



DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Part 1910, 1915, and 1926

[Docket No. OSHA-2010-0034]

RIN 1218-AB70

Occupational Exposure to Respirable Crystalline Silica; Correction

AGENCY: Occupational Safety and Health Administration, Department of Labor.

ACTION: Final rule; correcting amendment.

SUMMARY: OSHA published a final rule on occupational exposure to respirable crystalline silica on March 25, 2016 which became effective on June 23, 2016. This document corrects typographical errors in the final rule by revising these sections.

DATES: Effective **[INSERT DATE OF PUBLICATION IN FEDERAL REGISTER]**.

FOR FURTHER INFORMATION CONTACT: Annette Iannucci, Directorate of Standards and Guidance, Room N-3718, OSHA, U.S. Department of Labor, 200 Constitution Avenue NW, Washington, DC 20210; telephone (202) 693-1950; email Iannucci.annette@dol.gov.

SUPPLEMENTARY INFORMATION: On March 25, 2016, OSHA published a final rule entitled Occupational Exposure to Respirable Crystalline Silica (81 FR 16285-16890). The final rule retained the preceding permissible exposure limits (PELs) for respirable crystalline silica in general industry (29 CFR 1910.1000, Table Z-3), shipyards (29 CFR 1915.1000, Table Z), and construction (29 CFR 1926.55, appendix A), and added footnotes to make clear that these PELs apply to any sectors or operations where the new PEL of 50 µg/m³ is not in effect. The preceding PELs apply to operations that are not covered by the new standards, such as the processing of sorptive clays. The preceding PELs are also applicable during the time between publication of

the silica rule and the dates established for compliance with the rule, as well as in the event of regulatory delay, a stay, or partial or full invalidation by the Court.

This document corrects typographical errors in the formulas for the preceding PELs, so that they will appear as they did prior to publication of the final rule.

List of Subjects in 29 CFR Parts 1910, 1915, and 1926

Cancer, Chemicals, Cristobalite, Crystalline silica, Hazardous substances, Health, Lung Diseases, Occupational safety and health, Quartz, Reporting and recordkeeping requirements, Silica, Silicosis, Tridymite.

Authority and Signature.

This document was prepared under the direction of David Michaels, Ph.D., MPH, Assistant Secretary of Labor for Occupational Safety and Health. It is issued under the following authorities: Sections 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); section 107 of the Contract Work Hours and Safety Standards Act (the Construction Safety Act) (40 U.S.C. 3704); section 41 of the Longshore and Harbor Worker's Compensation Act (33 U.S.C. 941); Secretary of Labor's Order 1-2012 (77 FR 3912 (1/25/2012)); and 29 CFR part 1911.

Signed at Washington, DC, on August 5, 2016.

David Michaels,
Assistant Secretary of Labor for Occupational Safety and Health.

Accordingly, for the reasons set forth in the preamble above, the Occupational Safety and Health Administration is amending 29 CFR parts 1910, 1915, and 1926 as follows:

PART 1910—OCCUPATIONAL SAFETY AND HEALTH STANDARDS

1. The authority citation for part 1910 continues to read as follows:

Authority: 29 U.S.C. 653, 655, 657; Secretary of Labor's Order Numbers 12-71 (36 FR 8754), 8-76 (41 FR 25059), 9-83 (48 FR 35736), 1-90 (55 FR 9033), 6-96 (62 FR 111), 3-2000 (65 FR 50017), 5-2002 (67 FR 65008), 5-2007 (72 FR 31159), 4-2010 (75 FR 55355), or 1-2012 (77 FR 3912), as applicable.

Sections 1910.6, 1910.7, 1910.8 and 1910.9 also issued under 29 CFR 1911. Section 1910.7(f) also issued under 31 U.S.C. 9701, 29 U.S.C. 9a, 5 U.S.C. 553; Public Law 106-113 (113 Stat. 1501A-222); Pub. L. 11-8 and 111-317; and OMB Circular A-25 (dated July 8, 1993) (58 FR 38142, July 15, 1993).

2. In §1910.1000, in Table Z-3, revise the entries for “Silica: Crystalline Quartz (Respirable)”, “Silica: Crystalline Cristobalite”, and “Silica: Crystalline Tridymite” to read as follows:

§ 1910.1000 Air contaminants.

* * * * *

TABLE Z-3—MINERAL DUSTS

Substance	mppcf ^a	mg/m ³
Silica:		
Crystalline		
Quartz (Respirable) ^f	250 ^b	10 mg/m ^{3 e}
	% SiO ₂ +5	% SiO ₂ +2

Cristobalite: Use ½ the value calculated from the count or mass formulae for quartz^f

Tridymite: Use ½ the value calculated from the formulae for quartz^f

* * * * *

* * * * *

^aMillions of particles per cubic foot of air, based on impinger samples counted by light-field techniques.

^bThe percentage of crystalline silica in the formula is the amount determined from airborne samples, except in those instances in which other methods have been shown to be applicable.

* * * * *

^cBoth concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size-selector with the following characteristics:

Aerodynamic diameter (unit density sphere)	Percent passing selector
2	90
2.5	75
3.5	50
5.0	25
10	0

The measurements under this note refer to the use of an AEC (now NRC) instrument. The respirable fraction of coal dust is determined with an MRE; the figure corresponding to that of 2.4 mg/m³ in the table for coal dust is 4.5 mg/m^{3K}.

^fThis standard applies to any operations or sectors for which the respirable crystalline silica standard, 1910.1053, is stayed or is otherwise not in effect.

PART 1915—OCCUPATIONAL SAFETY AND HEALTH STANDARDS FOR SHIPYARD EMPLOYMENT

3. The authority citation for part 1915 continues to read as follows:

Authority: Section 41, Longshore and Harbor Workers' Compensation Act (33 U.S.C. 941); Sections 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Secretary of Labor's Order No. 12-71 (36 FR 8754), 8-76 (41 FR 25059), 9-83 (48 FR 35736), 1-90 (55 FR 9033), 6-96 (62 FR 111), 3-2000 (65 FR 50017), 5-2002 (67 FR 65008), 5-2007 (72 FR 31160), 4-2010 (75 FR 55355), or 1-2012 (77 FR 3912), as applicable; 29 CFR part 1911.

Sections 1915.120 and 1915.152 of 29 CFR also issued under 29 CFR part 1911.

4. In §1915.1000, amend Table Z by:

a. Revising the entries for “Silica, crystalline, respirable dust, cristobalite”, “Silica, crystalline,

respirable dust, quartz”, “Silica, crystalline, respirable dust, tripoli (as quartz)”, and “Silica, crystalline, respirable dust, tridymite”; and

b. Under the “MINERAL DUSTS” heading of the table, revising the entry for “Silica: Crystalline Quartz”.

The revisions read as follows:

§ 1915.1000 Air contaminants.

* * * * *

TABLE Z – SHIPYARDS

Substance	CAS No. ^d	ppm ^{a*}	mg/m ³ ^{b*}	Skin designation
* * * * *				
Silica, crystalline, respirable dust				
Cristobalite; see 1915.1053	14464-46-1			
Quartz; see 1915.1053 ⁵	14808-60-7			
Tripoli (as quartz); see 1915.1053 ⁵	1317-95-9			
Tridymite; see 1915.1053	15468-32-3			
* * * * *				

MINERAL DUSTS

Substance	mppcf ^(j)
SILICA:	250 ^(k)
Crystalline Quartz. Threshold Limit calculated from the formula ^(p)	% SiO ₂ +5
* * * * *	

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⁵See Mineral Dusts table for the exposure limit for any operations or sectors where the exposure limit in § 1915.1053 is stayed or is otherwise not in effect.

*The PELs are 8-hour TWAs unless otherwise noted; a (C) designation denotes a ceiling limit. They are to be determined from breathing-zone air samples.

^aParts of vapor or gas per million parts of contaminated air by volume at 25 °C and 760 torr.

^bMilligrams of substance per cubic meter of air. When entry is in this column only, the value is exact; when listed with a ppm entry, it is approximate.

* * * * *

^dThe CAS number is for information only. Enforcement is based on the substance name. For an entry covering more than one metal compound, measured as the metal, the CAS number for the metal is given—not CAS numbers for the individual compounds.

* * * * *

^pThis standard applies to any operations or sectors for which the respirable crystalline silica standard, 1915.1053, is stayed or otherwise is not in effect.

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PART 1926—SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION

Subpart D—Occupational Health and Environmental Controls

5. The authority citation for part 1926, subpart D, continues to read as follows:

Authority: Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704); Sections 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); and Secretary of Labor's Order No. 12-71 (36 FR 8754), 8-76 (41 FR 25059), 9-83 (48 FR 35736), 1-90 (55 FR 9033), 6-96 (62 FR 111), 3-2000 (65 FR 50017), 5-2002 (67 FR 65008), 5-2007 (72 FR 31160), 4-2010 (75 FR 55355), or 1-2012 (77 FR 3912), as applicable; and 29 CFR part 1911.

Sections 1926.58, 1926.59, 1926.60, and 1926.65 also issued under 5 U.S.C. 553 and 29 CFR part 1911.

Section 1926.61 also issued under 49 U.S.C. 1801-1819 and 6 U.S.C. 553.

Section 1926.62 also issued under section 1031 of the Housing and Community Development Act of 1992 (42 U.S.C. 4853).

Section 1926.65 also issued under section 126 of the Superfund Amendments and Reauthorization Act of 1986, as amended (reprinted at 29 U.S.C.A. 655 Note), and 5 U.S.C. 553.

6. In §1926.55, in appendix A, in the table titled “Threshold Limit Values of Airborne Contaminants for Construction”:

a. Revise the entries for “Silica, crystalline, respirable dust, cristobalite”, “Silica, crystalline, respirable dust, quartz”, “Silica, crystalline, respirable dust, tripoli (as quartz)”, and “Silica, crystalline, respirable dust, tridymite”;

b. Under the “MINERAL DUSTS” heading of the table, revise the entry for “Silica: Crystalline Quartz”

The revisions read as follows:

§ 1926.55 Gases, vapors, fumes, dusts, and mists.

* * * * *

Appendix A to § 1926.55—1970 American Conference of Governmental Industrial Hygienists’ Threshold Limit Values of Airborne Contaminants

THRESHOLD LIMIT VALUES OF AIRBORNE CONTAMINANTS FOR CONSTRUCTION

Substance	CAS No. ^d	ppm ^{a*}	mg/m ^{3b}	Skin designation
* * * * *				
Silica, crystalline, respirable dust				
Cristobalite; see 1926.1153	14464-46-1			
Quartz; see 1926.1153 ⁵	14808-60-7			
Tripoli (as quartz); see 1926.1153 ⁵	1317-95-9			
Tridymite; see 1926.1153	15468-32-3			
* * * * *				

MINERAL DUSTS

SILICA:

250^(k)

Crystalline Quartz. Threshold Limit calculated from the formula ^(p)	% SiO ₂ +5
* * * * *	* * * * *

* * * * *

⁵See Mineral Dusts table for the exposure limit for any operations or sectors where the exposure limit in § 1926.1153 is stayed or is otherwise not in effect.

*The PELs are 8-hour TWAs unless otherwise noted; a (C) designation denotes a ceiling limit.

* * * * *

^aParts of vapor or gas per million parts of contaminated air by volume at 25 °C and 760 torr.

^bMilligrams of substance per cubic meter of air. When entry is in this column only, the value is exact; when listed with a ppm entry, it is approximate.

* * * * *

^dThe CAS number is for information only. Enforcement is based on the substance name. For an entry covering more than one metal compound, measured as the metal, the CAS number for the metal is given—not CAS numbers for the individual compounds.

* * * * *

^pThis standard applies to any operations or sectors for which the respirable crystalline silica standard, 1926.1153, is stayed or otherwise is not in effect.

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