

Conventional Plaster Products

7



Quality Delivers Performance

A completed plaster job can be no better than the basecoat or finish materials used and the base to which they are applied. CGC plastering products have gained their superiority on one basis: performance.

This record of performance extends through the complete CGC line—broadest in the industry—of plaster and lime products, plaster bases and accessories, designed to work together in a wide range of wall and ceiling systems.

The basic materials recommended by CGC for quality plaster walls and ceilings are described on the following pages. All meet the essential requirements of function, economy and speed of installation.

The CGC trademark on a product is assurance of consistent high quality and proven performance to meet your construction needs.

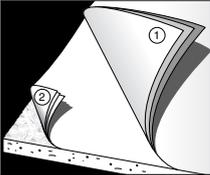
CGC sales representatives are ready to consult with contractors, architects and dealers on plastering materials, systems and special job conditions. They may be reached by contacting the nearest CGC Sales Office at 1-800-565-6607.

Plaster Bases

Proper use of CGC plaster bases and plasters provides the secure bond necessary in order to develop surface strength and resistance to abuse and cracking. These characteristics are common to both metal lath and gypsum plaster bases.

Gypsum Plaster Base

GRAND PRIX Plaster Base is a gypsum lath that provides a rigid, fire-resistant base for the economical application of gypsum plasters. GRAND PRIX Plaster Base requires less basecoat plaster than does metal lath. The specially formulated core of this plaster base is made with mineral materials that enhance the board's resistance to fire exposure.



GRAND PRIX multi-ply face paper

The gypsum core of this lath is faced with multilayer laminated paper engineered by a CGC process to provide proper absorption, check plaster slide and resist lath sag. As illustrated, the three outer layers (1) are highly absorbent to draw moisture from the plaster mix uniformly and quickly so that the plaster takes on anti-slump strength before it can slide; the inner layers (2) are chemically treated to form a barrier against moisture penetration, thus reduce softening of the gypsum core and consequent sag after the board is in place. Face paper is folded around the long edges and the ends are square-cut.

GRAND PRIX Plaster Base is made 12.7 mm (1/2") thick and 1220 x 2440 mm (4' x 8') and is packaged in bundles of two.

GRAND PRIX Plaster Base complies with ASTM C37, C588 and C1396. Other features are:

Fire Resistance When used with gypsum plaster, gypsum plaster bases provide assemblies with fire ratings of up to 2 hrs. for partitions, ceilings and column fireproofing.

Strength When securely attached, gypsum plaster bases add lateral stability to the assembly.

Sound Resistance Partitions faced with gypsum plaster bases and plaster on both sides have excellent resistance to sound transmission;

resilient attachment further improves ratings, makes assemblies suitable for party walls.

Bonding Gypsum plaster bonds to these gypsum plaster bases with a safety factor far higher than required to meet usual construction standards.

Durability Not harmfully affected by decay, dry rot, or normal humidity levels; will not attract vermin.

General Limitations: (1) To be used with gypsum plaster only. Bond between lime or portland cement plaster and GRAND PRIX Plaster Base is inadequate; (2) Should not be used in areas that are exposed to excessive moisture for extended periods or as a backing for ceramic tile or other similar surfacing materials commonly used in wet areas; galvanized metal lath and portland cement-lime plaster or DUROCK Brand Cement Board systems are recommended; (3) GRAND PRIX Plaster Base is unsuitable for veneer plasters and finishes.

Note: Gypsum basecoat plasters have slightly greater dimensional stability than gypsum lath. Therefore, the stability of the lath would govern in design considerations. Refer to Appendix for coefficients of expansion, and data on drying shrinkage.

Note: See Appendix for Thermal Resistance Values (R).

Specifications—GRAND PRIX Plaster Bases

| GRAND PRIX product | Thickness | | Width | | Length | | Approx.wt. | |
|--------------------|-----------|-----|-------|-----|--------|-----|-------------------|----------------------|
| | mm | in. | mm | in. | mm | in. | kg/m ² | lb./ft. ² |
| Regular | 12.7 | 1/2 | 1220 | 48 | 2440 | 96 | 8.8 | 1.8 |

Gypsum Plaster Laths

GRAND PRIX Plaster Base is a solid gypsum board lath for plaster, with special paper facing for maximum plaster bond. Complies with ASTM C37, C588 and C1396. Requires about 45% less basecoat plaster than metal lath.

– 12.7 mm (1/2") thick GRAND PRIX Plaster Base available in 1220 mm width x 2440 mm length (4' width x 8' length).

– Can be quickly attached to wood studs framing, (with nails, screws, or staples).

Limitations

1. Maximum frame spacing for 12.7 mm (1/2") GRAND PRIX Plaster Base should not exceed 400 mm (16") o.c.
2. For general information on steel framing, consult 09260-1E.
3. Shall be used with gypsum plasters only. Lime-based plaster and portland cement plaster are incompatible with GRAND PRIX Plaster Base and shall not be specified.
4. Shall not be used in areas with sustained high relative humidity or where exposed to excessive moisture for extended periods. (Galvanized metal lath and portland cement-lime plaster or a DUROCK Cement Board System is recommended for wet areas. See DUROCK Cement for further information.

Metal Lath

Metal Lath Mesh material formed from sheet steel that has been slit and expanded to form a multitude of small openings. It is made in Diamond Mesh and Riblath types and in two different weights for most applications. Diamond mesh and 9.5 mm (3/8") Riblath are also available in galvanized steel. They comply with ASTM C847.

Ends of bundles of metal lath are often spray painted in different colors for various weights, thus simplifying stocking and handling. Check the manufacturer's coding system to avoid confusion.

Metal lath offers these features:

Strength Metal lath embedded within the plaster provides reinforcement.

Flexibility Readily shaped to ornamental contours to a degree not possible with other plaster bases.

Fire Resistance When used with gypsum plaster, metal lath provides excellent fire-resistant construction; up to 2 hrs. for partitions and 4 hrs. for ceilings and column fireproofing (See Plaster Systems, Chapter 10).

Security Metal lath and plaster surfaces are extremely difficult to penetrate; provide excellent protection against penetration or forced entry.

Available in following types and styles:

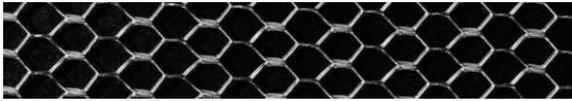
Diamond Mesh Lath



Self-Furring Diamond Mesh Lath



Paper-Back Lath



Flat Riblath



9.5 mm (3/8") Riblath



**Metal Lath
General
Limitations**

1. Metal lath products should not be used with magnesium oxychloride cement stuccos or stuccos containing calcium chloride additives.
2. In ceiling assemblies, certain precautions concerning construction, insulation and ventilation following sound building science principles are necessary for good performance.

Diamond Mesh Lath A small diamond mesh metal plaster base. A general all-purpose lath; it is best for ornamental, contour plastering. The small mesh openings conserve plaster and reduce droppings. Also available in self-furring type having 6.4 mm (1/4") dimple indentations spaced 38 mm (1-1/2") o.c. each way, for use as exterior stucco base over sheathing, column fireproofing and for replastering over old surfaces.

Paper-Backed Metal Lath Asphalt paper-backed Diamond Mesh Lath. Regular or Self-Furring type. Asphalt-impregnated paper is factory-bonded to the back.

Paper-backed painted lath is recommended for lath and plaster back-up of interior tile work and other inside work. Paper-backed galvanized lath is a recommended base and reinforcement for some exterior wall construction, including stucco and other machine or hand applied exterior surfacing materials.

Flat Riblath A 'flat rib' type of lath with smaller mesh openings. More rigid than diamond mesh, excellent as nail-on lath, and for tie-on work on flat ceilings. Not recommended for contour lathing.

9.5 mm (3/8") Riblath A herringbone mesh pattern with 9.5 mm (3/8") V-shaped ribs running lengthwise of the sheet at 114 mm (4-1/2") intervals, with inverted intermediate 4.8 mm (3/16") ribs. The heavy ribs provide exceptional rigidity. Used when supports are spaced more than 400 mm (16") o.c. and not more than 600 mm (24"), and for 51 mm (2") solid studless metal lath and plaster partitions. Also used as a centering lath for concrete floor and roof slabs. Unsuitable for contour plastering. Min. ground thickness must be 25 mm (1").

Metal Lath Selector

| Type of lath | Recommended Applications | | | | | |
|-----------------------|--------------------------|---------------------|------------------------------------|-----------------------------|------------------|--------------------|
| | Ornamental contour | Over int. substrate | Over ext. substrate ⁽¹⁾ | Nail-on/tie-on flat ceiling | Solid partitions | Concrete centering |
| Diamond Mesh | X | | | X ⁽³⁾ | X ⁽⁵⁾ | |
| Self-Furring | | X | X ⁽²⁾ | X ⁽⁴⁾ | | |
| Flat Riblath | | | | X | | |
| 9.5 mm (3/8") Riblath | | | | | X | X |

(1) For example: gypsum sheathing, replastering existing work, column fireproofing. (2) 1.84 kg/m² (3.4 lb./yd.²) galvanized lath. (3) For tie-on only; supports 400 mm (16") o.c. max. (4) For nail-on only; supports 400 mm (16") o.c. max. (5) Supports 400 mm (16") o.c. max.

Trim Accessories

Corner beads should be used on all external plaster corners to provide protection, true and straight corners, and grounds for plastering; casing beads are used as plaster stops around wall openings and at intersections of plaster with other finishes.

Limitation: Galvanized steel accessories are recommended for interior use only. For exterior application and where corrosion due to high humidity and/or saline content of aggregates is possible, the use of zinc alloy accessories is recommended. Should not be used with magnesium oxychloride cement stucco or portland cement stucco containing calcium chloride additives.

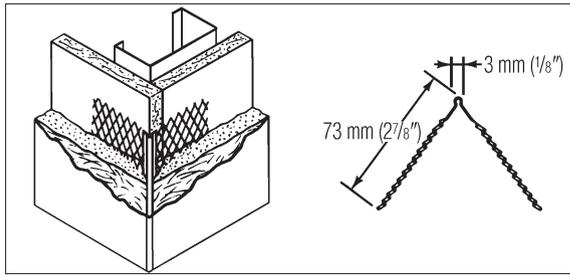
Corner and Casing Beads

1-A Expanded Corner Bead A general-purpose corner bead, economical and most generally used. Has wide expanded flanges that are easily flexed. Preferred for irregular corners. Provides increased reinforcement close to nose of bead.

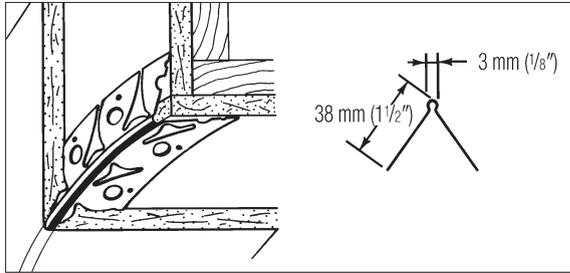
4-A Flexible Corner Bead A special utility, solid-punch-pattern bead. By snipping flanges, this bead may be bent to any curved design (for archways, etc.)

Double-X Corner Bead Has full 83 mm (3-1/4") flanges easily adjusted for plaster depth on columns. Ideal for finishing corners of structural tile and rough masonry. Has perforated stiffening ribs along expanded flange.

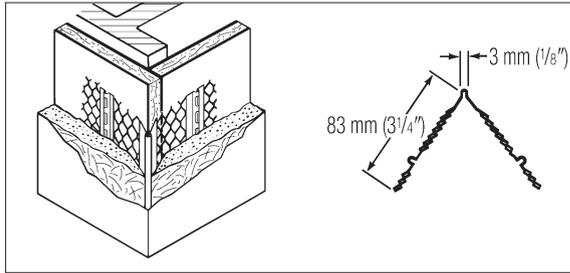
1-A Expanded Corner Bead



4-A Flexible Corner Bead



Double-X Corner Bead

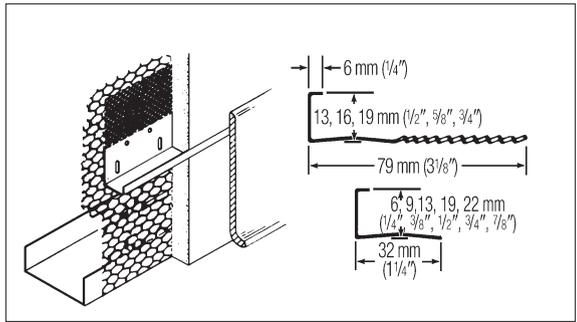


Casing Beads Used as a plaster stop and exposed to eliminate the need for wood trim around window and door openings; also recommended at junction or intersection of plaster and other wall or ceiling finishes, and as a screed. May be used with metal lath, GRAND PRIX Plaster Base, DUROCK Brand Cement Board or masonry construction. In order to ensure proper grounds for plastering, 19 mm (3/4") casing beads are recommended for use with metal lath, 16 mm (5/8") beads with all masonry units, 22 mm (7/8") beads when solid flange is applied under gypsum plaster base, 13 mm (1/2") beads when flange is applied over veneer gypsum base. Available in galvanized steel, or zinc alloy for exterior applications.

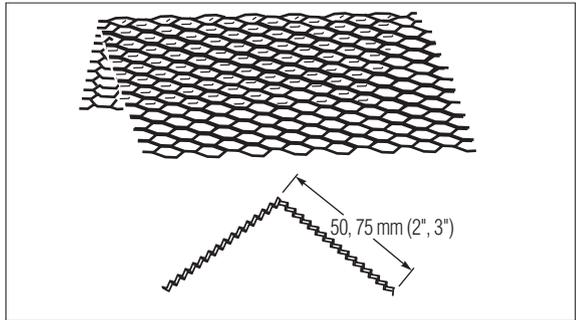
Cornerite and Striplath

These products are strips of painted or galvanized Diamond Mesh Lath used as reinforcement. Cornerite, bent lengthwise in the center to form a 100° angle, should be used in all internal plaster angles where metal lath is not lapped or carried around; over gypsum lath, anchored to the lath, and over internal angles of masonry constructions. Also used in the floating angle method of applying gypsum lath to wood framing in order to reduce plaster cracking. Striplath is a similar flat strip, used as a plaster reinforcement over joints of gypsum lath and where dissimilar bases join; also used to span pipe chases, and as reinforcement of headers over openings.

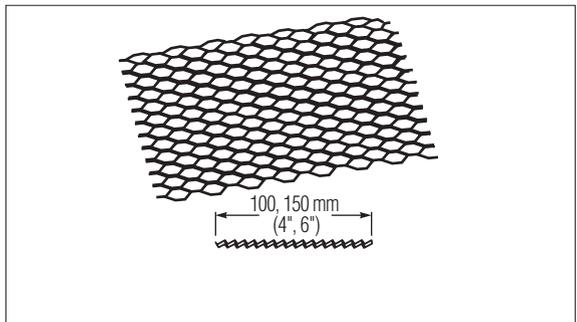
#66 Square Edge Casing Beads
(expanded or short flange)



Cornerite



Striplath



Control Joints

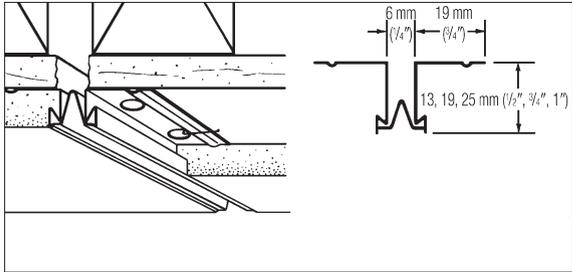
Zinc Control Joint Designed to relieve stresses of both expansion and contraction in large plastered areas. Made from roll-formed zinc alloy, it is resistant to corrosion in both interior and exterior uses with gypsum or portland cement plaster. An open slot, 6 mm (1/4") wide and 13 mm (1/2") deep, is protected with plastic tape which is removed after plastering is completed (see page 226). The short flanges are perforated for keying and attachment by wire-tying to metal lath or by stapling to gypsum lath. Thus the plaster is key-locked to the control joint, which not only provides plastering grounds but can also be used to create decorative panel designs. Sizes and grounds: No. 50, 13 mm (1/2"); No. 75, 19 mm (3/4"); No. 100, 25 mm (1") (for uses such as exterior stucco).

Maximum Spacing—Control Joints for Interior Assemblies

| System | Location | Max. single dimension | |
|-----------------------|-----------|-----------------------|-------------------|
| | | m | ft. |
| Metal Lath & Plaster | Partition | 9 | 30 |
| | Ceiling | 15 | 50 ⁽¹⁾ |
| | | 9 | 30 ⁽²⁾ |
| Gypsum Lath & Plaster | Partition | 9 | 30 |
| | Ceiling | 15 | 50 ⁽¹⁾ |
| | | 9 | 30 ⁽²⁾ |

(1) With perimeter relief. (2) Without perimeter relief.

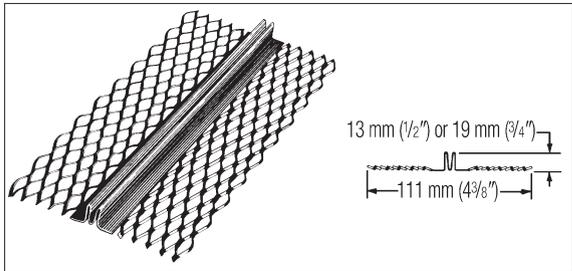
*SHEETROCK Brand
Control Joint Nos. 50,
75, 100*



Limitation: Where sound and/or fire ratings are prime considerations, adequate protection must be provided behind the control joint. Functions only with transverse stresses. Should not be used with magnesium oxychloride cement stucco or portland cement stucco containing calcium chloride additives.

Double-V Expansion Joint Provides stress relief to control cracking in large plastered areas. Made with expanded flanges of corrosion-resistant galvanized steel, or zinc for exterior use in 13 mm (1/2") or 19 mm (3/4") grounds.

Double V Expansion Joint



Specifications—Typical Plaster Trim Accessories

| Product | Depth or grounds | | Flange width | | Finish |
|--|------------------|-------|--------------|--------|---------------------|
| | mm | in. | mm | in. | |
| 1-A Expanded Corner Bead | — | — | 73 | 2-7/8 | Galv. or Zinc Alloy |
| 4-A Flexible corner Bead | — | — | 38 | 1-1/2 | Galv. |
| Double-X Corner Bead | — | — | 83 | 3-1/4 | Galv. |
| #66 Square Expanded Flange Casing Bead | 13 | 1/2 | 79 | 3-1/8 | Galv. or Zinc Alloy |
| | 16 | 5/8 | 79 | 3-1/8 | Galv. or Zinc Alloy |
| | 19 | 3/4 | 79 | 3-1/8 | Galv. or Zinc Alloy |
| | 22 | 7/8 | 79 | 3-1/8 | Galv. or Zinc Alloy |
| | 25 | 1 | 79 | 3-1/8 | Galv. or Zinc Alloy |
| | 32 | 1-1/4 | 79 | 3-1/8 | Galv. or Zinc Alloy |
| #66 Square Short Flange Casing Bead | 13 | 1/2 | 32 | 1-1/4 | Galv. or Zinc Alloy |
| | 19 | 3/4 | 32 | 1-1/4 | Galv. or Zinc Alloy |
| | 22 | 7/8 | 32 | 1-1/4 | Galv. or Zinc Alloy |
| Cornerite | — | — | 51 | 2 | Paint or Galv. |
| | — | — | 76 | 3 | Paint or Galv. |
| Striplath | — | — | 102 | 4 | Paint or Galv. |
| | — | — | 152 | 6 | Paint or Galv. |
| Zinc Control Joint No. 93 | 13 (#50) | 1/2 | 19 | 3/4 | Zinc Alloy |
| | 19 (#75) | 3/4 | 19 | 3/4 | Zinc Alloy |
| | 25 (#100) | 1 | 19 | 3/4 | Zinc Alloy |
| Double-V Expansion Joint | 13 | 1/2 | 77 | 2-3/16 | Galv. |
| | 19 | 3/4 | 77 | 2-3/16 | Galv. |

(1) Available in zinc, special order only.

Screws

The result of continuing development aimed at producing the best possible attachment of gypsum boards to steel, wood or gypsum supports simply and quickly. A complete line of self-drilling, self-tapping steel screws is available to improve construction systems and simplify installation methods. All screws are highly corrosion-resistant and have a Phillips head recess for rapid installation with a special bit and power-driven screw gun. (For complete data and Screw Selector Guide, see Chapter 1.)



Bugle head, high and low threads, slotted point of screws.

Framing Components

Steel framing members offer the advantages of light weight, low material cost and quick erection, superior strength and versatility in meeting job requirements. All are noncombustible.

Steel Studs and Runners Channel-shape and roll-formed from galvanized or corrosion-resistant steel. Used in non-load and load-bearing interior partition and exterior curtain wall systems. Limited chaseways are provided by punchouts in the web. Assemblies using these studs are low in cost with excellent sound and fire-resistance characteristics. Available in various styles and widths to meet functional requirements:

For data on framing components see Chapter 1. For installation, see Chapter 2.

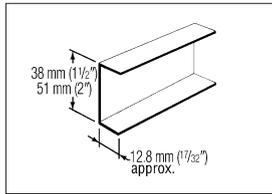
Cold-Rolled Channels Formed from 1.4 mm (16-ga.) steel, black asphaltum painted or galvanized. Used for furring, suspended ceilings, partitions and ornamental lathing. Sizes: 19 mm (3/4"), 38 mm (1-1/2"), 51 mm (2").

Metal Furring Channels Roll-formed, hat-shaped section of galvanized steel, this 0.5 mm (25-ga.) channel may be attached with furring clips or tie wire to the main carrying channels and spaced 400 mm (16") o.c. for economical screw attachment of GRAND PRIX plaster base FIRECODE Base as a base for either adhesively applied acoustical tile or a basecoat plaster. Also available made from 0.8 mm (20-ga.) galvanized steel for heavier loads and longer spans. The furring channel also provides noncombustible furring for exterior walls, may be spaced up to 600 mm (24") o.c. Face width 32 mm (1-1/4"), depth 22 mm (7/8"). (See Chapter 1 for data on Z-Furring Channels.)

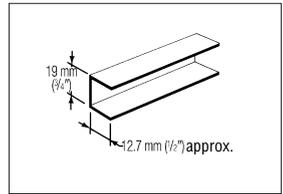
Adjustable Wall Furring Brackets Used for attaching 19 mm (3/4") furring channels to exterior masonry walls. Made of galvanized steel with corrugated edges. Brackets are attached to masonry and act as supports for horizontal channels 600 mm (24") o.c. in braced furring systems.

Tie Wire 1.2 mm (18-ga.) galvanized soft annealed wire for tying metal lath to channels and furring to runner channels.

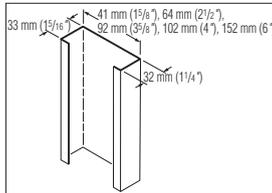
Hanger Wire 4.1 mm (8-ga.) for suspended ceiling channel runners when spaced not more than 1220 mm (4 ft.) o.c.



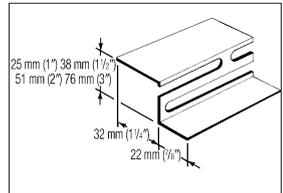
Cold-rolled channel



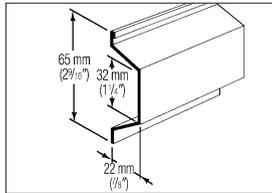
Cold-rolled channel



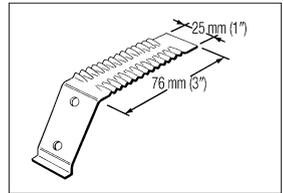
Steel stud



Z-furring channel



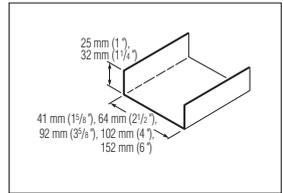
Furring channel



Adjustable wall furring bracket



Tie wire



Steel runner

Specifications—Structural Accessories⁽¹⁾

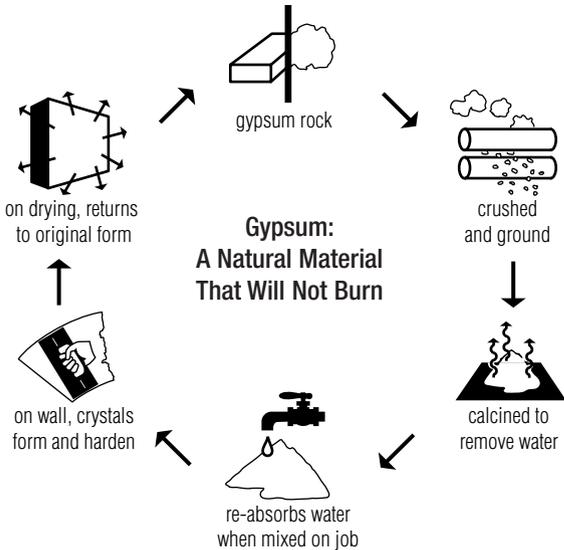
| Product | Size | |
|--|------------|-----|
| | in./ga. | mm |
| Cold Rolled Channel ^{(2) (3)} | 3/4" | 19 |
| | 1-1/2" | 38 |
| | 2" | 51 |
| Tie Wire/Hanger Wire ⁽³⁾ | 8-ga. Coil | 4.1 |
| | 18-ga Coil | 1.2 |
| | 8-ga. Bdl. | 4.1 |
| | 18-ga Hank | 1.2 |
| | 18-ga.Hank | 1.2 |

Notes: (1) See Chapter 1 for other structural accessories; (2) Painted; (3) Galvanized

Plasters

The main ingredient of all gypsum plasters is gypsum rock—hydrous calcium sulfate—which has a water content of about 20% in chemical combination. During processing, about 3/4 of this chemically combined water is removed from the gypsum rock by means of a controlled heating process called calcination. When water is added at the job, the material crystallizes (sets), reverting to its original chemical composition.

CGC plasters are specifically formulated to control setting time and other important characteristics. These depend upon the intended use and method of application, the climatic conditions of the area and job conditions.



Abuse Resistance

Abuse resistance has become a key wall system selection factor as designers and their clients have realized that it is often less expensive from a life-cycle perspective to address abuse resistance in critical areas in the initial project stage than to pay the high on-going costs of maintaining and repairing regular drywall partitions.

Abuse resistance may be defined as the ability of a system to resist three levels of damage: (1) Surface damage from abrasion and/or indentation; (2) Penetration through to the wall cavity from sharp or blunt impact; (3) Security breach through the entire assembly from ballistics or forced entry. For more detailed information on abuse resistance, see CGC *Abuse Resistant Systems*, publication SA 929.

A table describing the categories of abuse resistance and a table of products and systems organized by category of abuse resistance is in the Appendix.

Basecoat Plasters

To take advantage of all the beauty and durability plaster can offer, the required number of coats must be applied in each of the following situations:

Three coats are required on all metal lath and are desirable on all gypsum lath.

Two coats are acceptable on gypsum lath and on interior face of rough concrete block, clay tile or porous brick.

Furring is required over the interior surface of outside masonry prior to plastering to prevent damage from seepage and condensation.

In preparing for plastering, consideration should be given to the selection of materials not only for compatibility but also for the quality of the structure to be plastered. It is wise to upgrade plastering specifications when possible.

Two-Purpose Plaster—Suitable for machine or hand application; reduces inventory requirements. Must be job-aggregated, perlite aggregate not recommended when vertical lift exceeds 9 m (30 ft.) or hose length is over 46 m (150 ft.) Meets ASTM C28. Available in 22.5 kg (50 lb.) bags.

STRUCTO-LITE Gypsum Plaster Contains mill-mixed perlite aggregate and is preferred in cold weather when aggregate may freeze, or when suitable aggregate is not readily available. Lighter weight and greater insulation value than sanded basecoats. Not recommended over metal lath when smooth-trowel lime finish is used or machine application when vertical lift exceeds 9 m (30 ft.) or hose length is over 46 m (150 ft.) Meets ASTM C28. Available in 22.5 kg (50 lb.) bags.

Coverage and Technical Data—Gypsum Basecoat Plasters

| Plaster product | Mix | Ratio: aggregate (vol.)/ Basecoat (wt.) | | Approx. compressive strength dry ⁽¹⁾ | | Approx. coverage per ton of gypsum basecoat ⁽²⁾ | | | | | |
|--------------------------------|-------------|--|---------------------------|--|----------------------------|--|-----------------------|------------------------------------|-----------------------|------------------------------------|-----------------------|
| | | | | MPa ⁽⁴⁾ | lb./in. ² (psi) | Gypsum lath | | Metal lath | | Unit masonry | |
| | | m ² /ton ⁽³⁾ | ft. ² /100 lb. | | | m ² /ton ⁽³⁾ | yd. ² /ton | m ² /ton ⁽³⁾ | yd. ² /ton | m ² /ton ⁽³⁾ | yd. ² /ton |
| Two-Purpose Plaster | sand | 1.24 | 2.0 | 6.00 | 875 | 165 | 180 | 104 | 114 | 129 | 140 |
| | sand | 1.55 | 2.5 | 5.17 | 750 | 190 | 206 | 121 | 131 | 147 | 160 |
| | sand | 1.86 | 3.0 | 4.48 | 650 | 213 | 232 | 136 | 148 | 167 | 181 |
| | perlite | 1.24 | 2.0 | 4.82 | 700 | 162 | 176 | 103 | 112 | 126 | 137 |
| | perlite | 1.86 | 3.0 | 3.62 | 525 | 206 | 224 | 132 | 143 | 160 | 174 |
| | vermiculite | 1.24 | 2.0 | 3.21 | 465 | 157 | 171 | 100 | 109 | 123 | 133 |
| | vermiculite | 1.86 | 3.0 | 2.00 | 290 | 198 | 215 | 126 | 137 | 154 | 168 |
| STRUCTO-LITE Gypsum Plaster | regular | — | — | 4.82 | 700 | 129 | 140 | 82 ⁽⁵⁾ | 89 ⁽⁵⁾ | 100 | 109 |

(1) Average laboratory results when tested in accordance with ASTM C472. Figures may vary slightly for products from individual plants.
 (2) Grounds (including finish coat): gypsum lath (face of lath), metal lath 19 mm (3/4") (back of lath), unit masonry 15.9 mm (5/8"). (3) Metric ton.
 (4) Megapascals (MN/m²). (5) Lightweight aggregated plasters are not recommended over metal lath when the finish coat is to be smooth troweled.

Basecoat Plaster Limitations

1. Where sound isolation is prime consideration, use sand aggregate only.
2. Do not use where water or excessive moisture is present. May be applied to exterior soffits equipped with suitable drips and casings and protected from direct exposure to rain and moisture.
3. Not recommended for masonry or concrete walls or ceilings coated with bituminous compounds or waterproofing agents. Interior of exterior walls shall be furred and lathed prior to plastering to prevent seepage and condensation.
4. The only CGC plaster recommended for embedding electric heat cables is job-sanded DIAMOND Brand Interior Finish Plaster applied directly to properly prepared monolithic concrete or IMPERIAL Brand Gypsum Base (See pages 212-214 for more information). If GRAND PRIX Plaster Base and job-sanded DIAMOND Brand Interior Finish are used for a radiant heat system, the cable-sheath operating temperatures must never exceed 52°C (125°F).
5. Basecoats containing job-mixed lightweight aggregate or STRUCTO-LITE Gypsum Plaster must be finished with an aggregated finish plaster.

Finish Plasters

Conventional plaster walls are finished with gauging plasters and finishing limes or with prepared finishes. CGC provides a range of products with a variety of characteristics, depending upon performance requirements. From the standpoint of workability, productivity and ease of achieving surface smoothness, the conventional finish plasters that follow are superior to the veneer finish plasters that are known best for their surface hardness. See page 437 in the Appendix for a comparison of various finish plasters.

**Finish Coat
Plaster
General
Limitations**

1. A smooth trowel finish should not be used over lightweight aggregate gypsum basecoat applied over metal lath. Only sand float finishes are recommended over metal lath.
2. Where the gypsum basecoat is STRUCTO-LITE plaster or contains lightweight aggregate (perlite or vermiculite) and a smooth trowel finish is used over any plaster base except metal lath, the finish coat should be RED TOP Gauging Plaster (regular) and lime: a) with addition of 0.014 m³ (0.5 ft.³) of perlite fines, or, b) with addition of 23 kg (50 lb.) of No. 1 white silica sand per 45 kg (100 lb.) gauging plaster.
3. Gypsum or lime-based finishes, including Keenes cement, should not be used directly over a portland cement basecoat or over concrete block or other masonry surfaces.
4. Smooth-trowel high-strength finishes, must not be used over STRUCTO-LITE Plaster or a basecoat with a lightweight aggregate.
5. Gauged-lime putty applied over conventional basecoat plasters must age 30 days, be thoroughly dry and properly sealed before decorating. Quick-drying vinyl acrylic latex or alkali-resistant alkyd primer-sealers are recommended.
6. Primers containing polyvinyl acetate (PVA) are not recommended and should not be specified for use over wet plaster of any kind, over lime-gauging or lime-containing plasters. The PVA film is subject to rewetting and will almost certainly result in bond loss and subsequent paint delamination. In view of these precautions, strictly follow the specific lime-locking product recommendations of paint manufacturers for painting lime-gauging putty finishes and for lime-containing veneer plaster finishes.

Gauging Plasters

Lime, when used alone as a finish plaster, does not set, is subject to shrinkage when drying, and lacks a hard finish. Gauging plaster is blended into the lime putty in the proper proportions to provide controlled set, early hardness and strength, and to prevent shrinkage cracks.

Gauging plasters are carefully ground and screened to proper particle sizes to make the plasters quick-soaking and easily blended with lime putty.

Gauging Plaster Blends easily with lime putty for durable smooth-trowel or sand-float finishes. Provides high strength, hardness and abrasion resistance superior to many other surfaces. Easily painted or decorated. Applied over a gypsum basecoat. Two types: Quick Set (30-40 min); Slow Set (50-70 min.). Meets ASTM C28. Available in 22.5 kg (50 lb.) bags.

Finish Limes

The purpose of finish lime is to provide bulk, plasticity and ease of spread for the finish coat. There are two types of finish lime: (1) double hydrate (Type S), (2) normal or single hydrate (Type N). Each requires different preparation in order to produce a good finish-lime putty.

SNOWDRIFT Finish Limes Autoclaved (double-hydrate) limes that immediately develop high plasticity when mixed with water and do not require overnight soaking. Virtually eliminate the possibility of future expansion within the finish coat because of unhydrated magnesium oxides. These limes are easy to apply and have excellent spreading qualities. Comply with ASTM C206, Type S. Available in 23 kg (50-lb.) bags.

Red Top Single-hydrate lime that is economical, easy working, uniform, white and plastic. Requires soaking at least 16 hrs. to develop proper plasticity and the degree of hydration for use. Complies with ASTM C206, Type N. Available in 23 kg (50-lb.) bags.

Prepared Finishes

IMPERIAL Brand Finish Plaster Provides the ultimate in surface hardness and abrasion resistance. Available for hand application. Provides a smooth-trowel or float or spray-texture finish ready for decoration. Complies with ASTM C584. Available in 22.5 kg (50 lb.) bags.

DIAMOND Brand Interior Finish Plaster Offers a strong, hard white surface for construction where the extra hardness of IMPERIAL Brand Finish Plaster is not required. Extremely adaptable to textured finishes. Complies with ASTM C587. Available in 22.5 kg (50 lb.) bags.

Coverage—Finish Plasters⁽¹⁾

| Product | Ratio of Mix (dry wt.) | | | Approx. Coverage ⁽²⁾ | |
|---------------------------------------|------------------------|---------|---------------------|----------------------------------|-----------------------|
| | Lime | Gauging | Sand ⁽³⁾ | m ² /t ⁽⁴⁾ | yd. ² /ton |
| IMPERIAL Brand Finish Plaster | — | — | — | 330 | 360 |
| DIAMOND Brand Interior Finish Plaster | — | — | — | 510 | 550 |
| RED TOP Gauging Plaster | 2 | 1 | 8 | 260 | 280 |

(1) Over conventional basecoat plasters; over veneer basecoats, coverage is increased. (2) 1.6 mm (1/16") thickness.

(3) Natural, uniformly graded, clean silica sand. (4) Metric ton.

Special Additives

Plaster Retarders



USG Standard Strength Retarder Recommended for slight to moderate (30 to 45 min.) lengthening of set times of conventional and veneer plasters. Available for use with plaster when required by job or climate conditions. Available in 680 g (1-1/2-lb.) package.

USG High Strength Retarder Extends setting time of plaster 1 to 3 hours. Especially suitable for conventional plasters where machine application set time alteration is required. Available in 567 g (1-1/4-lb.) package.

USG Retarder for Lime Containing Plaster Products Especially formulated for use with lime/finish plasters, such as RED TOP Finish, DIAMOND Brand Interior Finish and gauging/lime plaster finishes.

Retarder Limitations: Avoid use of too much retarder, which can weaken the plaster finish. When used in excess, "dry-out" may occur—a condition where the water required for the chemical set reaction evaporates before adequate setting can take place. CGC Retarders should never be added directly to the plaster mix. Pre-mixing with water assures faster and more uniform dispersion for better batch control.

Plaster Accelerators



USG Standard Strength Gypsum Plaster Accelerator Provides slight adjustments in setting time (10 to 30 min.) for conventional and veneer plasters. Available for use with plaster when required by job or climate conditions. When used in excess, setting and drying problems can arise. Available in 680 g (1-1/2-lb.) package.

USG High-Strength Gypsum Accelerator Provides more substantial adjustments to setting times (30 min. to 2 hr.) for conventional plasters. Also may be used to alter set times for setting-type (DURABOND or EASY SAND) joint compounds. Available in 680 g (1-1/2-lb.) package.

USG Plaster Accelerator—Alum Catalyst This accelerator helps correct plaster performance in dry-out conditions. In addition to shortening working times for plaster, this accelerator also may be used to treat sun-faded IMPERIAL Brand Gypsum Base when a lime-containing plaster is to be applied to it. It is used to improve the bond of alkaline veneer plaster to gypsum bases with faded face paper. Available in 680 g (1-1/2-lb.) package.

Accelerator Limitations: Never add USG Standard Strength or High Strength Accelerator directly to the mixing water or mix it with water to form a solution before adding it to the plaster mix. When used in this manner, its ability to accelerate is significantly reduced. Instead, the accelerator should be sprinkled in dry form into the mixer after the plaster has been added. For hand mixing, dry accelerator can be added either to the dry mix or the plaster slurry.

Plaster Bonder



USG Plaster Bonder Vinyl acetate homopolymer emulsion for enhancing adhesion of new plaster to any structurally sound interior surface. Clear or tinted pink to allow visual confirmation of application where desired. May be brush, roller or spray applied. Dries to a film that rewets when plaster is applied. Compatible with gypsum plaster, cinder block, stone, gypsum drywall panels and other similar materials. Should not be used around swimming pools or in exceptionally moist areas. Do not apply to underside of concrete roof decks. Required for applications of plaster over DuRock Brand Cement Board, FIBEROCK Brand Abuse-Resistant Gypsum Fiber Panels and monolithic concrete. Available in 3.78 L (1 gal.) containers.

Acrylic Additive



USG AcRI-ADD 100% Acrylic Add-Mix Fortifier Water-based acrylic polymer emulsion admixture designed for interior use with gypsum-based products and for interior or exterior use with portland cement-based products. It enhances performance of gypsum plasters, mortars and cement plasters by improving bond strength and water resistance, it minimizes shrinkage cracking, and it improves overall durability. It also enhances curing qualities, imparts abrasion resistance and reduces cracking due to tensile and impact stresses. Low odor and color fast. Substitute the fortifier for a portion of the normal amount of mixing water, typically 1:3, but sometimes 1:2 or 1:1 depending on application end product, jobsite conditions and substrates selected. Available in 3.78 L (1 gal.) containers.