

Statutory basis: COSHH 2002 requires exposure to isocyanates, epoxy resins and solvents to be prevented or adequately controlled — isocyanates are respiratory sensitisers, so the aim is to prevent inhalation, with the workplace exposure limits in EH40/2005 (4th edition, 2020) as a ceiling, not a target. Local exhaust ventilation is designed and commissioned following HSE HSG258 (3rd edition, 2017) and thoroughly examined and tested under COSHH reg 9; health surveillance is provided under reg 11. Solvent vapour in a spray enclosure is a dangerous substance under DSEAR 2002, and the spray, heating, pumping and access equipment is work equipment under PUWER 1998. 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

Spray application of two-pack fire protection coatings through heated plural-component equipment, and spraying of isocyanate-containing topcoats over intumescent: the enclosure and its extraction, commissioning the enclosure before first use, mixing and ratio checks, heated hoses and pumps at high pressure, access inside the enclosure, clearance, emergency rescue and health surveillance.

This document does not cover: single-pack airless spraying (KD-RAMS-PD-003), the RPE regime and breathing air quality (KD-RA-PA-002), two-pack products applied by brush or roller (KD-RA-PA-001), the coating system and dry film thickness records (KD-RAMS-PD-005), and hand-applied fire-stopping (KD-RA-FP-001).

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. Inhaling isocyanate spray mist — occupational asthma, which can follow a single high exposure

At risk: Sprayers, anyone entering the enclosure

Controls: Spraying only inside the enclosure under extraction, nobody else inside. Sprayers wear air-fed breathing apparatus with a low-flow warning device, fed from a breathing air supply whose quality is controlled and checked under KD-RA-PA-002; filter respirators are not relied on. RPE stays on for the clearance time and comes off outside the enclosure.

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

2. Enclosure leaking mist, or catching fire

At risk: Other trades, occupants, sprayers

Controls: Enclosure built from flame-retardant sheeting, sealed at joints and entrances, and kept under negative pressure; extraction discharges to open air away from openings and air intakes; inspected before each session.

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

3. Extraction not performing — failed fan, blocked filters, damaged ducting

At risk: Sprayers

Controls: Before first use the enclosure and extraction are commissioning-tested — airflow measured, smoke test for leaks and dead spots, clearance time established — and the results recorded. Airflow indicator checked before each session; thorough examination and test at the interval COSHH reg 9 requires. Spraying stops on low flow.

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

4. Skin contact with isocyanates, epoxy resins and hardeners — sensitisation

At risk: Sprayers, mixers

Controls: Disposable hooded coveralls, gloves of the material the data sheet specifies, changed often; no skin exposed at wrists and neck; contaminated clothing bagged, not taken home. Health surveillance for every sprayer and mixer; chest tightness or wheeze reported at once and isocyanate work stopped until assessed.

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

5. High-pressure injection injury from spray gun, whip hose or fittings

At risk: Sprayers

Controls: Tip guard and trigger lock in use; pressure relieved before any tip change or blockage clearance; hoses and fittings rated for the pump's maximum pressure and inspected daily. An injection wound is a hospital emergency — the casualty goes to A&E with the product data sheet.

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

6. Burns from heated hoses and material; heat strain in coveralls and breathing apparatus

At risk: Sprayers

Controls: Material and hose temperatures to the manufacturer's data; insulated hose covers intact; heaters off and cooled before maintenance. Work and rest periods planned for a warm enclosure; drinking water outside; anyone unwell leaves the enclosure.

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

7. Fire or explosion from solvent vapour — including the MEWP as an ignition source*At risk: Sprayers, the building*

Controls: Ignition sources excluded; lighting, fans, MEWPs and other powered equipment inside only where suitable for the zone the DSEAR assessment sets; spray equipment earthed against static; flush solvent in closed containers; no hot works nearby.

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

8. Air-fed and spray hoses snagged or crushed by the MEWP or tower*At risk: Sprayers*

Controls: A hose attendant outside the platform's path manages the hoses; platform movement stops when a hose is under tension; hoses never routed under wheels or outriggers.

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

9. A sprayer collapsing, trapped or with a failed air supply inside the enclosure*At risk: Sprayers*

Controls: Emergency exit marked and kept clear; a trained person outside watches the sprayers throughout, can shut down the spray pump, knows the MEWP ground controls, and can reach and bring out a casualty wearing suitable RPE.

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

10. Off-ratio or poorly mixed material — uncured coating that stays hazardous and does not perform*At risk: Sprayers, building occupants*

Controls: Ratio and temperature checked and recorded at start-up and at the intervals the manufacturer states; off-ratio material stopped, removed and disposed of.

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

- Obtain the coating system data sheets, safety data sheets and COSHH assessment; confirm each sprayer's health surveillance and air-fed RPE arrangements under KD-RA-PA-002.
- Build the enclosure from flame-retardant sheeting with a marked emergency exit; install extraction to its design.
- Commission the enclosure before first use — airflow, smoke test, clearance time; record.
- Control detectors, ignition sources and openings near the enclosure; post signs and control entry; confirm powered access is suitable for the zone.
- Set up the plural-component unit and heated hoses; earth the equipment; check hoses, fittings, tip guards and trigger locks; brief the hose attendant and the rescue person.
- Check the airflow indicator, breathing air supply and low-flow warning before anyone enters; start up and record ratio and temperatures.
- Spray with only the sprayers inside. STOP if the airflow indicator drops, the air supply warns, the enclosure is breached, a hose snags or the ratio drifts.
- Relieve pressure before any tip change or blockage clearance; take planned rest breaks outside.
- After spraying, keep extraction running and RPE on for the clearance time; flush equipment into closed containers.
- Leave the enclosure, remove RPE and coveralls outside, bag contaminated items and wash; record ratio, temperatures, areas sprayed and extraction checks.

SITE-SPECIFIC AMENDMENTS TO THE SEQUENCE

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5 PLANT, EQUIPMENT AND MATERIALS

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|--|---|
| Heated plural-component spray unit | Air-fed breathing apparatus with low-flow warning |
| Flame-retardant sheeted enclosure with extraction to outside | Earthing leads for spray equipment |
| Airflow indicator and smoke test kit | MEWP or tower suitable for the zone |

INSPECTION / THOROUGH EXAMINATION REFS

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COSHH ASSESSMENT REFS

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

Head protection
Safety footwear
High visibility

Gloves — task-rated
Eye protection
Hearing protection

Air-fed breathing apparatus for spraying
Disposable hooded coveralls

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

7 PERMITS REQUIRED BEFORE THIS WORK STARTS

A permit authorises this work in that place, on that day. It extends the safe system of work in this document — it does not replace it (HSE HSG250). The site issues the permit; record its number before work starts.

KD-PTW-FI-023 — Fire Alarm and Detection Isolation Permit
Where detection in or near the enclosure is isolated.

PERMIT NUMBER

KD-PTW-WH-006 — Work at Height Permit
Where the site requires a permit for the access.

PERMIT NUMBER

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

PRINTED NAME	ROLE	COMPANY	SIGNATURE	DATE	TIME
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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.