.au/commflrpac/aus/ep/au/vinyl_video_library.html

1. How long should you wait after sticking down the sheets before you start the welding process?

2. How deep and how wide should you groove out the seam with a grooving tool?

3. Why do the seams need to be well cut with a gap of no more than 0.5 to 1 mm? That is, why can't you simply fill up a wide gap with welding cable?

Heat welding problems

Have you experienced any of the problems discussed in this lesson in your own welds or seen them in other people's work? Describe the appearance of the weld and state what you think might have caused the problem.

Appearance	Cause of problem

Finishing the job

Go to the web link below and select: 'Vinyl sheet installation video – Part 6'. Watch the video and then answer the questions.

Go to the Armstrong Flooring videos page at:

http://www.armstrong-aust.com.au/commflrpac/aus/ep/au/vinyl_video_library.html

1. What are the recommended methods for carrying out the 'initial maintenance'?

2. What coloured pad should you fit to the floor polisher?

Section 3: Borders, features and coving

Borders and feature strips

Have you worked on any installations that involved borders or feature strips? What type of project was it? What was the design?

Project type	Design

If you haven't done these sorts of installations before, have a look around in your travels at some examples of borders and feature strips. Take photos on your mobile phone and share them with your trainer and other learners in your group.

Types of coving

A pencil cove is required to have a curve of no more than 5 mm radius. What does this mean?

Fitting cove formers

The links shown below will take you to two video clips produced by Altro Flooring on the methods used to fit cove formers.

Installing and laying safety flooring on a reduced cove:

<http://www.youtube.com/watch?v=aOESvsQWl7U>

Fitting cove former:

<http://www.youtube.com/watch?v=KMWRstRqoCY>

Watch the video clips and answer the following questions:

1. How does the installer take the tension out of the reduced cove former (first video) after he has cut a V shape in the end?

2. What type of adhesive does he apply to the back of the cove former and to the wall and floor (second video)?

Coving field material

Watch the following videos and answer the questions.

1. Butterfly corners:

<http://www.youtube.com/watch?v=ni57m2zVYxo>

- (a) How does the installer make the flooring material more flexible so it can be pushed tightly into the corner?

- (b) How does he enable the butterfly piece to bend easily around the external corner?

- (c) What technique does he use to avoid scorching the capping seal while he is welding the joint?

(d) How does he 'blend in' the ends of the welds after they have been trimmed?

2. Make-out piece:

<http://www.youtube.com/watch?v=71Cy4cuiHBM>

(a) How does the installer mark a line in the coved material in the internal corner before he cuts it?

(b) Which part of the make-out piece does he cut first?

(c) Which part of the make-out piece does he cut last?

Fitting cove skirting

The link below will take you to a PDF document issued by Armstrong called 'Feather edge skirting'. Read through the document and answer the following questions:

<http://www.armstrong-aust.com.au/pdbupimages/191341.pdf>

1. What two sizes are available in feather edge skirting?

-
2. What adhesives are recommended? State the brand name and type of adhesive for each one.

Brand name	Adhesive type

3. How is the adhesive applied?

--

Part 2

Assignments



Assignment 1

Name		Date	
------	--	------	--

1. What does 'resilience' mean, according to Australian Standard 1884-2012?

--

2. Choose two commercial vinyl products with different properties and end uses.

For each one, answer the following questions using the table below:

- (a) What is the product name and who is the manufacturer?
- (b) What types of end uses is it most suitable for?
- (c) What are its main features – that is, what characteristics would clients be looking for when they choose this product?
- (d) What general maintenance advice is provided by the manufacturer?

Product 1:

Product name and manufacturer:	
End uses:	
Main features:	
Maintenance advice provided:	

Product 2:

Product name and manufacturer:	
End uses:	
Main features:	
Maintenance advice provided:	

3. For each of the adhesive types listed below, answer the following questions:

- (a) What is the product name and who is the manufacturer?
- (b) Which resilient sheet products is it most appropriate for?
- (c) What type of installation is it designed for (concrete subfloors, cove skirtings, wet areas, etc.)?
- (d) How is it applied? If it requires a notched trowel, state the trowel notching size.

Epoxy

Product name and manufacturer:	
Resilient sheet products:	
Type of installation:	
Application method:	

Polyurethane

Product name and manufacturer:	
Resilient sheet products:	
Type of installation:	
Application method:	

Acrylic

Product name and manufacturer:	
Resilient sheet products:	
Type of installation:	
Application method:	

Contact

Product name and manufacturer:	
Resilient sheet products:	
Type of installation:	
Application method:	

Assignment 2

Name		Date	
-------------	--	-------------	--

1. What on-site conditions can affect the duration of an adhesive's open time and working time? Name three factors.

1.
2.
3.

2. List three things that can go wrong with an installation due to an adhesive problem. For each one, answer the following questions:
- (a) How has the problem affected the finished floor (that is, what has it done to the floor, or what does it look like)?
 - (b) What is the cause of the problem?
 - (c) How would you avoid this problem (what extra precautions could you take, or how would you vary the installation process)?

Problem 1	
Effect on the finished floor	
Cause of the problem	
How to avoid it	

Problem 2	
Effect on the finished floor	
Cause of the problem	
How to avoid it	

Problem 3	
Effect on the finished floor	
Cause of the problem	
How to avoid it	

3. List three things that can go wrong with a heat weld. For each problem, answer the following questions:

- (d) What effect does the problem have on the finished weld?
- (e) What is the cause of the problem?
- (f) How would you avoid this problem?

Problem 1	
Effect on the finished weld	
Cause of the problem	
How to avoid it	

Problem 2	
Effect on the finished weld	
Cause of the problem	
How to avoid it	

Problem 3	
Effect on the finished weld	
Cause of the problem	
How to avoid it	

4. What advice would you give to the client about protecting their new floor immediately after installation?

--

Assignment 3

Name		Date	
-------------	--	-------------	--

1. What are the three types of coving described in AS 1884? For each type, name a typical application where it would be most suitable.

Type of coving	
Typical application	

Type of coving	
Typical application	

Type of coving	
Typical application	

2. Why does AS 1884 say that butterfly corners must be used in wet areas?

--

3. What are the two techniques for fitting feather edge skirting to internal and external corners?

1.
2.

Practical demonstrations

In this unit we have provided background material to cover the following competencies:

LMFFL3302A: Install commercial vinyl floor coverings

LMFFL3303A: Install resilient floor coverings using custom designs and decorative finishes

Your trainer may ask you to keep a log book or diary of the work you do on-the-job that relates to either or both of these competencies. This will help them to determine when you will have had sufficient hands-on practice in the tasks to undertake the assessment events.

When you're ready to be assessed, your assessor will watch you carrying out a range of practical demonstrations. The checklists below set out the sorts of things the assessor will be looking for when you undertake these practical tasks.

For *LMFFL3302A Install commercial vinyl floor coverings*, you will be asked to install:

- commercial vinyl using internal and external mitres and heat welded seams in:
 - one piece with pre-formed coving
 - custom designs with pattern scribed coving
- commercial vinyl with chemically welded seams.

If you are also undertaking *LMFFL3303A Install resilient floor coverings using custom designs and decorative finishes*, you will be asked to install:

- resilient flooring using a custom design containing a logo or motif that includes decorative welding, inlays and borders.

For both competencies, you will need to:

- follow all work, health and safety requirements and environmental care procedures
- correctly interpret company documents and work instructions
- communicate and work effectively with other workers in the area
- prevent damage to goods, equipment and products
- work productively and produce a high quality job
- modify activities and techniques used to suit different sites and working conditions.

As part of the practical demonstrations, you will be asked to use of the following tools:

- utility knife with hook, straight and concave blades, spatula knife, wall trimmer, seam and edge trimmer
- straight edge square, roofing square, chalk and chalk-line, tape measure
- hacksaw, hammer, rubber mallet
- recess scribe, pre-formed linoleum recess scribes, scribing bar, dividers
- grooving tool, welding gun and accessories,
- pencil cover roller, hand roller, cove gauging tool, roller
- gas bottle and gun, hot air gun
- notched trowel, paint brush and bucket, contact bucket,
- liquid seam sealer, seam sealer applicator
- linoleum trolley.

Make sure you talk to your trainer or supervisor about any of the details you don't understand, or aren't ready to demonstrate, before the assessment events are organised. This will give you time to get the hang of the tasks you'll need to perform, so that you'll feel more confident when the time comes to be assessed.