

# SUBSTRATE MOISTURE TESTING AND SURFACE DPMS

# ACTIVITY RAMS — ADAPT TO SITE BEFORE USE

Hygrometer and probe tests · drilling over heating pipes · forced drying · epoxy surface DPMS

KD-RA-FO-005 Rev A0

Statutory basis: COSHH 2002 with HSE ACOP L5 (6th edition, 2013) for epoxy surface damp-proof membranes, primers and drilling dust; DSEAR 2002 for solvent-borne primers and the flammable gas produced in carbide test kits. PUWER 1998 for drills, dehumidifiers and heaters. The moisture limit depends on what is being laid: BS 8203:2017 sets 75 % relative humidity by hygrometer for resilient coverings (vinyl, linoleum, rubber and cork); tiling to BS 5385-3:2014; timber flooring to BS 8201:2011; resin systems to the manufacturer's figure. CDM 2015 regs 13 and 15. This document is the recorded safe system of work required by HSWA 1974 s.2(2)(a) and MHSWR 1999 regs 3 and 5.

## 1 DOCUMENT AND PROJECT IDENTIFICATION

| RAMS REFERENCE                | PROJECT / SITE REF | SITE NAME AND ADDRESS | DATE PREPARED | NEXT REVIEW DATE     |
|-------------------------------|--------------------|-----------------------|---------------|----------------------|
|                               |                    |                       |               |                      |
| CLIENT / PRINCIPAL CONTRACTOR | PLANNED START      | DURATION              | OPERATIVES    | SUPERVISING THE WORK |
|                               |                    |                       |               |                      |

## 2 SCOPE OF WORKS

Establishing whether a concrete or screed base is dry enough for the floor finish, and dealing with it when it is not: hygrometer and in-situ probe testing, carbide testing where specified, forced drying with dehumidifiers and heaters, and application of liquid surface damp-proof membranes to the covering manufacturer's system.

This document does not cover: laying the screed (KD-RAMS-AF-003), below-ground and wet-room waterproofing and tanking (KD-RAMS-WP-001 and KD-RAMS-WP-003), mechanical preparation by grinding or shot blasting (KD-RAMS-FL-003), and commissioning of underfloor heating, which is the heating installer's.

SITE-SPECIFIC SCOPE, LOCATIONS AND LIMITATIONS

## 3 RISK ASSESSMENT — SCORE EACH RISK FOR THIS SITE, THEN ADD WHAT IS MISSING

The hazards and controls below are the starting point for this activity, written by a working main contractor. They are not complete for your site until a competent person has scored each risk, added the site-specific hazards, and struck out anything that does not apply. Rate risks High / Medium / Low before and after controls.

### 1. Drilling into heating pipes, cables and conduits in the screed

At risk: Operatives, the building

Controls: The surface hygrometer hood is used wherever it will give the answer, because it needs no holes. Before any hole is drilled for an in-situ probe: heating and services drawings checked, the heating installer consulted on pipe routes, a detector used, drill depth limited with a depth stop, and positions marked clear of pipe and cable routes. A struck pipe or cable means stop, isolate and report.

| INITIAL (H/M/L) | RESIDUAL (H/M/L) | SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A | ACTION OWNER | BY WHEN |
|-----------------|------------------|-------------------------------------------|--------------|---------|
|                 |                  |                                           |              |         |

### 2. Dust from drilling probe holes

At risk: Operatives

Controls: Drilling with on-tool extraction; holes vacuumed, not blown out; RPE (FFP3, face-fit tested) where the COSHH assessment requires it.

| INITIAL (H/M/L) | RESIDUAL (H/M/L) | SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A | ACTION OWNER | BY WHEN |
|-----------------|------------------|-------------------------------------------|--------------|---------|
|                 |                  |                                           |              |         |

### 3. Flammable gas from carbide test kits

At risk: Operatives

Controls: The carbide method produces acetylene inside a pressure vessel. Used only where specified, by a trained operative, in a ventilated area with no ignition sources; vessel and gauge checked before use; vessel opened pointing away from people in a well-ventilated place; spent reagent disposed of as the kit manufacturer directs.

| INITIAL (H/M/L) | RESIDUAL (H/M/L) | SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A | ACTION OWNER | BY WHEN |
|-----------------|------------------|-------------------------------------------|--------------|---------|
|                 |                  |                                           |              |         |

### 4. Test hoods and probes left on the floor

At risk: Everyone in the area

Controls: Hoods and probes stay in place while readings stabilise. Each location is marked, protected and logged; no test is placed on a walkway or in front of a door; locations are cleared and holes filled as soon as the reading is taken.

| INITIAL (H/M/L) | RESIDUAL (H/M/L) | SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A | ACTION OWNER | BY WHEN |
|-----------------|------------------|-------------------------------------------|--------------|---------|
|                 |                  |                                           |              |         |

### 5. Laying on a base that is still wet

At risk: Occupants, the finished floor

Controls: A finish laid on a wet base can blister, lift and debond, leaving trip hazards. Readings are recorded against the limit for what is being laid — BS 8203:2017 for resilient coverings (vinyl, linoleum, rubber, cork), BS 5385-3:2014 for tiles, BS 8201:2011 for timber, the manufacturer's figure for resin. Above the limit is a hold point: wait, force-dry or apply a surface DPM as the specification allows, and record the decision.

| INITIAL (H/M/L) | RESIDUAL (H/M/L) | SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A | ACTION OWNER | BY WHEN |
|-----------------|------------------|-------------------------------------------|--------------|---------|
|                 |                  |                                           |              |         |

**6. Forced drying — carbon monoxide, fire and trailing leads***At risk: Operatives, other trades*

Controls: Forced drying uses electric dehumidifiers and electric heaters only — no LPG, paraffin or diesel heaters in enclosed areas, which give off carbon monoxide and add water vapour. Heaters kept clear of combustible materials and left running out of hours only where the site's fire arrangements allow. Leads routed off walkways; condensate tanks emptied before they overflow. Underfloor heating is run only to the heating installer's commissioning schedule.

| INITIAL (H/M/L) | RESIDUAL (H/M/L) | SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A | ACTION OWNER | BY WHEN |
|-----------------|------------------|-------------------------------------------|--------------|---------|
|                 |                  |                                           |              |         |

**7. Epoxy surface damp-proof membranes — skin sensitisation***At risk: Operatives*

Controls: Two-part epoxy DPMS are sensitisers: gloves to the safety data sheet and no skin contact; whole units mixed as supplied and only what can be applied within the pot life; tools cleaned with the specified cleaner; skin checks as the COSHH assessment sets.

| INITIAL (H/M/L) | RESIDUAL (H/M/L) | SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A | ACTION OWNER | BY WHEN |
|-----------------|------------------|-------------------------------------------|--------------|---------|
|                 |                  |                                           |              |         |

**8. Solvent-borne primers — vapour and fire***At risk: Operatives, others nearby*

Controls: Water-based or solvent-free primers where the system allows. Otherwise: ventilation before the tin is opened, ignition sources removed for the drying period, minimum quantity out, rags and empties in lidded metal bins taken out each shift.

| INITIAL (H/M/L) | RESIDUAL (H/M/L) | SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A | ACTION OWNER | BY WHEN |
|-----------------|------------------|-------------------------------------------|--------------|---------|
|                 |                  |                                           |              |         |

**9. Slips on primed and coated floors***At risk: Everyone in the area*

Controls: Coated areas barriered and signed with the walk-on time; work progresses towards the exit; no access route left across wet membrane.

| INITIAL (H/M/L) | RESIDUAL (H/M/L) | SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A | ACTION OWNER | BY WHEN |
|-----------------|------------------|-------------------------------------------|--------------|---------|
|                 |                  |                                           |              |         |

**Site-specific hazards not listed above — every site has at least one:**

| HAZARD | WHO IS AT RISK | CONTROLS | INITIAL H/... | RESIDUAL... | ACTION OWNER | BY WHEN |
|--------|----------------|----------|---------------|-------------|--------------|---------|
|        |                |          |               |             |              |         |
|        |                |          |               |             |              |         |
|        |                |          |               |             |              |         |

**4 METHOD — SEQUENCE OF WORK**

- 1 Collect the base information: screed or slab type and age, thickness, drying conditions so far, underfloor heating, and the moisture limit for the specified finish and adhesive.
- 2 Confirm the building is weathertight and the space is at the conditions the test method needs.
- 3 Use surface hygrometer hoods as the default; seal each hood, mark and protect its location, and log it.
- 4 Where in-situ probes are needed, check drawings, consult the heating installer, detect pipe and cable routes, set the depth stop and drill with extraction.
- 5 Use a carbide test only where specified, in a ventilated area free of ignition sources, to the kit instructions.
- 6 Take and record readings once stable as the instrument instructions state; clear hoods and probes and fill holes.
- 7 Compare readings with the limit and record the decision: lay, wait, force-dry, or apply a surface damp-proof membrane.
- 8 Force-dry with electric dehumidifiers and heaters only; empty condensate; re-test before laying.
- 9 For a surface DPM, confirm preparation is complete (KD-RAMS-FL-003), ventilate, and put on gloves and eye protection.
- 10 Mix whole units and apply the membrane at the coverage the manufacturer states, working towards the exit; barrier and sign with the walk-on time.
- 11 Stop if a pipe or cable is struck, a heater or dehumidifier develops a fault, vapour builds up, or product reaches skin or eyes; make safe and report. Hand over the test record with the flooring.

**SITE-SPECIFIC AMENDMENTS TO THE SEQUENCE****5 PLANT, EQUIPMENT AND MATERIALS**

|                                                  |                                           |
|--------------------------------------------------|-------------------------------------------|
| Hygrometer with sealed hoods, and in-situ probes | Electric dehumidifiers and heaters        |
| Drill with depth stop and on-tool extraction     | Rollers and squeegees for DPM application |
| Pipe and cable detector                          | Barriers and cones                        |
| Carbide test kit where specified                 |                                           |

**INSPECTION / THOROUGH EXAMINATION REFS****COSHH ASSESSMENT REFS**

**6 PPE — THE LAST LINE OF CONTROL, NOT THE FIRST**

- |                                          |                                              |                                                                                   |
|------------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------------|
| <input type="checkbox"/> Head protection | <input type="checkbox"/> Gloves — task-rated | <input type="checkbox"/> Chemical-resistant gloves to the data sheet              |
| <input type="checkbox"/> Safety footwear | <input type="checkbox"/> Eye protection      | <input type="checkbox"/> FFP3 RPE when drilling, where required — face-fit tested |
| <input type="checkbox"/> High visibility | <input type="checkbox"/> Hearing protection  | <input type="checkbox"/> Knee protection                                          |

RPE TYPE, FACE-FIT STATUS, AND ANY OTHER PPE REQUIRED

**7 PERMITS REQUIRED BEFORE THIS WORK STARTS**

No permit is normally required for this activity. The site's own rules may still require one — check before starting, and record any permit issued below.

PERMITS ISSUED FOR THIS WORK (OR NONE)

**8 EMERGENCY ARRANGEMENTS — COMPLETE FOR THIS SITE**

|                          |                                     |                                |
|--------------------------|-------------------------------------|--------------------------------|
| FIRST AIDER AND LOCATION | NEAREST A&E                         | ASSEMBLY POINT                 |
| HOW THE ALARM IS RAISED  | EMERGENCY ACCESS FOR THIS WORK AREA | SPILL / ENVIRONMENTAL RESPONSE |

**9 BRIEFING RECORD — EVERYONE WORKING UNDER THIS RAMS SIGNS BEFORE STARTING**

By signing you confirm the contents of this RAMS have been explained to you, you understand the hazards and controls, and you will work to the sequence stated. Tell the supervisor if the work or the site does not match this document — work stops until it does.

| NAME | COMPANY | SIGNATURE | DATE |
|------|---------|-----------|------|
|      |         |           |      |
|      |         |           |      |
|      |         |           |      |
|      |         |           |      |
|      |         |           |      |
|      |         |           |      |
|      |         |           |      |

**10 PREPARED AND ACCEPTED**

Prepared / adapted for this site by — I confirm I have adapted this document to the site, scored the risks, and that it describes how the work will actually be done.

| PRINTED NAME | ROLE / COMPETENCE | COMPANY | SIGNATURE | DATE | TIME |
|--------------|-------------------|---------|-----------|------|------|
|              |                   |         |           |      |      |

Accepted for the site by — principal contractor or site manager review.

| PRINTED NAME | ROLE | COMPANY | SIGNATURE | DATE | TIME |
|--------------|------|---------|-----------|------|------|
|              |      |         |           |      |      |

Review this RAMS if the work, the site or the law changes, and at least before each new phase of the works. Flatten the completed PDF before filing so the record cannot be silently edited.

R REVISION HISTORY

Every revision of this document, and every review that found nothing to change. The revision on the front of this sheet is the one you are holding — check kubitdocs.com for the current one before use.

| Rev | Date       | Class       | What changed                                                                                                                                                            | Authorised by                                                                 |
|-----|------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| D0  | 2026-09-11 | first-issue | First issue.                                                                                                                                                            | — not yet approved —                                                          |
| A0  | 2026-09-11 | review      | Approved for issue by the author. Content unchanged from the reviewed draft; the draft status strip is removed. No independent third-party review has been carried out. | Author — director, UK principal contractor, SMSTS. Not an independent review. |

Class: first-issue · material (the law, a control, a field or the scope changed — past buyers are notified) · editorial (wording or layout only) · review (checked, nothing changed) · withdrawal. Revision prefix D = draft, not approved and not for sale; A = approved for issue by the person named, on the date shown.