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...ENT & GYPSUM CORPORATION

INTER-OFFICE MEMORANDUM

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DEFDOC/
KAISER

To e Distribution

DATE January 11, 1972

FROM J. H. Walton
1586 KB

Asbestos

Attached is a copy of the "Emergency Standards for Exposure to Asbestos Dust" as set forth in the Federal Register which became effective as of December 7, 1971.

Industrial Hygienist A. J. Trommershausen advises that dust sampling equipment is now being obtained in order to determine the concentrations of asbestos fibers present in the various in-plant situations. In the meantime it would be prudent to assume that at least a minimum exposure - as listed in Section 1910.93(C)(2) - occurs in your bag unloading and dumping operations. This exposure requires the use of respirators such as the A/O Dust Demon, which is now generally available.

Your attention is also directed to Section (d)(3) parts (f) and (g), "Asbestos Scrap Waste and Scrap shall be collected and disposed of in ...sed bags or other containers and all clean-up of asbestos dust shall ...done by vacuum cleaners. No dry sweeping shall be performed."

I will appreciate your advising of your plans for meeting these standards in each instance in which there is employee exposure to asbestos dust.

JHW:as
Attachment

The new standard was issued under the Occupational Safety and Health Act and also applies to the Construction Safety Act and Walsh-Healey Public Contracts Act regulations.

The adoption was made under Section 6(c) of OSHA following studies conducted by the National Institute for Occupational Safety and Health and recommendations made by the American Conference of Governmental Industrial Hygienists. NIOSH and ACGIH determined that existing standards constituted a grave danger to employees exposed to the eight-hour time weighted average concentration and that an emergency standard was necessary. NIOSH concurred that the change proposed by the ACGIH would provide a substantial base.

Action under Section 6(b) of the Act will begin soon. Any notice of proposed rulemaking under 6(b) will give notice of the emergency standard as a proposed rule of any subsidiary proposals which may be required under subsections (5) and (7) of 6(b) relating to toxic substances.

The emergency temporary standard had been called for in a letter to the Labor Department from the AFL-CIO. The letter cited evidence from a study conducted by Dr. Irvin J. Selikoff and the staff of the Mount Sinai School of Medicine, the AFL-CIO, and the Ad Hoc Committee on the Asbestos Hazard of the AFL-CIO Industrial Union Department (Current Report, November 18, p. 581).

The emergency standard appears in the Full Text section of this report and will be included in a future Reference File supplement.

Asbestos

OSHA PUBLISHES EMERGENCY STANDARD FOR ASBESTOS TO BE EFFECTIVE IMMEDIATELY

An emergency standard limiting the exposure of employees to asbestos dust was published by the Occupational Safety and Health Administration and made effective December 7.

The emergency standard limits the eight-hour time weighted average airborne concentration of asbestos dust to which employees are exposed to no more than five fibers per milliliter greater than five microns in length. Concentrations above five fibers per milliliter but, not to exceed 10 fibers per milliliter, may be permitted up to a total of 15 minutes in an hour for up to five hours in an eight-hour day.

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Full Text

EMERGENCY STANDARD FOR EXPOSURE TO ASBESTOS DUST PUBLISHED BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

Chapter XVII—Occupational Safety and Health Administration, Department of Labor

PART 1910—OCCUPATIONAL SAFETY AND HEALTH STANDARDS

Emergency Standard for Exposure to Asbestos Dust

Pursuant to section 6(c) of the Williams-Steiger Occupational Safety and Health Act of 1970 (84 Stat. 1596, 29 U.S.C. 655), Part 1910 of Title 29, Code of Federal Regulations (36 F.R. 10466, May 29, 1971) is hereby amended in the manner indicated below in order to provide an emergency standard dealing with the exposure of employees to asbestos dust.

In light of increasing information on the results of exposure of employees to airborne asbestos dust, including recent studies by the National Institute for Occupational Safety and Health and others, and recommendations by the American Conference of Governmental Industrial Hygienists (ACGIH), it is hereby determined that (1) exposure under the present standard for asbestos dust in Table G-3, § 1910.93, of 12 fibers per milliliter greater than 5 microns in length or 2 million particles per cubic foot of air, which is derived from an established Federal standard promulgated under the Walsh-Healey Public Contracts Act on May 20, 1969, constitutes a grave danger to employees exposed to this 8-hour time-weighted average concentration; and that (2) an emergency standard is necessary to protect employees from this excessive exposure. The National Institute for Occupational Safety and Health concurs that the proposed change in the asbestos dust standard recommended by the American Conference of Governmental Industrial Hygienists should be the substantial base for the emergency standard.

Action concerning the standard will be commenced under section 6(b) in the immediate future. Any notice of proposed rulemaking under section 6(b) will give notice of the emergency standard as a proposed rule and also of any appropriate subsidiary proposals which may be required under subparagraphs (5) and (7) of section 6(b) relating to the exposure of employees to toxic substances.

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Part 1910 is amended as follow

1. Table G-3 following § 1910.[illegible] .36 F.R. 15104, Aug. 13, 1971) is hereby amended by deleting the following:

Asbestos—12 fibers per milliliter greater than 5 microns in length or	2 Mppcf.	
Tremolite	5 Mppcf.	20mg./M³
		% SiO_2

As amended, Table G-3 reads as follows:

TABLE G-3—MINERAL DUSTS

Substance	Mppcf *	Mg/M³
Silica:		
Crystalline:		
Quartz (respirable)	250 †	10mg/M³ ‖
	%SiO_2+5	%SiO_2+2
Quartz (total dust)		30mg/M³
		%SiO_2+2
Cristobalite: Use ½ the value calculated from the count or mass formulae for quartz.		
Tridymite: Use ½ the value calculated from the formulae for quartz.		
Amorphous, including natural diatomaceous earth	20	80mg/M³
		%SiO_2
Silicates (less than 1% crystalline silica):		
Mica	20	
Soapstone	20	
Talc	20	
Portland cement	50	
Graphite (natural)	15	
Coal dust (respirable fraction less than 5% SiO_2)		2.4mg/M³ or
For more than 5% SiO_2		10mg/M³
		%SiO_2+2
Inert or Nuisance Dust:		
Respirable fraction	15	5mg/M³
Total dust	50	15mg/M³

NOTE: Conversion factors—
mppcf×35.3=million particles per cubic meter
=particles per c.c.

* Millions of particles per cubic foot of air, based on impinger samples counted by right-field technics.

† The percentage of crystalline silica in the formula is the amount determined from air-borne samples, except in those instances in which other methods have been shown to be applicable.

‡ As determined by the membrane filter method at 430× phase contrast magnification.

‖ Both 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 instrument. If the respirable fraction of coal dust is determined with a MRE the figure corresponding to that of 2.4 Mg/M³ in the table for coal dust is 4.5 Mg/M³.

2. A new § 1910.93a is added to Part 1910. The new § 1910.93a reads as follows:

§ 1910.93a Asbestos dust.

(a) The 8-hour time-weighted average airborne concentration of asbestos dust to which employees are exposed shall not exceed 5 fibers per milliliter greater than 5 microns in length, as determined by the membrance filter method at 400–450× magnification (4 millimeter objective) phase contrast illumination. Concentrations above 5 fibers per milliliter but not to exceed 10 fibers per milliliter, may be permitted up to a total of 15 minutes in an ho up to 5 hours in an 8-hour day.

(b) Engineering methods, such as but not limited to, enclosure, vacuum sweeping, and local exhaust ventilation, shall be used to meet the exposure limits prescribed in paragraph (a) of this section. Where such engineering methods are not feasible, or do not otherwise reduce the concentrations below those prescribed in paragraph (a) of this section, respiratory protective devices shall be provided and used in accordance with paragraph (c) of this section.

(c) (1) (i) When the limits of exposure to asbestos dust prescribed in paragraph (a) of this section are exceeded and when engineering controls required by paragraph (b) of this section are not feasible or do not otherwise reduce the concentration of asbestos dust below those prescribed in paragraph (a) of this section, the employer shall require the use of respiratory protective devices. The selection of respiratory protective devices shall be limited to those specified in the remaining subparagraphs of this paragraph (c).

(ii) The employer shall require that each employee test his respiratory protective device before each use in order to insure a proper fit according to the manufacturer's instructions. The employer shall further provide for effective training or supervision of employees in the testing of respiratory protective devices for fit before their use.

(2) For an atmosphere containing not more than 25 fibers per milliliter greater than 5 microns in length over an 8-hour average, or more than 50 fibers per milliliter over any period of 15 minutes, a reusable or single-use filter type respirator, operating with negative pressure during the inhalation phase of breathing, approved by the U.S. Bureau of Mines under the provisions of 30 CFR Part 14 (Bureau of Mines Schedule 21B), or a valveless respirator providing equivalent protection, shall be used.

(3) For an atmosphere containing not more than 250 fibers per milliliter greater than 5 microns in length over an 8-hour average, or more than 500 fibers per milliliter over any period of 15 minutes, a powered filter positive pressure respirator approved by the U.S. Bureau of Mines under the provisions of 30 CFR Part 14 (Bureau of Mines Schedule 21B) shall be used.

(4) For an atmosphere containing more than 250 fibers per milliliter greater than 5 microns in length over an 8-hour average a type C positive pressure supplied-air respirator approved by the U.S. Bureau of Mines under the provisions of 30 CFR Part 12 (Bureau of Mines Schedule 19B) shall be used.

(5) The employer shall establish a respirator program in accordance with the requirements of American National Standard Practice for Respiratory Protection Z88.2—1969.

(6) The respirators provided each employee shall be properly inspected, cleaned, repaired and stored.

(d) (1) When an employer has employees who are exposed to asbestos dust exceeding the limits prescribed in paragraph (a) of this section and the exposure results from the operations described in the remaining subparagraphs of this paragraph (d), the employer shall comply with the requirements of these subparagraphs relating to the operations involved. The requirements of this paragraph are in addition to those prescribed in paragraph (b) of this section.

(2) All hand- or power-operated tools which produce asbestos dust such as, but not limited to, saws, scorers, abrasive wheels, and drills shall be provided with local exhaust ventilation and dust collectors in accordance with the American National Standard Fundamentals Governing the Design and Operation of Local Exhaust Systems; ANSI Z9.2—1971.

(3) Employees exposed to the spraying of asbestos or the demolition of pipes, structures, or equipment covered or insulated with asbestos shall be provided with respiratory protective devices in accordance with paragraph (c)(4) of this section.

(e) Asbestos cement, mortar, coatings, grout, and plaster shall be mixed in closed bags or other containers.

(f) Asbestos waste and scrap shall be collected and disposed of in sealed bags or other containers.

(g) All cleanup of asbestos dust and blowing shall be performed by vacuum cleaners. No dry sweeping shall be performed.

3. Section 1910.12 is amended by changing paragraph (a) in order to apply the emergency standard prescribed in the new § 1910.93a, which is published in this document, to construction work which is subject to the Act. The amendment is necessary in light of the rule of regulatory construction set forth in § 1910.5(c). As amended, § 1910.12 reads as follows:

§ 1910.12 Construction work.

(a) (1) *Adoption and extension of established safety and health standards for construction.* The standards prescribed by Part 1518 of this title and in effect on April 28, 1971, are adopted as occupational safety or health standards under section 6(a) of the Act and shall apply, according to the provisions thereof, to every employment and place of employment of every employee engaged in construction work. Each employer shall protect the employment and places of employment of each of his employees engaged in construction work by complying with the appropriate standards prescribed by this paragraph.

(2) The standards prescribed in § 1518.55(c) of this title shall apply in the case of the exposure of any employee in construction work to airborne asbestos dust.

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Effective date. These amendments shall become effective immediately upon publication in the FEDERAL REGISTER (12-7-71).

(Sec. 6(c), 84 Stat. 1596, 29 U.S.C. 655, Secretary's Order No. 12-71, 36 F.R. 8754)

Signed at Washington, D.C., this 2[illegible] day of December 1971.

G. C. GREENWALD,
Assistant Secretary of Labor

[FR Doc.71-17933 Filed 12-6-71,8:47 am]

RAW MATERIAL ! LETIN DRYWALL ACCESSORY PRODUCTS	ASBESTOS 7RF10	BULLETIN NO: RM-J045 DATE: 6/20/72 PAGE: 1 of 1
APPROVALS:		CANCELS: RM-J045 DATE: 12/4/69

USES: Joint and Finish Compounds, Texture Paints

APPROVED SOURCE: Philip Carey

ALTERNATE SOURCE *: Johns-Manville

SPECIFICATIONS:

1.	Mixing Water Requirement	480 to 550
2.	Free moisture (200°F)	2.0%
3.	Color	Light Gray
4.	Grit	0.05% maximum. All passing 80 mesh screen
5.	Calcium carbonate (CO_2 method)	1.0% maximum
6.	Canadian screen	0.0-0.0-0.0-16.0
7.	pH (10% dispersion)	7-8
8.	Wet bulking	250-350

The following information is for Kaiser Gypsum Company personnel only:

Testing Schedule: Take a minimum of one 1/2 pound sample from each pallet in shipment, with a maximum of 20 samples. Test two random samples for grit and wet bulking. Test 10 samples for mixing water requirements. Retain a representative sample from each shipment for one year.

SAFETY: Employees should wear respirators when handling, weighing and batching asbestos.

* Use Alternate Source in emergency only due to color. For regular use, Alternate Source must be rechecked by Research and "approved."

RAW MATERIAL BULLETIN DRYWALL ACCESSORY PRODUCTS	ASBESTOS FILLER 1600	BULLETIN NO: RM-J036 DATE: 6/20/72 PAGE: 1 of 1
APPROVALS:		CANCELS: RM-J2C DATE: 12/1/69

APPROVED SOURCE: Western Chemical & Manufacturing Company - Los Angeles
(Wedbestos # 1600)
(Asbestos 3Z)

SPECIFICATIONS:	# 1600
1. Free Moisture (%)	3% maximum
2. Mixing Water Requirement (cc)	120 to 160
3. pH (10% dispersion) Beckman pH meter or equivalent	7.5 to 9.0
4. Color	White as per retained sample
5. Fineness, cumulative(%)	
Retained on 50 mesh	10-20
Retained on 100 mesh	20-40
Retained on 200 mesh	35-55
6. Grit	0.5% maximum - All passing 80 mesh screen

Warning: Employees should wear respirators when handling, weighing and batching asbestos.

RAW MATERIAL BULLETIN DRYWALL ACCESSORY PRODUCTS	ASBESTOS 7TF1	BULLETIN NO: RM-J050 DATE: 6/20/72 PAGE: 1 of 1
APPROVALS:		CANCELS: RM-J050 DATE: 1/26/71

USES: Joint and Finish Compounds, Texture Paints

APPROVED SOURCE: Philip Carey

ALTERNATE SOURCE *: Johns-Manville

SPECIFICATIONS:

1.	Mixing Water Requirement	330 to 370
2.	Free moisture (200°F)	2.0% maximum
3.	Color	Light Gray
4.	Grit	0.05% maximum. All passing 80 mesh screen
5.	Calcium carbonate (CO_2 method)	1.0% maximum
6.	Canadian screen	0.0-0.0-0.0-16.0
7.	pH (10% dispersion)	7.5-8.5
8.	Wet bulking	100-130

The following information is for Kaiser Gypsum Company personnel only:

Testing Schedule: Take a minimum of one 1/2 pound sample from each pallet in shipment, with a maximum of 20 samples. Test two random samples for grit and wet bulking. Test 10 samples for mixing water requirements. Retain a representative sample from each shipment for one year.

SAFETY: Employees should wear respirators when handling, weighing and batching asbestos.

* Use Alternate Source in emergency only due to color. For regular use, Alternate Source must be rechecked by Research and "approved."

RAW MATERIAL BULLETIN DRYWALL ACCESSORY PRODUCTS	ASBESTOS SG 210	BULLETIN NO: RMJ-047 DATE: 6/20/72 PAGE: 1 of 1
APPROVALS:		CANCELS: RMJ-12D DATE: 9/15/69

APPROVED SOURCES: Union Carbide
(SG-210)

SPECIFICATIONS:

1.	Magnetite (%)	2.5 maximum
2.	Reflectance, G. E. Photovolt (%)	68.0 minimum
3.	Dry Bulk Density, lbs/cu.ft.	5-6
4.	Wet Screen, Retain on	
	80 mesh (%)	0.8 maximum
	325 mesh	15.0 maximum

WARNING:

Employees should wear respirators when handling, weighing and batching asbestos.

RAW MATERIAL BULLETIN DRYWALL ACCESSORY PRODUCTS	ASBESTOS 7RF9	BULLETIN NO: RM-J046 DATE: 6/20/72 PAGE: 1 of 1
APPROVALS:		CANCELS: RM-J046 DATE: 12/9/69

USES: Joint and Finish Compounds, Texture Paints

APPROVED SOURCE: Philip Carey

ALTERNATE SOURCE *: Johns-Manville

SPECIFICATIONS:

1.	Mixing Water Requirement	450 to 550
2.	Free moisture (200°F)	2.0%
3.	Color	Light Gray
4.	Grit	0.05% maximum. All passing 80 mesh screen
5.	Calcium carbonate (CO_2 method)	1.0% maximum
6.	Canadian screen	0.0-0.0-0.0-16.0
7.	pH (10% dispersion)	7-8
8.	Wet bulking	200-300

The following information is for Kaiser Gypsum Company personnel only:

Testing Schedule: Take a minimum of one 1/2 pound sample from each pallet in shipment, with a maximum of 20 samples. Test two random samples for grit and wet bulking. Test 10 samples for mixing water requirements. Retain a representative sample from each shipment for one year.

SAFETY: Employees should wear respirators when handling, weighing and batching asbestos.

* Use Alternate Source in emergency only due to color. For regular use, Alternate Source must be rechecked by Research and "approved."

RAW MATERIALS BULLETIN DRYWALL ACCESSORY PRODUCTS	ASBESTOS 7D	BULLETIN NO: RM J 040 DATE: 6/20/72 PAGE: 1 of 1
APPROVALS:		CANCELS: RM J 040 DATE: 3/2/71

USES: TEXTURE PAINTS

APPROVED SOURCE: Philip Carey (7D-1) - Quebec, Canada

SPECIFICATIONS:

	Requirements
1. Canadian Screen	
2 mesh (minimum)	0
4 " "	0
10 " "	5.0 -
Pan (maximum)	11.0
2. Free Moisture (200°F)	2% maximum
3. Color	-
4. pH (pHydrion Paper)	8.0-9.5

The information following is for Kaiser Gypsum Co. personnel only.

Testing Schedule: Take a minimum of four 1/2 pound samples from each shipment. Retain a representative sample from each shipment for one year.

Warning: Employees should wear respirators when handling, weighing and batching asbestos.