
Finished Panel Odour Test

1.0 Objective & Quality Standard

The objective of this procedure is to ensure that every finished painted or coated panel is free from objectionable odours that indicate incomplete curing, solvent entrapment, or material contamination. The acceptable quality standard is that the panel emits no detectable solvent, chemical, or musty odour when tested under controlled conditions. Any odour that is clearly identifiable as chemical, sour, or musty constitutes a failure.

2.0 Required Tools & Gauges

- Clean, odour-free plastic bag (large enough to enclose the panel)
- Timer or stopwatch
- Odour reference chart (optional, for training)
- Personal protective equipment (PPE) as per Section 3.0
- Clean, dry, well-ventilated testing area free from ambient odours

3.0 Safety & Material Handling

- Wear clean, lint-free gloves to avoid transferring skin oils or odours to the panel.
- Use a respirator with organic vapour cartridges if testing panels suspected of high solvent content.
- Perform the test in a designated odour-free zone away from paint booths, solvents, and cleaning agents.
- Handle panels by edges only to prevent contamination of the surface.

4.0 Step-by-Step Procedure

1. Verify that the panel has completed the full curing cycle per the coating manufacturer's specifications.
2. Inspect the panel visually for any signs of incomplete cure, such as tackiness, discolouration, or solvent popping.
3. Place the panel inside a clean, odour-free plastic bag and seal the bag loosely to allow air circulation.
4. Allow the panel to remain sealed in the bag for 5 minutes at room temperature (20-25°C) to concentrate any volatile compounds.
5. After 5 minutes, open the bag slightly and carefully sniff the air inside the bag from a distance of approximately 15 cm.
6. Do not place your nose directly into the bag. Use a gentle wafting motion to draw air toward your nose.
7. Note any odour detected. Compare against the odour reference chart if available.
8. If no odour is detected, or the odour is faint and non-objectionable (e.g., neutral paper), the panel passes.
9. If a distinct solvent, chemical, musty, or sour odour is detected, the panel fails.
10. Remove the panel from the bag and allow it to air out for 10 minutes in a ventilated area.

11. Repeat the test once more after airing to confirm the odour is not transient.
12. Document the test result on the QA checklist, including panel ID, test date, and odour description if applicable.

5.0 Verification & Defect Reporting

1. If the panel fails the odour test, immediately red-tag the panel with a non-conformance tag indicating 'Odour Failure'.
2. Segregate the failed panel in a designated quarantine area away from finished goods.
3. Notify the finishing supervisor and QA manager within 1 hour of detection.
4. Rework options include extended airing (24-48 hours) or re-coating after stripping, depending on root cause.
5. Log the defect in the ShopDocs QA module with details: panel ID, odour type, test date, and operator name.
6. Initiate a root cause analysis if more than 2% of panels from the same batch fail the odour test.

Regulatory Disclaimer: This document is a generic quality assurance template. The end-user assumes all liability for validating all dimensional tolerances, testing procedures, and engineering specifications against actual production requirements before deployment.