



Australian Government

ICPINK221 Blend chemicals

Release: 1

ICPINK221 Blend chemicals

Modification History

Release	Comments
Release 1	This version first released with ICP Printing and Graphic Arts Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to blend chemicals for ink and varnish manufacture.

It applies to individuals who typically perform routine tasks under direct supervision to ensure production requirements are met. Individuals identify process and job requirements, set up machinery or equipment and complete the blending process according to defined procedures.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Ink Manufacture

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1 Read and interpret job requirements and locate materials	1.1 Appropriate processes are identified and confirmed, and original is assessed to determine scanner settings 1.2 Appropriate chemicals, inks, materials and/or equipment are selected according to job specifications
2 Set up machines/equipment	2.1 Pre-startup checks are completed and documented according to enterprise procedures 2.2 Raw materials or feed lines are checked to ensure availability 2.3 Machine and equipment operation is verified according to enterprise procedures
3 Maintain blending or	3.1 Mix is completed according to enterprise procedures and work

ELEMENT	PERFORMANCE CRITERIA
homogenising process	health and safety (WHS) requirements 3.2 Materials are added to process according to job specifications 3.3 Quality inspection and sampling is carried out according to enterprise procedures 3.4 Adjustments to mix or equipment are made to correct identified quality problems 3.5 Records, log or checklists are completed according to enterprise procedures
4 Shut down	4.1 Correct shutdown sequence is followed according to manufacturer's specifications and enterprise procedures 4.2 Product or materials used in manufacture are removed from operating area where appropriate 4.3 Solid and liquid waste is removed from operating area and recycled or disposed of, where required, according to regulatory requirements and enterprise procedures
5 Clean up	5.1 Equipment cleaning requirements are identified 5.2 Correct equipment or materials for manual or mechanical cleaning are selected 5.3 Cleaning is undertaken according to enterprise procedures and WHS requirements

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.2, 3.2	Establishes job requirements from job documentation or production control system
Writing	2.1, 3.5	- Records information related to job outcomes - Accurately completes records, logs and checklists
Numeracy	1.2, 3.1-3.4	- Measures and records quantities of materials - Checks measuring devices for accuracy and resets as required
Navigate the	2.1, 2.3, 3.1, 3.3, 3.5,	Complies with legislative requirements and organisational policies and procedures relevant to own

world of work	4.1-4.3, 5.1, 5.3	role
Get the work done	1.1, 1.2, 2.1, 2.2, 3.4, 5.1, 5.2	- Follows clearly defined instructions and monitors own progress on tasks - Makes routine decisions relevant to immediate task in accordance with job requirements - Responds to problems by referring to procedures and implementing required solutions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICPINK221 Blend chemicals	ICPIM221C Blend chemicals	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a74b7a0f-a253-47e3-8be0-5d426e24131d>

Assessment Requirements for ICPINK221 Blend chemicals

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Performance Evidence

Evidence of the ability to:

- locate, interpret and use information from various sources to carry out tasks
- use a mixer disperser OR a bead mill OR an automatic ink dispensing system to blend TWO batches of chemicals OR tint TWO batches of ink intermediates or concentrates according to manufacturer's and job specifications, health and safety requirements and enterprise procedures including:
 - selecting, checking and setting up chemicals, ink, materials and equipment
 - carrying out quality checks during blending and making required adjustments
 - completing required records
 - cleaning and removal of waste.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- list and briefly describe the purpose of each of the listed items used in the blending of chemicals for ink or varnish manufacture:
 - high and low speed dispersers
 - pan washer or scrubbers
 - pumps
 - valves
 - automatic ink dispensing system
 - homogeniser
 - de-ioniser
- identify potential hazards in the selection, preparation and clean up of materials and equipment for blending chemicals, including the correct use of safety equipment

- identify environmental issues that need to be considered when working with the range of materials used in chemical blending and tinting
- describe the enterprise procedures for:
 - preparing containers and equipment for blending and tinting
 - adding chemicals and constructing correct colours according to formulae
 - testing conductivity, viscosity and pH, where in-process testing is conducted
 - sampling and testing
 - a planned shutdown
- explain the purpose and process of:
 - homogenisation
 - de-ionising water when it is to be used in the blending process
 - batch coding systems
- outline the checks to be made when measuring chemicals for blending
- explain the factors that determine the position of the mixing head when blending
- list and describe problems that may occur in the tinting process and how these may be overcome.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the ink manufacture field of work and include access to:

- enterprise documents and policies and procedures
- materials and equipment used in the blending process
- cleaning chemicals, materials and equipment.

Assessors must satisfy NVR/AQTF assessor requirements.

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