

MSHA's Final Silica Rule: Understanding the New Requirements

The Mine Safety and Health Administration's (MSHA) final rule on respirable crystalline silica — published April 18, 2024 — is one of the most significant regulatory changes to affect the mining industry in decades.

The goal of this final rule is to reduce silica exposure and improve respiratory protection for miners. However, the rule's enforcement has been delayed by litigation and industry pushback.



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Key Provisions of the Final Rule

The final rule represents a major overhaul of how MSHA addresses silica and airborne hazards.

1. Reduced Exposure Limits

- **Permissible Exposure Limit (PEL):** Set at **50 $\mu\text{g}/\text{m}^3$** of respirable crystalline silica, measured as an 8-hour time-weighted average (TWA).
- **Action Level:** Established at **25 $\mu\text{g}/\text{m}^3$** ; reaching this level requires operators to begin exposure monitoring and other protective actions.

2. Uniform Standards Across Sectors

For the first time, coal and metal and nonmetal (MNM) mines face uniform exposure limits and monitoring requirements. This closes a long-standing regulatory gap between sectors.

3. Exposure Monitoring and Sampling

Operators must conduct **regular sampling** of work areas with potential silica exposure. Sampling must use ISO-compliant devices and accredited laboratories. Results must be reported to MSHA and shared with affected miners.

4. Hierarchy of Controls

The rule reinforces a **hierarchy of controls**, requiring engineering and administrative solutions before reliance on personal protective equipment (PPE). Examples include:

- Improved ventilation systems.
- Wet drilling and cutting methods.
- Dust suppression and collection technologies.
- Enclosed operator cabs with HEPA filtration.



Despite legal uncertainty, **silica remains a recognized occupational hazard with life-threatening consequences.**

Mining companies must balance **compliance preparedness** with **proactive protection** of worker health, positioning themselves to **adapt quickly** once litigation concludes.

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5. Respiratory Protection Program Updates

Operators must implement written respiratory protection programs. Programs must include proper respirator selection, fit testing, training, use, cleaning, and maintenance.

6. Expanded Medical Surveillance

- Coal miners: Already covered by medical monitoring, including chest X-rays and pulmonary function testing.
- MNM miners: Newly included under mandatory medical surveillance requirements, providing baseline and periodic exams, lung function testing, and imaging.

Medical surveillance aims to detect early signs of silica-related disease, improve treatment outcomes, and inform control strategies.

Litigation and Current Status

On April 4, 2025, the Eighth Circuit Court of Appeals issued a stay of the compliance deadlines for coal mines, halting MSHA's ability to enforce the rule in those operations.

MSHA subsequently announced it would pause enforcement "until the litigation is concluded."

For MNM mines, compliance deadlines remain unchanged. However, companies should recognize that the outcome of the litigation could alter or delay enforcement across both sectors.



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Compliance Timeline

- **June 17, 2024:** Rule went into effect.
- **Coal Mines:** Original compliance deadline April 14, 2025. Enforcement paused indefinitely due to judicial stay.
- **MNM Mines:** Compliance deadline April 8, 2026. No announced stay as of September 2025.

Despite legal uncertainty, silica remains a recognized occupational hazard with life-threatening consequences. Mining companies must balance compliance preparedness with proactive protection of worker health, positioning themselves to adapt quickly once litigation concludes.



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