

Combustible Dust: Verify Capture and Cleanup

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Why this matters

A fine dust may create a fire or explosion hazard even when the solid material seems familiar. Dust above eye level or inside equipment can matter as much as the floor.

Objective: Confirm the dust assessment, collection system and approved cleanup method before work.

Key hazards or failure points

Unknown dust properties; escaped dust; hidden deposits; unsuitable vacuums; sparks; dust clouds during cleanup.

Practical controls

- Use the facility's assessment for the actual material and process. Have a qualified specialist resolve unknown combustibility or changed dust conditions.
- Operate the specified collection and protection systems. Control ignition sources, including nearby hot work, through the approved arrangements.
- Use the prescribed cleanup equipment and method. Do not improvise compressed-air blowdown, dry sweeping or an ordinary vacuum for combustible dust.

Verify It in the Field

Match today's material and operation to the assessment. Identify who reviews product or process changes before work continues.

From a safe position, compare collector indicators, connections and protection status with the equipment procedure. A running motor does not prove effective capture.

Review accessible surfaces and recorded inspections of concealed areas. Confirm cleanup-equipment suitability and actual completion; never disturb a deposit to test it.

Stop and reassess

Hold affected work for failed collection, unexpected deposits, unknown material or uncontrolled ignition. For smoke, fire or abnormal heating, raise the alarm and follow the emergency plan; do not open suspect equipment.

Ask the crew

1. Where can dust accumulate unseen?
2. What proves this vacuum is suitable?
3. Which change needs specialist review?

Use this HOP tool — Validate assumptions: Write down one assumption about the dust or cleanup equipment. Ask what material-specific evidence supports it and who can assess any gap. Keep the affected activity on hold until the responsible person documents the finding and explains the approved method to everyone involved.

Sources: Combustible Dust: An Explosion Hazard; OSHA SHIB 07-31-2005 — Combustible Dust in Industry. HOP concepts adapted from DOE-HDBK-1028-2009, Vol. 2 (June 2009). No claim to original U.S. Government work; no government endorsement implied.

Free next step: JHA/JSA planning and field-verification worksheet

Expanded guidance and separate forms: toddjeromejenkins.com/toolbox-talks/combustible-dust-capture-cleanup