

MAVS

MASONRY ADHERED VENEER SYSTEMS®



**Premium, Yet Practical Solutions For
Veneer & Masonry Installations**

 PRIVATELY OWNED
AMERICAN MADE

Omega-Products.com/MAVS

**OMEGA**
PRODUCTS INTERNATIONAL

ABOUT US

Omega Products International is a leader in commercial and residential plaster and stucco wall systems. We provide the most complete line of wall systems and finishes including our ColorTek stucco, Super Cement, Diamond Wall plaster systems, OmegaFlex Acrylic finishes, AkroFlex EIFS Systems, Valentino, Siena Tile & Stone Products, and our newest product line MAVS - Masonry Adhered Veneer Systems. Omega has been the professional's choice offering unsurpassed high quality products and exceptional customer service since 1974.

Omega is all about colors. We offer hundreds of standard and custom colors, and the ability to match any color that fits your project's needs. All Omega products are manufactured in the USA using only the highest quality raw materials and pigments available to ensure product consistency and the very best performance.

Omega is committed to customer satisfaction and exceptional service to produce superior results on your projects. We strive to maintain our leadership role in the industry, and we back our products with renowned technical support as well as product and system warranties.



To learn more about Omega Products International and our family of products such as: Siena Tile & Stone Installation Products, MAVS - Masonry Adhered Veneer Systems, Valentino Decorative Venetian Plaster and so much more, please visit our websites at: **Omega-Products.com, SienaProducts.com, and ValentinoProducts.com**

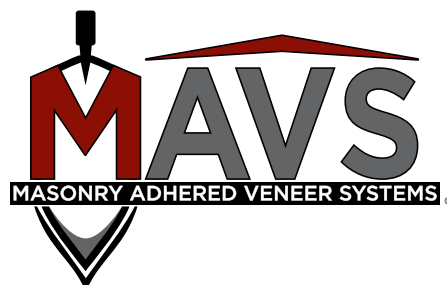
At Omega, we have worked hard over the years to build an excellent reputation of outstanding products and exceptional service, and we are committed to continuing these high standards for years to come.

MAVS - MASONRY ADHERED VENEER SYSTEMS



MAVS is a family of mortars and grouts used for installing adhered veneer, as well as setting traditional full brick and block. MAVS bonding mortars are designed to handle the more popular veneers being designed and specified today such as: large format natural & manufactured profiles, porcelain tile, thin brick, dry stacked, planks and many others. These veneers require high quality polymer-modified mortars, specially formulated for demanding applications. Veneer manufacturers are requiring that installers use polymer-modified mortars that meet the requirements outlined in ANSI A118.4 or A118.15 standards for many of their profiles. MAVS provides options that meet and exceed all of these ANSI requirements.

One of the greatest features of MAVS is the industry-leading warranties that can be integrated with Omega's wall system products. These exceptional wall system warranties incorporate Omega's already proven wall assemblies with our high performing MAVS bonding mortars to cover the entire wall from brown coat to veneer. These amazing warranties along with our exceptional customer service makes MAVS and Omega the Professionals Choice. MAVS may be Omega's newest product line, however Omega has been manufacturing modified mortars, grouts and hundreds of high quality products for almost 50 years.



Premium, Yet Practical Solutions For Your Masonry Veneer Needs

MAVS BONDING MORTARS



Choose the Level of Strength, Sand Profile, and Color

MAVS bonding mortars offer a selection of polymer modification, sand profiles, and colors which gives applicators and design professionals the options needed to meet the requirements for a wide variety of veneer applications.

Performance

All MAVS bonding mortars are polymer-modified and use specialty additives to improve performance. MAVS offers three levels of bonding mortars:

- MAVS 1000 - Good, exceeding the requirements of ANSI A118.4
- MAVS 2000 - Better, exceeding the requirements of ANSI A118.4 & A118.11
- MAVS 3000 - Best, exceeding the requirements of ANSI A118.15

Sand Profile

MAVS bonding mortars are available in two sand profiles:




- Standard - Masonry sand similar to Type S mortars
- Fine - Finer sand similar to thin set mortars

Colors

MAVS bonding mortars are available in a variety of standard and custom colors.

- Standard base colors: grey, white, off white, and tan
- Custom color matching available to meet all your project needs

FEATURES	BENEFITS
Polymer-modified	Unsurpassed shear bond strength and water-resistance
Sag-resistant	Holds large, heavy veneers in place
Smooth Consistency	Excellent workability and easy installation
High Performance	Exceeds ASTM C270, TMS 402/602 shear strength ANSI A118.4, ANSI 118.11, and/or ANSI 118.15 requirements
Efflorescence-resistant	Reduces efflorescence from the mortar bed
Low Shrinkage	Reduced risk of cracking
Factory Blended	Consistent, quality controlled
Warrantied	Omega system warranties and technical services

MAVS BONDING MORTARS	MAVS 1000 	MAVS 2000 	MAVS 3000 
POLYMER LEVEL	MODIFIED	PREMIUM MODIFIED	ULTRA-PREMIUM MODIFIED
Test Standards	ANSI A118.4	ANSI A118.4 & ANSI A118.11	ANSI A118.15
Area of use	<ul style="list-style-type: none"> ▪ Natural stone ▪ Manufactured masonry veneers (including large format or heavy) ▪ Thin brick 	<ul style="list-style-type: none"> ▪ Natural stone ▪ Manufactured masonry veneers (including large format or heavy) ▪ Thin brick ▪ Most tile 	<ul style="list-style-type: none"> ▪ Natural stone ▪ Manufactured masonry veneers (including large format or heavy) ▪ Thin brick ▪ Most tile
Substrates	<ol style="list-style-type: none"> 1. Masonry and CMU 2. Stucco Brown coat 3. Cement backer units 4. Portland cement mortar beds 5. Brick 	<ol style="list-style-type: none"> 1. Masonry and CMU 2. Stucco Brown coat 3. Cement backer units 4. Portland cement mortar beds 5. Brick 6. Poured-in-place and tilt-up concrete* 7. Exterior grade plywood** 8. Gypsum Sheathing** 	<ol style="list-style-type: none"> 1. Masonry and CMU 2. Stucco Brown coat 3. Cement backer units 4. Portland cement mortar beds 5. Brick 6. Poured-in-place and tilt-up concrete* 7. Exterior grade plywood** 8. Gypsum Sheathing** 9. Over membranes 10. Submerged applications

* Release agent must be removed prior to application ** Interior use only



Coverage

Masonry Method: (25 - 35 ft²) typical thin brick with 1/2" joint, Trowel Method: (55 - 65 ft²) 1/4" x 3/8" trowel, (40 - 50 ft²) 1/2" x 1/2" trowel.

Approximate coverage per 50 lb bag may vary due to the type of veneer, ambient or surface temperatures, surface preparation, application method, and/or mixing.

Packaging

50 lb (22.7kg) bag

Storage

1. Store bags in a cool, dry location.
2. Store away from direct contact with the ground and/or concrete.
3. Protect bags from weather and other damage.

Shelf Life

One year from date of production in an unopened bag when stored properly.

Color

Available in grey, white, off white, tan and hundreds of standard and custom colors. *(additional charges may apply)*

THIRD PARTY TESTING

MAVS products have been extensively tested with industry-leading results. MAVS Bonding Mortars have been formulated to perform exceptionally in the most demanding adhered veneer projects.

Third party ASTM C482 shear bond testing results in the chart below shows the MAVS 3000 bonding mortar outperforming competitor mortars such as an ASTM C270 Type S, a slightly modified A118.4 mortar, and a highly modified A118.15 mortar.

Tabel 1
Shear/Bond Strength Test Results

Lab. No.: L973

Specimen	Sample Description	Bond Area [in ²]	Maximum Force [lbf]	Bond Shear Stress [psi]	Failure Mode
1	Type S Mortar	7.73	149.71	19.36	Mortar to stone bond failure.
2		7.30	75.16	10.29	Mortar to stone bond failure.
3		7.61	182.45	23.96	Mortar to stone bond failure.
4		7.62	26.93	3.54	Mortar to stone bond failure.
Average				14.29	
1	Slightly Modified Mortar	7.55	314.97	41.70	Mortar to stone bond failure.
2		7.51	316.83	42.17	Mortar to stone bond failure.
3		7.29	308.36	42.31	Mortar to stone bond failure.
4		6.83	384.63	56.28	Mortar to concrete bond failure.
Average				45.62	
1	Highly Modified Mortar	7.56	1514.19	200.09	Delamination of a thin layer of stone.
2		7.08	1264.84	178.55	Mortar to concrete bond failure.
3		7.59	1542.36	203.15	Thin layer of concrete failure.
4		7.12	1801.86	153.18	Thin layer delamination of concrete and stone
Average				208.74	
1	MAVS 3000	7.77	3662.15	471.47	Thin layer of concrete failure.
2		7.38	1896.34	257.07	Mortar to stone bond failure.
3		7.18	1088.04	151.57	Thin layer delamination of stone.
4		7.65	2553.52	333.89	Delamination failure of concrete.
Average				303.50	



MAVS 3000 vs. Competitor ANSI A118.15 Mortar

The MAVS bonding mortars have not just been tested in labs. They have also been third-party tested in the field to verify real-world performance. Once again, MAVS was shown to outperform competitor products.



NON-MODIFIED MORTARS

There are many different mortars used in the masonry industry. Some mortars are commonly known as Type S or non-modified mortars used for setting or grouting, while others are commonly known as polymer-modified mortars used for bonding.

Non-Modified Mortars

Non-modified mortars are typically made using portland cement, lime, and sand. They are used for setting brick, block and for grouting joints between veneer. Non-modified mortars have the following characteristics:

- Conform with ASTM C270, standard specification for mortar for unit masonry
- Traditionally known as standard Type S
- Allows for field mixed mortars
- Works well for grouting and setting full brick and block

Non-modified mortars are not recommended for adhering veneer.



MAVS Masonry Mortar & Grout



MAVS Masonry Mortar & Grout is a non-modified premium mortar used for setting brick, block and for grouting natural and manufactured veneers, thin brick, pavers, stone, precast, brick and block. Exceeds ASTM C270 Type S and ANSI A118.6 grout requirements.

MAVS Masonry Mortar & Grout is available in grey, white, off white, tan, and a variety of standard and custom colors.



Modified Mortars

Modified mortars contain portland cement and aggregate, but are also modified with polymers and specialty additives to improve:

- Workability
- Sag-resistance
- Water-retention
- Setting times

The level of polymer-modification is one of the most important factors in the performance of a bonding mortar. Often the modification level is measured by the ANSI A118 testing standard it is able to pass:

- ANSI A118.1 : Non-modified
- ANSI A118.4: Minimally modified
- ANSI A118.11: Modified
- ANSI A118.15: Highly modified

Modified veneer bonding mortars are formulated specifically for today's more common and challenging adhered veneer applications.

Advantages of Highly Modified Mortar

- High adhesion and early strength
- Greater flexural and tensile strength
- Reduced water permeability
- High compressive strength
- Resistance to freeze thaw cycling
- Reduced shrinkage and cracking
- Higher bond strength and durability
- Holds large, heavy veneers in place



ALL MAVS BONDING MORTARS ARE POLYMER-MODIFIED

VENEER & MORTAR EXAMPLES

Why do we need different types of mortars?

Today's veneer and substrates all have different physical properties. Some of the important properties to take into consideration are density, porosity (absorption), size, and weight. These differences require specifically formulated mortars to ensure a successful installation. For example, large format porcelain tiles require a highly polymer-modified mortar with excellent sag resistance and greater adhesive strength that complies with ANSI A118.15. While clay thin brick veneer or small manufactured stone veneer, which are both porous and lighter weight only require a lower modified ANSI A118.4 mortar. The following sections have some examples of different types of veneer, their physical properties, and the corresponding MAVS Bonding Mortars that can be used to install them.



Examples of Veneer for ANSI A118.4 Bonding Mortars



Front View



Side View

Veneers that are fairly porous, 5% - 10% absorption rate.

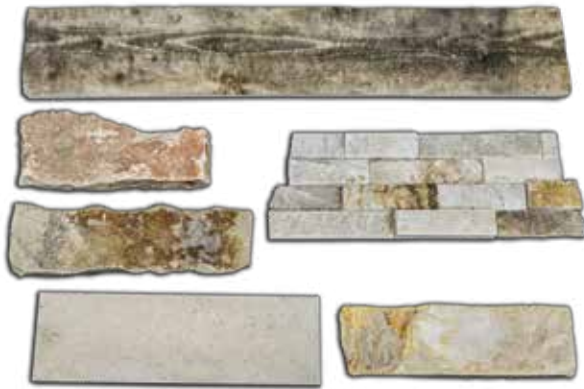
Smaller and/or lighter veneers, such as these examples:

- Manufactured stone: smaller sizes, such as 4"x8", 6"x10", 2"x12"
- Thin natural stone: smaller sizes that are approx. 1/2" thick and 6" to 8" long
- Thin brick: manufactured or cut that are not high fired



MAVS 1000

Examples of Veneer for ANSI A118.11 Bonding Mortars



Front View



Side View

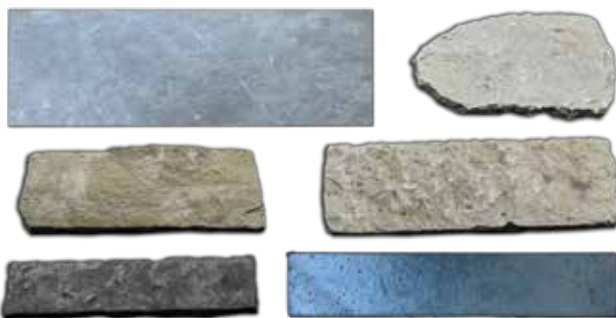
Veneers that are less porous, 2.5% - 4% absorption rate.
Moderate in size and/or weight veneers, such as these examples:

- Manufactured stone and plank veneers, approx. 12" x 24" to 8" x 36"
- Thin brick that are medium to high fired
- Natural stone medium size, Z panels, quick fit panels



MAVS 2000

Examples of Veneer for ANSI A118.15 Bonding Mortars



Front View



Side View

Veneers that are dense, not porous, .05% - 2.9% absorption rate.
Larger in size and/or weight veneers, such as these examples:

- Porcelain tile, large or heavy veneer, and longer plank style veneers
- Natural stone large/heavy in size, veneers close to 15 lbs/sf
- High fired, or iron spot brick veneer, glass tiles, dense stone



MAVS 3000 & Siena M300

OMEGA WALL SYSTEM WARRANTIES

One of the unique features of MAVS is the industry-leading warranties that can be integrated with Omega's wall system products. These exceptional wall system warranties incorporate Omega's already proven wall assemblies with our high-performing MAVS bonding mortars.

Adhered veneer is often being installed over Omega Super Cement Three Coat system or Omega Diamond Wall One Coat system. When using MAVS to install veneer, the builder or owner receives veneer bonding mortars that are verified to perform over Omega wall systems, plus the integrated warranty that covers the wall assembly from the scratch coat to the veneer. The warranty length depends on the combination of Omega products used.

MAVS over Super Cement Wall System



MAVS over Diamond Wall System



¹ Using AkroGuard will increase the warranty an additional 5 years

² Omega AkroLoc, Admix 500, or PolyLoc admix may be used to improve base coat tensile/flexural strength and water-resistance. Using admix will increase the warranty an additional 5 years.

GET UP TO A 35 YEAR WARRANTY USING MAVS

ADDITIONAL MAVS WARRANTIES

Omega offers industry leading warranties when MAVS bonding mortars are used over other types of approved wall assemblies. Some of the more common substrates include; CMU, tilt-up or poured in place concrete, manufactured approved cement board, and brick.

CMU, Tilt-up, and Poured-in-Place Warranty



Approved Cement Board Warranty



* NOTE: All substrates must be free of dirt, oil, release agents, paint, or anything that is considered a bond breaker. They must be removed prior to installation of bonding mortar. Sandblasting or bead blasting is required. Pressure washing is not acceptable.

MAVS WARRANTY INFORMATION FORM

Omega Products International is proud to manufacture only the highest quality products with excellent warranty plans. Omega's MAVS Bonding Mortars have multi-year extended warranties. The length of the warranty depends upon the combination of products used. The following warranties are available:

System and or Products Used	Years
<input type="checkbox"/> MAVS 1000 with Diamond Wall ^{1,2}	15
<input type="checkbox"/> MAVS 2000 with Diamond wall ^{1,2}	20
<input type="checkbox"/> MAVS 3000 with Diamond wall ^{1,2}	25
<input type="checkbox"/> Siena M300 with Diamond Wall ^{1,2}	25
<input type="checkbox"/> MAVS 1000 with Super Cement Fibered ^{1,2}	15
<input type="checkbox"/> MAVS 2000 with Super Cement Fibered ^{1,2}	20
<input type="checkbox"/> MAVS 3000 with Super Cement Fibered ^{1,2}	25
<input type="checkbox"/> Siena M300 with Super Cement Fibered ^{1,2}	25
<input type="checkbox"/> MAVS 1000 over non-Omega substrate ³	5
<input type="checkbox"/> MAVS 2000 over non-Omega substrates ³	10
<input type="checkbox"/> MAVS 2000 over non-Omega substrates ³	15
<input type="checkbox"/> Siena M300 over non-Omega substrates ³	15

Notes:

- 5 years added to the above- listed warranties when Omega AkroLoc, Admix 500, or PolyLoc admix is used in the Diamond Wall or Super Cement.
- 5 years added to the above- listed warranties when Omega AkroGuard water-resistive/air barrier is used.
- Approved, properly installed and prepared substrates, such as but not limited to CMU, pour-in-place concrete, and cement broad.

WARRANTY

This warranty applied to the Omega MAVS or Siena Bonding Mortar listed above.

Omega Products International warrants that the Omega MAVS Bonding Mortars manufactured by it, when properly applied by an applicator approved by Omega in strict accordance with Omega's procedures and applicable specifications (as the case may be), shall be free from defects in material and shall perform to standards specified in Omega literature, specifications and appropriate published reports for a period of years listed above from the date of Omega's original invoice to Omega's suppliers, distributor, contractor, applicator or owner, as the case may be; provided, however, that no warranty stated herein shall be effective until and unless Omega has received payment in full for such products to this warranty. It is the responsibility of the owner, for such products to this warranty. It is the responsibility owner, builder and/or contractor to obtain and understand Omega's literature, specifications and appropriate published reports.

The above warranty shall NOT cover other products produced by Omega that are not MAVS or Siena Bonding Mortars even if listed under the warranty coverage description. Further, Omega makes no warranties whatsoever with respect to the workmanship or accuracy involved in the application of any Omega products warranted hereunder. Omega shall not be responsible for any incidental or consequential damages, as defined in Section 2-710 of the Uniform Commercial Code or any other applicable or successor law defining said terms, regardless of cause.

Omega makes no other warranty, express or implied, with respect to its products, nor with respect to its specification, except as expressly stated herein. Further, OMEGA MAKES NO WARRANTY OF MERCHANTABILITY WITH RESPECT TO ITS PRODUCTS, AND FURTHER MAKES NO WARRANTY THAT THE PRODUCTS OF ITS MANUFACTURE ARE FIT FOR ANY PARTICULAR PURPOSE.

EXCLUSIVE REMEDY

Omega's sole responsibility and liability under this warranty shall be to repair or replace, at its option, and by a contractor selected by it, the Omega product(s) warranted hereunder shown to be defective. Omega's obligation shall be to return the Omega product(s) to a commercially accepted standard.

MAKING A CLAIM

To make a claim under this warranty, Omega must be notified in writing at P.O. Box 77220, Corona, California 92877-0107, within thirty (30) days of discovery of the alleged defect(s). Omega shall be allowed a reasonable time, access for its authorized representative to inspect the defect, and authorization to remove samples in order to perform testing deemed necessary by Omega to investigate and determine (a) if there is a defect and (b) the cause of the defect. The owner shall cause temporary repairs to be made if necessary to avoid further damage until the cause of the problem is determined and permanent repair recommendations can be made.

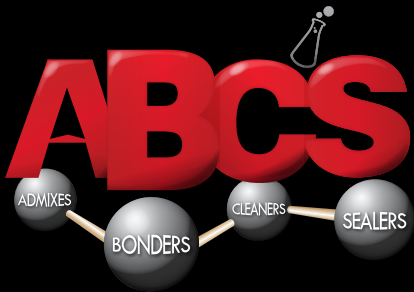
APPLYING FOR WARRANTY

To receive a written warranty, download the Application for a Written Warranty from www.omega-products.com or contact Omega Products. The project must be completed prior to submitting the warranty application. Upon review and approval of the warranty application, Omega will issue a MAVS written warranty for the product.






TECHNICAL ASSISTANCE

Technical assistance and information is available by visiting omega-products.com, calling Omega Products International at 951-737-7447 or FAX (951) 520-2594, or by email at info@omega-products.com

OMEGA ENHANCEMENT PRODUCT



Omega offers a family of enhancement products called ABC'S - Admixtures, Bonders, Cleaners and Sealers. These products can be used to enhance the performance of the mortars or the veneer. Below are a few of these products and their benefits.

PRODUCT	BENEFITS
	<p>E-FX Admix</p> <p>A liquid admix used to reduce efflorescence. E-FX will offer long lasting protection from the elements while retaining the surface's natural appearance and vapor permeability.</p>
	<p>Aquashield</p> <p>An integral sealer that is added to the water in order to improve water-resistance, freeze-thaw performance and reduce staining.</p>
	<p>Akroloc, PolyLoc, & Admix 500</p> <p>Each of these three admixtures can be used to reduce cracking, and increase bond, tensile and flexural strength.</p>
	<p>OmegaCure</p> <p>A liquid accelerator that can be used to improve hydration, increase early strength and hardness. Use Omega Cure when cold weather applications are needed.</p>
	<p>OmegaGuard Plus</p> <p>A silane-siloxane based, water-repellent sealer that is clear, non-yellowing, and will not create a sheen or glossy appearance. It can be used on brick, natural and manufactured stone veneer, masonry, concrete, stucco, and other cement-based surfaces for long lasting protection.</p>

PROPER INSTALLATION PRACTICES

Along with selecting the proper mortar for a particular adhered veneer project, it is critical that proper installation practices are followed. Some of the veneers available today are much more challenging to install than the veneer from the past. Some of the traditional installation methods and mortars that were used in the past are now causing failures. The following are some proven installation methods and additional resources that will help to have a successful veneer installation.

- All veneers must be installed using proper installation methods, consisting of:
 - A wet-to-wet bond.
 - Back buttering each veneer. Do not spot bond.
 - Ensuring 100% coverage between the veneer and the properly prepared substrate.
- Substrate and back of veneer receiving bonding mortar must be free of dirt, dust, debris, oil, paint, release agent, or anything that can hinder proper bond.
- Proper movement joints and control joints should be in place to avoid veneers from buckling or tenting.
- Verify the veneer and grout color match through a job site mock-up using all the specified products and colors prior to the actual installation.
- Verify through the veneer manufacturer that the veneer can be used for the specified application. For example; not all veneers can be used exterior, or as a vertical wall facade.





Industry Resources

Below is a list of industry resources related to proper veneer installation methods, proper substrate preparation, and industry best practices. Review these resources prior to starting a veneer installation project or to troubleshoot why a failure may have occurred.

- ASTM C1780 Standard Practice for Installation Methods for Adhered Manufactured Stone Masonry Veneer
- NCMA Manufactured Stone Veneer Installation Guide and Detailing Options for Compliance w/ASTM C1780
- BIA Technical Notes 28C Thin Brick Veneer Installation
- TCNA Handbook - Proper installation methods & details
- Local Building Codes, OSHA Requirements
- ANSI A180.5 - Proper installation preparation
- NTCA - Trowel & Error Video (<https://youtu.be/8sUYVVksdGw>)



MAVS & COLORS



OMEGA IS ALL ABOUT COLORS

Omega state of the art color labs can match any color in the industry

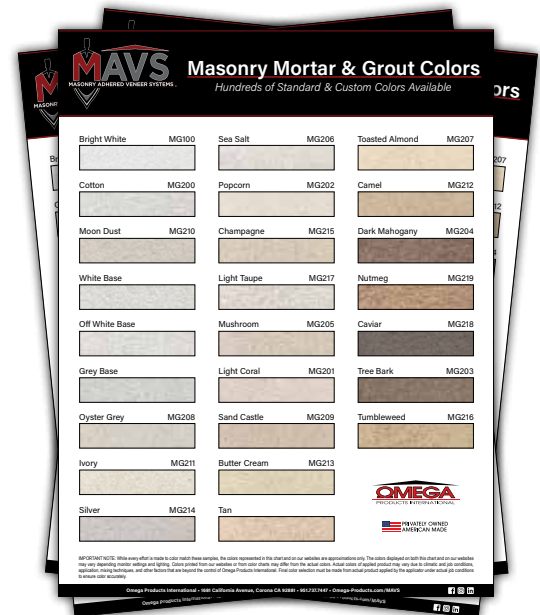


MAVS Masonry Mortar & Grout is used for setting brick, block and for grouting manufactured and natural veneers, thin brick, pavers, stone, precast, brick and block. Exceeds ASTM C270 Type S and ANSI A118.6 grout requirements.

MAVS Adhesive Sealant is used to fill in expansion and control joints. It is non-sag, fast drying, UV resistant, and has exceptional elongation.

MAVS Masonry Mortar & Grout and MAVS Adhesive Sealants can be manufactured in hundreds of standard and custom colors

(additional charges may apply)





For additional information please visit our websites at:

Omega-Products.com

SienaProducts.com

ValentinoProducts.com



- Complete, updated products catalogs
- Downloadable product data including:
 - Product and system data sheets
 - Specifications in Word format
 - Details in AutoCAD or pdf formats
- Technical bulletins
- Color and textures, including online samples request
- Warranty information, including downloadable request forms
- Project photo galleries

Please contact us to schedule an AIA presentation, a product knowledge (PK) class, or a live product demonstration



LOCATIONS

Corona

Corporate Office & Manufacturing

Email: info@omega-products.com

1681 California Avenue, Corona, CA 92881 | P 951.737.7447

Bakersfield

5420 Aldrin Court, Bakersfield, CA 93313 | P 661.835.0155

Sacramento

8111 Fruitridge Road, Sacramento, CA 95826 | P 916.635.3335

Las Vegas

5576 Wynn Road, Las Vegas, NV 89118 | P 702.739.9040

Denver

6101 Dexter Street, Commerce City, CO 80022 | P 303.736.4470

SOCIAL MEDIA



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