

Tentative Specifications
FOR
TERRAZZO OXYCHLORIDE COMPOSITION FLOORING
AND
ITS INSTALLATION



OXYCHLORIDE CEMENT ASSOCIATION, INC.
1028 CONNECTICUT AVENUE
WASHINGTON 6, D. C.

Tentative Specifications
For
TERRAZZO OXYCHLORIDE COMPOSITION FLOORING
AND
ITS INSTALLATION

OCA-105

Revised September 29, 1949

SCOPE

1. These specifications cover Oxychloride Composition Terrazzo Flooring with respect to quality of materials and workmanship, installation, finishing and testing.

USES

2. Oxychloride Composition Terrazzo floors are adaptable to a wide variety of service conditions including heavy traffic and where decorative effects are desired. (See Note 1)

TYPES

3. The flooring shall be furnished in one of the following types,* as specified:

Type 1. Troweled

Type 2. Rolled or Power Floated

MATERIALS

4. (a) Dry Mix Matrix. - The dry mix matrix of the Oxychloride Composition shall consist of a machine-mixed compound of dry ingredients, which, at the time of installation, will set to a hard, dense product, as specified herein, when mixed with the gauging solution specified.

572 203 B-101

(b) All ingredients of dry mix matrix shall be dry, and shall be accurately proportioned and compounded by weight, mechanically mixed, and shall consist of caustic-calcined magnesia conforming to requirements of specification OCA Designation 500-10; inert fillers, such as talc, asbestos, marble flour, wood flour, and sawdust; inert aggregates (which are not affected by cleaning compounds), such as fine crushed stone, or other fine, chemically inert, low-absorbent physically strong aggregates. All material used shall be alkali-resistant and free from injurious amounts of deleterious materials, such as clay and silt. (See Note 2)

(c) Coarse aggregate and fine chips shall be substantially free from thin, flat, elongated shapes, slivers, and dust.

(d) Fibrous aggregate, fine aggregate, fine chips, and filler used in all compositions shall conform to the following requirements in respect to particle size gradation:

* Specifications for a third type containing cork can be supplied on request.

Sieve U. S. Number	Per Cent Passing			
	Fibrous Aggregate	Fine Aggregate	Filler (except asbestos)	Fine Chips
6				100
10		100		
16				5 max.
20	100			
50	80 max.	30 max.		
100			100	
200		10 max.	95 max.	

(e) Coarse aggregate shall be uniformly graded from a minimum of 1/8 in. to a maximum which shall not exceed one-third of the average thickness of the finished floor.

(f) Fibrous fillers shall be of such nature that the final finish, under service, shall not become fuzzy.

(g) Use of premixed dry ingredients which have become lumpy shall not be permitted.

(11) same as 100/101

5. Gauging Solution. - (a) The gauging solution shall be a water solution of magnesium chloride meeting requirements of OCA Specification Designation 500-11. The specific gravity of the gauging solution shall be $22.0 \pm 0.5^\circ$ Baume at 70 F when tested in accordance with Specification OCA Designation 350-11. Water used shall be clean and free of deleterious amounts of acids, alkalies, salts, or organic materials. (See Note 3)

(b) Alternate Gauging Solution. - As an alternate for that specified in Section 5 (a) a gauging solution containing magnesium sulfate may be used. This shall be a water solution of magnesium chloride and magnesium sulfate complying with the requirements of the Specifications for Magnesium Chloride (OCA Designation 500-11) and the Specification for Magnesium Sulfate (OCA Designation 500-12), respectively, of the Oxchloride Cement Association. The weight of the magnesium sulfate, calculated as $MgSO_4 \cdot 7H_2O$, shall be ten per cent (10%) of the weight of the magnesium chloride, calculated as $MgCl_2 \cdot 6H_2O$. The specific gravity of the gauging solution shall be $24.0 \pm 0.5^\circ$ Baume at 70 F when tested in accordance with method OCA Designation 350-11. Water used shall be clean and free of deleterious amounts of acids, alkalies, salts, and organic materials. (See Note 3)

(c) Solutions shall be prepared sufficiently in advance to permit their being cooled to at least room temperature before using. Care shall be exercised to insure complete solution of all crystalline material and to insure thorough mixing.

same as 101

6. Strips. - Division strips, base dividers, or ornaments, when required shall be formed from oxchloride cement, brass, stainless steel, monel metal, or plastics which are chemically resistant to the cement.

7. Certification of Raw Materials. - Contractor shall certify to the architect or owner that the magnesium oxide, magnesium chloride, magnesium sulfate, fillers, and aggregates conform to specifications designated in Sections 4 and 5.

PROPORTIONING AND MIXING

8. (a) Composition, Type 1. - The flooring shall be compounded strictly according to the formula used in making the sample or samples approved by and on file with the architect or owner and the composition shall be such as to yield a finished floor essentially the same as or better in appearance than the approved samples. The composition shall contain fibrous aggregate, fine aggregate, fine chips, coarse aggregate and the minimum amount of filler materials which will permit troweling to a smooth finish. Inorganic colors may be used if desired. The composition shall contain not less than 150 pounds of coarse aggregate to each 100 pounds of dry matrix.

(b) Composition, Type 2. - The composition shall be the same as that of Type 1 (Section 8 (a)) except that it shall contain not less than 200 pounds of coarse aggregate, not including the amount used for sprinkling during rolling or

power floating, to each 100 pounds of dry matrix.

4.7 * 11 gal for gal
gauging solution 21 gal/lb
(c) Mixing. - The dry ingredients shall be placed in a clean mortar box or clean mechanical mixer, the required amount of the specified gauging solution added, and the mass mixed until it is free from lumps. Mixing shall be continued for at least five minutes after the last addition of gauging solution. In no case shall the material be retempered for use by addition of gauging solution after it has become too stiff to be applied.

6"
(d) Consistency, Type 1. - The wet mix of Type 1, prepared as specified in Section 8 (c), shall slump not more than ~~50 percent~~ when tested in accordance with the Slump Test for Field Consistency of Oxychloride Cements, OCA Designation 350-12.

(e) Consistency, Type 2. - The wet mix of Type 2, prepared as specified in Section 8 (c), shall slump not more than ~~20 percent~~ when tested in accordance with method OCA Designation 350-12.

CONDITIONING OF WORKING AREA

9. In spaces where the floor is to be laid the temperature shall not be less than 50 F. and shall not exceed 95 F. until final set is attained. The prevailing temperature shall be maintained substantially uniform in a stipulated range, and shall not decrease more than twenty degrees from the temperature at the time of installation for at least twenty-four hours after placing. Heating shall not be accomplished by the use of salamanders. Convection heating may be employed provided overheating is avoided, or air not exceeding 70 F. may be used in forced circulation providing its velocity at the floor level is not in excess of 500 cu. ft. per min. at any location. Openings are to be kept closed or so arranged as to prevent harmful circulation of air. All water and steam connections from which leaks might affect the oxychloride cement shall be made tight.

PREPARATION OF SUBFLOORS

10. (a) The flooring composition shall be laid on either an oxychloride composition basecoat laid in accordance with the specification for Oxychloride Composition Basecoat (OCA Designation 100) or a subfloor which has been prepared in accordance with the specification for Preparation of Subfloors to Receive Oxychloride Composition Flooring (OCA Designation 200).

(b) Prepared subfloors or basecoats shall be protected from injury and the surface shall be free from any substance deleterious to the formation of a bond, such as water, dust, and grease.

METHOD OF APPLICATION

11. (a) When the floor is to be laid on an absorptive surface (such as oxychloride composition basecoat, concrete, stone, or ceramic subfloors), this surface shall be thoroughly dampened with gauging solution at full strength, leaving no puddles. The surface shall then be broomed with a thin slurry prepared from gauging solution and either the dry mix or straight caustic-calced magnesite. Areas prepared in this manner must then be covered with the flooring composition as specified in Section 11 (c) or 11 (d) before the surfaces set or acquire a glaze.

(b) When the floor is laid on a non-absorptive surface where an anchoring

medium is employed, a thin layer of the flooring composition shall be thoroughly worked into and around the anchors. Application of additional flooring composition shall then be made as specified in Section 11 (c) or 11 (d).

(c) Type 1. - After preparation of the subfloor surfaces as specified in Section 11 (a) or 11 (b) a thin layer of the flooring composition shall be thoroughly worked into all recesses and depressions by scraping with a trowel just prior to spreading the flooring mix. The flooring composition shall then be spread, leveled by darbying, followed at least by a flat troweling and a second compacting troweling. When the floor has hardened sufficiently it shall be rough ground, grouted if necessary, and finely ground to a true, even, smooth, polished surface.

(d) Type 2. - After preparation of the subfloor surfaces as specified in Section 11 (a) or 11 (b) the composition shall be spread, tamped and rolled or power floated into a compact mass. Additional coarse aggregate shall then be sprinkled over the surface to fill all depressions or take up excess matrix, and to permit the terrazzo composition to be rolled and troweled to a dense and flat surface, slightly above the specified finished thickness of the floor. The level shall allow for the surface grinding necessary to expose the area of coarse aggregate agreed upon, and to produce a smooth, flat surface, free from waves, depressions, and pits. The floor shall be ground to a true, even smooth polished surface. When solutions are used to prevent sticking of the composition to the rollers the minimum amount of full strength gauging solution (Section 5 (a)) shall be employed.

THICKNESS

12. The thickness of the oxychloride floor at any point shall conform to the following requirements:

	Wood Subfloor		OCA (100) Basecoat		All Other Subfloors	
	Min.	Max.	Min.	Max.	Min.	Max.
Type 1	5/8"	1 1/4"	5/8"	1 1/4"	5/8"	1 1/4"
Type 2	3/4"	xx	5/8"	xx	3/4"	xx

The symbol xx denotes either not generally used or no normal maximum thickness limit.

SEALING

13. (a) The floor shall be thoroughly cleaned after final set so that it is free from all foreign materials, laitance, etc., and shall be sealed as prescribed in Section 13 (b) with a sealer of low viscosity and which will maintain a low viscosity after at least 30 minutes' exposure in the form of a thin film to a normal atmosphere at a temperature of 80 F. Such sealers shall impart a uniformly water-repellent or water-impervious character to the surface of finished floor. The sealer shall be similar or equivalent to that formed from a low viscosity, slow evaporating solvent, a microcrystalline paraffin wax, and china wood oil.

(b) The floor surface shall be wet with an excess of the penetrating sealer for at least 30 minutes, after which the excess sealer shall be removed from the surface by means of rags or mop, or by means of sawdust spread over the floor surface to absorb the excess sealer and then completely removed by sweeping. The floor surface shall be free from any substantial surface coating after removal of the excess sealer.

PROTECTION OF FINISHED INSTALLATION

14. (a) After sealing, the floor shall then be covered and protected with sawdust, absorbent paper, or other suitable water-vapor-permeable material until the completion of the work of other trades. Areas used for trucking shall be adequately protected from injury by means of temporary false flooring.

(b) All traffic shall be kept off the finished floor for at least forty-eight hours after the installation has been completed. The finished floor shall not be scrubbed or flooded with water for at least fifteen days after installation is completed.

PHYSICAL REQUIREMENTS

15. The matrix of each type shall conform to the following physical requirements when tested in accordance with methods listed in Section 20.

Linear change, 1 to 7 days, within limits $+0.040$ to -0.050 per cent

Transverse strength, minimum, 1600 pounds per square inch.

Compressive strength, minimum ~~6000~~ pounds per square inch.

5200

WORKMANSHIP

16. The prepared mix shall be laid to the specified thickness in accordance with drawings by qualified workman and in conformance with approved procedures, to produce finished surfaces as specified.

SUPERVISION

17. The flooring contractor shall give his personal supervision to the work or provide a competent foreman or superintendent with authority to act for him, who shall be present the entire progress of the installation.

INSPECTION

18. The architect or owner shall reserve the right to conduct any inspection or make any test deemed necessary to determine conformance with the requirements of this specification. Samples approximately $12'' \times 12''$ or of other specified size, representative of the finished floor may be requested by the architect or owner for selection of the desired color and finish and for filing in connection with acceptance inspection.

SAMPLING

19. (a) The architect or owner reserves the right to take, at the time of or prior to installation, representative composite samples, for testing, of materials from each lot offered for delivery, in accordance with Specification OCA Designation 350-13. The minimum quantities of these samples shall be as follows:

Premixed dry ingredients	40 20 pounds
Gauging solution	2 gallons
Additives (Notes 2 and 3)	1 pound

(b) Samples thus obtained shall be placed in separate clean, dry, airtight, waterproof containers, securely closed, distinctly labeled and dated. Any tests performed shall be completed within 30 days from date of sampling.

METHODS OF TEST

20. All methods of test shall conform to those of the Oxychloride Cement Association according to the following OCA designations:

Sieve Analysis of Magnesium Oxychloride Compositions	300-10
Sampling Oxychloride Compositions and Ingredients	350-13
Field Determination of Specific Gravity of Gauging Solution	350-11
Slump Test for Consistency of Magnesium Oxychloride Cements	350-12
Mixing Oxychloride Cement Compositions with Gauging Solution	300-20
Consistency of Magnesium Oxychloride Cements by Means of a Flow Table	300-12
Setting Time of Magnesium Oxychloride Cements	300-15
Transverse Strength of Magnesium Oxychloride Cement Compositions	300-13
Compressive Strength of Magnesium Oxychloride Cement Compositions	300-14
Linear Change of Magnesium Oxychloride Cements	300-16
Magnesia for Magnesium Oxychloride Cements:	
Ignition Loss of Magnesia	400-1
Active Calcium Oxide in Magnesia	400-2
Sieve Analysis of Plastic Calcined Magnesia	400-3
Testing, for Magnesium Oxychloride Cements	400-4
Magnesium Chloride, Analysis of	400-12
Bulk Density of Oxychloride Compositions	300-19
Tensile Bond Strength of Bonding Mediums	300-30
Magnesium Sulfate, Analysis of	400-13

PACKAGING, MARKING, AND STORAGE

21. (a) The contractor shall take such measures as may be necessary to insure the safe delivery and storage of all materials used in oxychloride cement compositions on the job, such measures being adequate to avoid damaging moisture pick-up or other contamination from sources existing at the job site.

(b) In addition to other markings, each package shall bear the specific name of the material and, in the case of premixed dry ingredients, the date of mixing.

(c) All dry premixed compositions shall be packaged in suitable containers and kept under adequate conditions to prevent damaging moisture pick-up. When aged longer than sixty days from date of mixing, the composition shall be tested not more than ten days before using, and shall at the time of testing meet the requirements specified herein.

(d) If requested, or if samples are to be tested the flooring contractor shall supply his recommended ratio of gauging solution to dry mix.

Note 1. (Section 2) These floors are adaptable to service conditions such as are encountered in stores, show rooms, lobbies, corridors, railway stations, etc., wherever a decorative floor which will sustain heavy foot-traffic is required. Marble chips are available in a wide variety of colors and an infinite variety of finished designs may be obtained by proportioning the color and size of the chips. A plain terrazzo

effect is produced by using No. 1 or No. 2 marble chips or mixtures thereof, as the coarse aggregate. An art terrazzo is produced by also adding marble chips graded from eight mesh to twenty mesh; in this type of floor, the small chips fill in between the coarser aggregate which is exposed in the finished surface. The eight to twenty mesh chips may be added to the extent of about twenty-five per cent of the weight of the dry ingredients in the matrix. Graded marble dust may also be used in the matrix to produce tints which are harmonious with the colored aggregates.

This type of floor may be formulated to secure varying degrees of non-slip characteristic by the incorporation of abrasive aggregate in the required amount and of the proper type and size distribution.

Note 2. (Section 4 (b)) If additives are included to make the composition more water-repellent or water-resistant, or to lend other valuable properties to the composition, they shall be such that the finished floor qualifies in respect to the specified requirements of these specifications and such that the appearance and durability of the floor are not adversely affected.

Note 3. (Section 5 (a)) If any water-soluble ingredient is used other than specified, it shall be added to the gauging solution of full strength, and any such material may be used only if the finished floor fulfills the specified requirements and provided the appearance and durability of the finished installation are not adversely affected.

(00A-105)

Oxychloride Cement Association, Inc.
1028 Connecticut Avenue, N. W.
Washington 6, D. C.

Page 7 of 7 pages

Tentative Specifications
FOR
INDUSTRIAL GRANOLITHIC OXYCHLORIDE COMPOSITION FLOORING
AND
ITS INSTALLATION



OXYCHLORIDE CEMENT ASSOCIATION, INC.
1025 CONNECTICUT AVENUE
WASHINGTON 6, D. C.

Tentative Specifications
For
INDUSTRIAL GRANOLITHIC OXYCHLORIDE COMPOSITION FLOORING
AND
ITS INSTALLATION

OCA-106

Revised February 1, 1950

SCOPE

1. These specifications cover Industrial Granolithic Oxychloride Composition Flooring, with respect to quality of materials and workmanship, installation, finishing and testing.

USES

2. This industrial granolithic type of oxychloride cement flooring is adaptable to locations where the floor is subject to extremely severe service conditions and where decorative effects are not required. (See Note 1)

MATERIALS

3. Dry Mix Matrix. - (a) The Oxychloride Composition shall consist of an intimately machine-mixed compound of dry ingredients, which at the time of installation, will set to a hard, dense product, as specified herein, when mixed with the gauging solution specified.

(b) All ingredients of dry mix matrix shall be dry, and shall be accurately proportioned and compounded by weight, mechanically mixed, and shall consist of caustic-calcined magnesia conforming to requirements of specification OCA Designation 500-10; inert fillers such as silex, asbestos in quantities not over 3 per cent of the weight of the dry mix, wood flour, and sawdust; inert aggregates (which are not affected by cleaning compounds), such as sand, fine crushed stone, or other fine, chemically inert, low-absorbent physically strong aggregates. All material used shall be alkali-resistant and free from deleterious materials, such as clay and silt. (See Note 2)

(c) Coarse and fine aggregates shall be substantially free from thin, flat, elongated shapes, slivers and dust. They shall have a wear resistance value of not less than H_a 45, as determined by tests for wear resistance of stones as outlined in National Bureau of Standards Research Paper RP 612.

(d) Fibrous aggregate, fine aggregate, and filler shall conform to the following requirements in respect to particle size gradation:

Sieve U. S. Number	Per Cent Passing		
	Wood Flour, Sawdust and Asbestos	Sand, Fine Crushed Stone, etc.	Silex, Marble Flour
6		100	
20	100		
30		80 max.	
50	80 max.		
100		7 max.	100
200			95 max.

(e) Coarse aggregate shall be uniformly graded from a minimum of 1/8 in. to a maximum which shall not exceed one-third of the average thickness of the finished floor.

(f) Fibrous fillers shall be of such nature that the final finish, under service, shall not become fuzzy.

(g) Use of premixed dry ingredients which have become lumpy shall not be permitted.

4. Gauging Solution. - (a) The gauging solution shall be a water solution of magnesium chloride meeting requirements of OCA Specification Designation 500-11. The specific gravity of the gauging solution shall be $22.0 \pm 0.5^\circ$ Baume when tested in accordance with Specification OCA Designation 350-11. Water used shall be clean and free of deleterious amounts of acids, alkalies, salts, or organic materials. (See Note 3)

(b) Alternate Gauging Solution. - As an alternate for that specified in Section 4 (a) a gauging solution containing magnesium sulfate may be used. This shall be a water solution of magnesium chloride and magnesium sulfate complying with the requirements of the Specifications for Magnesium Chloride (OCA Designation 500-11), and the Specifications for Magnesium Sulfate (OCA Designation 500-12), respectively, of the Oxychloride Cement Association. The weight of the magnesium sulfate, calculated as $MgSO_4 \cdot 7H_2O$, shall be ten per cent (10%) of the weight of the magnesium chloride, calculated as $MgCl_2 \cdot 6H_2O$. The specific gravity of the gauging solution shall be $24.0 \pm 0.5^\circ$ Baume at 70 F when tested in accordance with method OCA Designation 350-11. Water used shall be clean and free of deleterious amounts of acids, alkalies, salts, and organic materials. (See Note 3)

(c) Solutions shall be prepared sufficiently in advance to permit their being cooled to at least room temperature before using. Care shall be exercised to insure complete solution of all crystalline material and to insure thorough mixing.

5. Certification of Raw Materials. Contractor shall certify to the architect or owner that the magnesium oxide, magnesium chloride, magnesium sulfate, fillers, and aggregates conform to specifications designated in Sections 3 and 4.

PROPORTIONING AND MIXING

6. (a) Composition. - The flooring shall be compounded strictly according to the formula used in making the sample or samples approved by and on file with the architect or owner and the composition shall be such as to yield a finished floor essentially the same as or better in appearance than the approved samples. The composition shall contain fibrous aggregate, fine aggregate, coarse aggregate, and the minimum amount of filler materials which will permit troweling to a smooth finish. The composition shall contain not less than 200 pounds of coarse aggregate, not including the amount used for sprinkling during rolling or power floating, to each 100 pounds of dry mix matrix.

(b) Mixing. - The dry ingredients shall be placed in a clean mortar box or mechanical mixer, the required amount of the specified gauging solution added, and the mass mixed until it is free from lumps. Mixing shall be continued for at least five minutes after the last addition of gauging solution. In no case shall the material be re-tempered for use by addition of gauging solution after it has become too stiff to be applied.

(c) Consistency. - The wet mix, prepared as specified in Section 6 (b), shall slump not more than 2.5 inches when tested in accordance with Specification OCA Designation 350-12. Sample for test shall be taken immediately after completion of mixing.

CONDITIONING OF WORKING AREA

7. In spaces where the floor is to be laid the temperature shall not be less than 50 F and shall not exceed 95 F until final set is attained. The prevailing temperature shall be maintained substantially uniform in a stipulated range, and shall not decrease more than twenty degrees from the temperature at the time of installation for at least twenty-four hours after placing. Heating shall not be

accomplished by the use of salamanders. Convection heating may be employed provided local overheating is avoided or air not exceeding 70 F. may be used in forced circulation providing its velocity at the floor level is not in excess of 500 cu. ft. per min. at any location. Openings are to be kept closed or so arranged as to prevent harmful circulation of air. All water and steam connections from which leaks might affect the oxychloride flooring shall be made tight.

Notes on site PREPARATION OF SUBFLOORS

8. (a) The flooring composition shall be laid on either an oxychloride composition basecoat laid in accordance with the specification for Oxychloride Composition Basecoat, Type 2 (OCA Designation 100) or a subfloor which has been prepared in accordance with the specification for Preparation of Subfloors to Receive Oxychloride Composition Flooring (OCA Designation 200).

(b) Prepared subfloors or basecoats shall be protected from injury and the surface shall be free from any substance deleterious to the formation of a bond, such as water, dust, and grease.

METHOD OF APPLICATION

9. (a) When the floor is to be laid on an absorptive surface (such as oxychloride composition basecoat, concrete, stone, or ceramic subfloors), this surface shall be thoroughly dampened with gauging solution at full strength, leaving no puddles. The surface shall then be broomed with a thin slurry prepared from gauging solution and either the dry mix or straight caustic-calcined magnesia. Areas prepared in this manner must then be covered with the flooring composition as specified in Section 9 (c) before the surfaces set or acquire a glaze.

(b) When the floor is laid on a non-absorptive surface where an anchoring medium is employed, a thin layer of the flooring composition shall be thoroughly worked into and around the anchors. Application of additional flooring composition shall then be made as specified in Section 9 (c).

(c) After preparation of the subfloor surfaces as specified in Section 9 (a) or 9 (b) a thin layer of the flooring composition shall be thoroughly worked into all recesses and depressions by scraping with a trowel just prior to spreading the flooring mix. The flooring composition shall be spread to the required thickness and then tamped and rolled or power floated into a compact mass. Additional coarse aggregate shall then be sprinkled over the surface to fill all depressions or take up excess matrix, and to permit the granolithic composition to be rolled or power floated and troweled to a level, dense, and flat surface. When the floor has hardened sufficiently, it shall be lightly ground to remove excess matrix brought to the surface by rolling, power floating, or troweling and to remove trowel chatter marks. (See Note 1)

(d) When metal grids are used these shall be installed in accordance with the manufacturer's specifications for the type selected.

THICKNESS

10. The thickness of the finished floor shall be not less than 1 in. at any point.

SEALING

11. (a) The floor shall be thoroughly cleaned after final set so that it is free from all foreign materials, laitance, etc., and shall be sealed as prescribed in Section 11 (b) with a sealer of low viscosity and which will maintain a low viscosity after at least 30 minutes' exposure in the form of a thin film to a normal atmosphere at a temperature of 80 F. Such sealers shall impart a uniformly water-repellent or water-impervious character to the surface of finished floor. The sealer shall be similar or equivalent to that formed from a low viscosity, slow evaporating solvent, a microcrystalline paraffin wax, and china wood oil.

(b) The floor surface shall be wet with an excess of the penetrating sealer for at least 30 minutes, after which the excess sealer shall be removed from the surface by means of rags or mop, or by means of sawdust spread over the floor surface to absorb the excess sealer and then completely removed by sweeping. The floor surface shall be free from any substantial surface coating after removal of the excess sealer.

PROTECTION OF FINISHED INSTALLATION

12. (a) After sealing, the floor shall then be covered and protected with sawdust, absorbent paper, or other suitable water-vapor-permeable material until the completion of the work of other trades. Areas used for trucking shall be adequately protected from injury by means of temporary false flooring.

(b) All traffic shall be kept off the finished floor for at least forty-eight hours after the installation has been completed. The finished floor shall not be scrubbed or flooded with water for at least fifteen days after installation is completed.

PHYSICAL REQUIREMENTS

13. The matrix of the composition shall conform to the following physical requirements as tested by the methods listed in Section 18:

- (a) Linear change, 1 to 7 days, shall be within the limits +0.040 to -0.050 per cent.
- (b) Transverse strength, at 7 days, minimum 1700 pounds per square inch.
- (c) Compressive strength, at 7 days, minimum ~~4000~~ ⁶⁰⁰⁰ pounds per square inch.

WORKMANSHIP

14. The prepared mix shall be laid to the specified thickness in accordance with drawings by qualified workmen to produce the finished surfaces as specified.

SUPERVISION

15. The contractor shall give his personal supervision to the work or provide a competent foreman or superintendent with authority to act for him, who shall be present throughout the entire progress of the installation.

INSPECTION

16. The architect or owner shall reserve the right to conduct any inspection

or make any test deemed necessary to determine conformance with the requirements of this specification. Samples approximately 12" x 12" or of other specified size, representative of the finished floor may be requested by the architect or owner for selection of the desired color and finish and for filing in connection with acceptance inspection.

SAMPLING

17. (a) The architect or owner reserves the right to take, at the time of or prior to installation, representative composite samples, for testing, of materials from each lot offered for delivery in accordance with Specification OCA Designation 350-13. The minimum quantities of these samples shall be as follows:

Premixed dry ingredients	40 20 pounds
Gauging solution	2 gallons
Additives (Notes 2 and 3)	1 pound

(b) Samples thus obtained shall be placed in separate clean, dry, airtight, waterproof containers, securely close, distinctly labeled and dated. Any tests performed shall be completed within 30 days from date of sampling.

METHODS OF TEST

18. All methods of test shall conform to those of the Oxychloride Cement Association according to the following OCA Designations:

Sieve Analysis of Magnesium Oxychloride Compositions	300-10
Sampling Oxychloride Compositions and Ingredients	350-13
Field Determination of Specific Gravity of Gauging Solution	350-11
Slump Test for Consistency of Magnesium Oxychloride Cements	350-12
Mixing Oxychloride Cement Compositions with Gauging Solution	300-20
Consistency of Magnesium Oxychloride Cements by Means of a Flow Table	300-12
Setting Time of Magnesium Oxychloride Cements	300-15
Transverse Strength of Magnesium Oxychloride Cement Compositions	300-13
Compressive Strength of Magnesium Oxychloride Cement Compositions	300-14
Linear Change of Magnesium Oxychloride Cements	300-16
Magnesia for Magnesium Oxychloride Cements:	
Ignition Loss of Magnesia	400-1
Active Calcium Oxide In Magnesia	400-2
Sieve Analysis of Plastic Calcined Magnesia	400-3
Testing, for Magnesium Oxychloride Cements	400-4
Magnesium Chloride, Analysis of	400-12
Bulk Density of Oxychloride Compositions	300-19
Magnesium Sulfate, Analysis	400-13

PACKAGING, MARKING AND STORAGE

19. (a) The contractor shall take such measures as may be necessary to insure the safe delivery and storage of all materials used on the job, such measures being adequate to avoid damaging moisture pick-up or other contamination from sources existing at the job site.

(b) In addition to other markings, each package shall bear the specific name of the material and, in the case of premixed dry ingredients, the date of mixing.

(c) All dry premixed compositions shall be packaged in suitable containers

and kept under adequate conditions to prevent damaging moisture pick-up. When aged longer than sixty days from date of mixing, the composition shall be tested not more than ten days before using, and shall at the time of testing meet the requirements specified herein.

(d) If requested, or if samples are to be tested the flooring contractor shall supply his recommended ratio of gauging solution to dry mix.

Note 1.- (Section 9 (c)) - The industrial granolithic oxychloride floor is essentially a terrazzo type since the aggregate is a crushed granite, trap rock or similar hard stone chips. It usually is not ground to such an extent as to produce a polished surface. The floor is extremely hard, tough and durable under severe service and will meet the demands of hard usage normal to warehouses and factories or other areas subject to similar service, such as in public markets, exhibition buildings, football locker rooms, etc., where a low cost, dustless, easy to maintain floor is the primary requirement. For still more extreme service steel or cast iron grids may be imbedded in the floor.

Note 2. - (Section 3 (b)) - If additives are included to make the composition more water-repellent or water-resistant, or to lend other valuable properties to the composition, they shall be such that the finished floor qualifies in respect to the specified requirements of these specifications and such that the appearance and durability of the floor are not adversely affected.

Note 3. - (Section 4) - If any water-soluble ingredient is used other than specified, it shall be added to the gauging solution of full strength, and any such material may be used only if the finished floor fulfills the specified requirements and provided the appearance and durability of the finished installation are not adversely affected.

(00A-106)

Oxychloride Cement Association, Inc.
1028 Connecticut Avenue, N. W.
Washington 6, D. C.

Page 6 of 6 pages