

Masonry Mortar Mixer Operation JHA

Worked instructional example

Work and worksite

A trained masonry worker will operate a guarded electric paddle-type mortar mixer at a separated outdoor ground-level batch station. Bagged dry material and water are charged using the mixer's designated guarded loading arrangement, and mortar is discharged into stable receiving containers. This fictional learning example describes planned controls; it records no actual inspection or work authorization.

- The actual model instructions govern setup, loading, discharge, shutdown and isolation; a mortar mixer is not assumed to match a concrete drum mixer.
- The exposure plan addresses dry-bag handling, charging and residue cleanup as well as wet-cement contact.
- This excludes towing, fuel-powered equipment, repairs, unguarded operation and entry into the drum while connected to power.

Questions before work

- Which guards, loading method and discharge controls are required by this mixer model?
- What dust-control evidence supports the dry-material charging method?
- How will the operator prevent restart and verify the safe state before drum cleanup?

Task Hazard Control

1 Release the batch station

Hazard: The mixer or receiving container can move; cords and traffic can create shock or contact hazards.

Control: Place the mixer on the model-specified stable surface and secure it against movement. Separate traffic, protect supply cords and provide the applicable construction electrical protection. Establish water, material and container routes without crossing the discharge pinch zone.

Verification: Station lead checks setup, supply protection and access before connecting power.

Reasoning: A workable batch route reduces exposure during every repeated cycle.

2 Inspect guards and controls

Hazard: An exposed drive or failed control can draw a hand into moving parts.

Control: Assigned operator inspects the drum guard, drive enclosure, latches and operating controls under the manual. Complete permitted function checks with the area clear and guards in place; remove defective equipment from service rather than bypassing a guard or switch.

Verification: Operator records defects and demonstrates the normal stop before loading.

Reasoning: A rotating mixer is not ready simply because its motor starts.

3 Charge through the guarded arrangement

Hazard: Bag dust can expose the crew to silica; sharp packaging and moving paddles can injure hands.

Control: Use the actual guarded loading procedure and the employer's exposure-control method for the identified dry mix. Stage manageable bags or use a loading aid, keep faces away from the release and hands and tools out of the drum. Use assessed contact, eye and respiratory protection where required.

Verification: Lead verifies material identification, charging controls and the operator's loading position.

Reasoning: Dry-bag charging needs assessment; a wet final mix does not settle that exposure.

Complete the work and hand over

4 Mix and respond to abnormal operation

Hazard: A blocked or overloaded mixer can move unexpectedly and invite unsafe reach-in.

Control: Operate within the model's permitted batch and mixing procedure with guards secured. Keep the operating area clear; stop for unusual movement, noise or poor discharge. Use the specified shutdown and isolation procedure before any obstruction is investigated.

Verification: Operator monitors mixer response and holds the next charge for any defect.

Reasoning: Never turn an operating problem into a hand-tool intervention in moving paddles.

5 Discharge into a stable container

Hazard: The tipping drum, receiving cart or wet mortar can crush hands or burn skin.

Control: Position the receiving container before operating the model's discharge controls. Keep helpers outside drum and handle movement, control the pour and prevent overload of the receiving container. Maintain wet-cement protection and prompt washing access.

Verification: Operator confirms receiving stability and clear pinch zones before discharge.

Reasoning: Discharge combines machine movement with a heavy, caustic material.

6 Isolate and clean the mixer

Hazard: Stopped paddles can restart and dried residue can expose cleanup workers.

Control: Shut down, disconnect and control the power source under the employer's isolation procedure; verify stopped motion and prevent restart before guarded access for cleanup. Stabilize any movable drum as required by the manual. Use the permitted wet or HEPA cleanup method, protect electrical components and restore guards before handover.

Verification: Operator verifies the isolated state and records remaining equipment defects.

Reasoning: The stop switch is an operating control, not the complete cleanup isolation.

Pause and reassess

- A guard or stop control fails, or the mixer moves abnormally.
- Charging dust controls, electrical protection or safe receiving access cannot be maintained.
- Cleanup needs guarded access before power and movement are safely isolated.

Improve the controls

Needs improvement: Work carefully and wear PPE.

More useful: Use the actual guarded loading procedure and the employer's exposure-control method for the identified dry mix. Stage manageable bags or use a loading aid, keep faces away from the release and hands and tools out of the drum. Use assessed contact, eye and respiratory protection where required.

Needs improvement: Check that everything is ready.

More useful: Place the mixer on the model-specified stable surface and secure it against movement. Separate traffic, protect supply cords and provide the applicable construction electrical protection. Establish water, material and container routes without crossing the discharge pinch zone.

Decisions that change the analysis

Does the CMU wall example already cover this mixer operation?

It includes mortar supply as one part of wall construction. This separate analysis follows the mixer's guarded charging, operating, discharge and isolation cycle; the actual machine manual still establishes its detailed procedure.

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

- Demonstrated use of the actual mortar mixer's guards, loading, discharge, stop and isolation arrangements.
- Material-specific silica and hazard-communication instruction, wet-cement protection and the selected cleanup method.

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

References and adaptation

Multiquip Plaster and mortar operation manuals

<https://service.multiquip.com/manuals-mixers-plastermortar.html>

OSHA 1926.300 Hand and power tools

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.300>

OSHA 1926.1153 Respirable crystalline silica

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.1153>

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.