

Hot Asphalt Built-Up Roofing JHA

Worked instructional example

Work and worksite

A roofing crew will install built-up roofing plies with hot asphalt on a released low-slope building roof. Hot material reaches the roof through the separately planned delivery system; this example covers roof receiving, controlled movement and mopping of plies. This fictional learning example describes planned controls; it records no actual inspection or work authorization.

- Roof condition, loading, edge/opening protection and protected access are released before roofing starts.
- The actual roofing specification, asphalt product and delivery equipment establish temperature, exposure and handling criteria.
- Kettle operation, fuel transfer, supply-equipment maintenance, coal-tar roofing and torch-applied membranes are excluded.

Questions before work

- Who controls the roof receiving point and hot-material route?
- Where are the actual asphalt temperature and exposure criteria recorded?
- How will workers leave the roof and summon help after a burn or other emergency?

Task Hazard Control

1 Release the roof work area

Hazard: Unprotected edges, weak deck areas or concentrated material loads can expose the crew before mopping starts.

Control: Confirm released deck and loading limits, the actual fall-protection arrangement, protected access and emergency arrangements. Position the receiving point and roofing stock so loading and hot-liquid routes do not compromise these controls.

Verification: Roofing lead records deck, access, loading and protection findings before delivery.

Reasoning: Hot asphalt handling leaves little room to recover from an unsafe walking route.

2 Coordinate hot material receipt

Hazard: Unplanned discharge or damaged containers can expose workers to severe burns and fumes.

Control: Identify the delivery-system operator and agreed stop signal. Inspect roof-side receiving equipment and suitable covered containers; exclude bystanders and receive only through the actual authorized method within its product and equipment limits.

Verification: Assigned receiver checks container condition, communication and required temperature findings.

Reasoning: A temperature or receiving method from another product is not the release criterion.

3 Move material to the mopping area

Hazard: Hot liquid can spill when a worker encounters congestion, unstable footing or unsuitable handling equipment.

Control: Keep the designated route clear and controlled. Use suitable handling aids and contained quantities under the approved method, with task-specific splash protection; prevent passing workers from entering the handling zone and pause if stability or visibility deteriorates.

Verification: Roofing lead observes route condition and handling before the next transfer.

Reasoning: A clear route protects both the handler and people beyond the mopping area.

Complete the work and hand over

4 Mop asphalt and place plies

Hazard: Burns, fumes, awkward tool movement and contact with others can occur as hot asphalt is spread.

Control: Maintain the specified application conditions and work sequence with suitable long-handled tools. Separate mopping and ply-setting positions, keep workers out of splash paths, and apply the assessed fume controls; reassess wind and ventilation changes instead of relying on odor.

Verification: Lead checks application conditions, crew spacing and exposure-control findings.

Reasoning: Temperature, air movement and worker position affect both exposure and the installed roof.

5 Manage interruptions and changing conditions

Hazard: Rain, heat stress, a fume concern or equipment trouble can undermine the planned operation.

Control: Stop receipt and handling through the agreed communication when conditions exceed the plan. Keep hot material secured under the equipment procedure, maintain the exclusion and arrange first aid or emergency response; repair or restart only after the responsible people resolve the change.

Verification: Lead records the reason for stopping, responsible person and restart criteria.

Reasoning: Continuing a hot-liquid operation can magnify a small change before the crew can react.

6 Close the roof operation

Hazard: Uncontrolled hot residue, tools or incomplete edges can expose the next crew.

Control: Follow the actual equipment and product procedure for remaining hot material and cleanup; do not improvise disposal or maintenance. Secure tools and containers, maintain protection and transfer unfinished roof sections and access restrictions to the receiving lead.

Verification: Lead confirms remaining-material status, housekeeping and the next crew's handover.

Reasoning: The end of mopping is not the end of the hot-material or roof-access hazard.

Pause and reassess

- Receiving equipment, communications or product temperature criteria cannot be verified.
- Rain, unstable route, changed fumes, heat illness concern or compromised fall protection.
- Spill, burn, blocked access or an unplanned equipment/maintenance task.

Improve the controls

Needs improvement: Work carefully and wear PPE.

More useful: Keep the designated route clear and controlled. Use suitable handling aids and contained quantities under the approved method, with task-specific splash protection; prevent passing workers from entering the handling zone and pause if stability or visibility deteriorates.

Needs improvement: Check that everything is ready.

More useful: Confirm released deck and loading limits, the actual fall-protection arrangement, protected access and emergency arrangements. Position the receiving point and roofing stock so loading and hot-liquid routes do not compromise these controls.

Decisions that change the analysis

Can the example supply one safe temperature for every asphalt?

No. Use the actual product information, roofing specification, equipment instructions and exposure assessment. Record applicable criteria and findings; the example supplies no universal kettle or roof-application setting.

What must the crew record for actual use?

Identify the actual equipment and work boundaries, responsible people, applicable criteria, inspection findings and open actions. Resolve changes with affected crews and obtain required project authorization before work.

Training needs

- Roof hot-asphalt receiving, contained handling, splash protection and burn/emergency response instruction.
- Product hazard communication, fume/exposure controls, heat-stress response and the actual roof fall-protection arrangement.

Confirm applicable qualifications and actual training evidence for the people assigned. Related toolbox talks support discussion; they do not establish competence.

References and adaptation

NIOSH Reducing roofers exposure to asphalt fumes
<https://www.cdc.gov/niosh/publications/numbered/2003-107.html>

OSHA 1926.501 Duty to have fall protection
<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.501>

OSHA 1910.1200 Hazard communication
<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1200>

References reviewed October 9, 2026. Use actual equipment and product instructions, project design and site requirements. This instructional example supplies no actual inspection results, signatures or work approval.