



AR-500-SIC MORTAR

The STEBBINS Engineering and Manufacturing Company
Watertown, NY USA
<http://www.StebbinsEng.com>

PRODUCT INFORMATION

DESCRIPTION

STEBBINS' AR-500-SIC Mortar is a chemical resistant masonry joint material based on a modified vinyl ester resin and abrasion resistant ceramic filler. This material combines good corrosion resistance with superior retention of properties at high temperatures. It is the material of choice where both corrosion resistance and abrasion resistance are required.

AR-500-SIC Mortar has been used in Splash and Flash Tanks in the Mining Industry handling acidic abrasive ore slurry.

ADVANTAGES

In addition to its excellent resistance to chemical attack by a wide range of media which makes it suitable for service in many areas, AR-500-SIC Mortar also exhibits superior physical properties. The mortar exhibits excellent abrasion resistance to abrasive slurries and gases. It has outstanding adhesion to ceramics, as well as to concrete and steel. Its tensile and compressive strengths are high, and its water absorption and shrinkage are very low.

COMPONENT PACKAGING

AR-500 "SIC" mortar is supplied as five (5) separately packaged components:

Material	Container	Weight
AR-500 Resin:	5-gallon (18.9 liter) pail	44 lb. (20.0 kg) Net
Perkadox L-40 RPS Catalyst:	(2) 1-pint (0.47 liter) plastic container	1 lb. (0.453 kg) Net each
AR500 "SIC" Aggregate (Black)	5-gallon (18.9 liter) pail	85 lb. (38.6 kg) Net
AR-Powder (Small Unit)	17.5-gallon (66 L) Fiber Drum	165 lb. (74.8 kg) Net
Cab-O-Sil PTG	Bag	10 lb. (45.8 kg) Net

TYPICAL PHYSICAL PROPERTIES

Physical State	Solid
Composition	Vinyl Ester Based Mortar
Color	Black
Density	129 lbs/ft ³ (2066 kg/m ³)
Total Coverage Per Unit	1.20 ft ³ (0.03 m ³)
Tensile strength, (ASTM C-307)	1,300 psi (9 MPa)
Compressive strength, (ASTM C-579)	13,000 psi (90 MPa)
Water Absorption, % (ASTM C-413)	< 0.2%
Coefficient of Thermal Expansion, (70-250°F [21-121°C] Whittemore Strain Gauge)	13 x 10 ⁻⁶ in./in./°F (23 x 10 ⁻⁶ mm/mm/°C)
Adhesion to Wire Cut Brick, (ASTM C-321)	500 psi (3.5 MPa) min.
Total Shrinkage Upon Setting and Cure	< 1%

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WORKING AND SETTING TIMES (Approximate)

Temperature	50°F (10°C)	70°F (21°C)	90°F (32°C)
Working Time	100 minutes	35 minutes	20 minutes
Setting Time	4 hours	2 hours	50 minutes
Full Cure	96 hours	36 hours	24 hours

The working and setting time of AR-500-SIC Mortar may be varied by STEBBINS' trained field personnel. Working and setting times are best controlled by controlling the temperatures of the mortar components. AR-500 will not cure below 50°F (10°C).

APPLICATION

AR-500-SIC Mortar is applied to the masonry with a trowel by the usual method. masonry must be dry and preferably at room temperature, but no colder than 50°F (10°C).

For pointing brick work, rake out the joints square to a minimum depth of 1/2" and remove all loose material. Be sure when pointing that all voids in the joint are filled. Once AR-500-SIC Mortar has begun to set, it cannot be retempered by adding more resin other than diluents.

AR-500-SIC Mortar should **NOT** be exposed to moisture or put into service before reaching full cure (see above).

STORAGE

Do not store in direct sunlight. Store in a cool, dry area. Keep the containers dry and the lids closed tight.

SAFETY PRECAUTIONS/DISCLAIMER

Mixes and applications of this product present a number of hazards. The purchaser and user must read and follow the hazard information, precautions and first aid directions on the individual product labels and safety data sheets before using.

All data contained in this Product Information sheet are averaged results of ASTM tests on laboratory prepared samples. Reasonable variations can be expected. The data should not be used for specification purposes.

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