

atlas

Sulfur Cements

Atlas Sulfur Cements are versatile, easy-to-use, economical, hot-pour compounds that when melted pour easily, and develop high early strength. Atlas Sulfur Cements are formulated with properly selected and graded aggregates that eliminate settling and produce a very fluid, self-leveling compound. In most applications, the products can be handled within 5 minutes after they are poured. There is no waste with Atlas Sul-

fur Cements since any unused cement that has solidified can be remelted and used as required.

Atlas Sulfur Cements are available in two basic forms — Vitrobond (silica filled) and Carbo-Vitrobond (containing carbon). Both types are offered with varying amounts of plasticizer content, depending on the properties required for the proposed end use.

Vitrobond Capping Compound

Vitrobond has been used for many years by independent testing laboratories, as well as federal, state and local testing agencies. Vitrobond develops a compressive strength of 5000 psi in 2 hours which conforms with the requirements of ASTM C617.

Vitrobond Capping Compound does not require mixing, controlled room temperatures, or humidity conditions during pouring of caps.



Vitrobond Cap

Carbo-Vitrobond Grinding Wheel Hub Compound

Carbo-Vitrobond is a 100% carbon-filled, plasticized hot-pour, sulfur-based cement that has been used as a hub compound for more than 25 years by leading manufacturers of vitrified grinding wheels. Its specific gravity is lower than lead, resulting in less weight per hub. Shrinkage is also less than lead. Carbo-Vitrobond provides an excellent bond to the

wheel and will not lose strength or adhesion under conditions of vibration, thermal or physical shock. Its excellent fluidity permits hubs to be completely filled, eliminating the necessity for further machining. It is self-lubricating to drive shafts. Vitrobond can be supplied in special colors.



ATLAS Vitrobond Grinding Wheel Hub Compound

Vitrobond Electrical Insulator Compound

This form of sulfur cement is used by major electrical insulator manufacturers to fill and seal ceramic shapes to metal parts. It adheres well to the special materials used in the assembly.

The plasticized sulfur cement is capable of withstanding weather and thermal shock to which electrical insulator assemblies are normally exposed. After being applied in a simple pouring operation, high physical strengths are

quickly reached, permitting rapid handling of the assembly immediately after cooling. This feature reduces assembly conveyor curing and storage requirements and results in a cleaner operation compared with the use of portland cement and gypsum compounds.

High dielectric strengths and light weight make Atlas Sulfur Cements an ideal material for use in this field.



Atlas Vitrobond

Vitrobond Post and Anchor Bolt Setting Compound

Vitrobond is ideally suited for the permanent installation of fence posts, anchor bolts, ornamental iron railings, parking meters, traffic markers, street signs, handrails, guardrails, machinery, partitions, etc. There's no need for caulking to make a tight fit...it's ready to use as soon as it has cooled, thus eliminating the

use of forms and supports. It is highly resistant to weathering and is stronger than concrete. Vitrobond provides excellent adhesion to concrete and metals and will not harm painted surfaces.



Atlas Sulfur Cements are hot-pour materials. Conventional thermostatically controlled electric heating pots are available for indoor applications. Portable steel or

cast iron melting pots are available for outdoor use. Recommended pouring temperature is 290° F - 300° F.

How to Use Vitrobond Capping Compound

Vitrobond caps are applied to the concrete test cylinder per ASTM Method C617. It is suggested that at least two rigs be prepared to avoid loss of time in testing. The base plates of the rig should be very lightly oiled or coated with a silicone compound such as a 1% solution in toluene of General Electric Fluid SPFE to facilitate removal of the mold. When silicone release agents are used, the rig should be allowed to stand for about 30 minutes after coating before pouring caps. If oil is used, extreme care should be taken to see that there is no excess oil which would affect the strength of Vitrobond.

To retard the cooling rate of the Vitrobond, it is recommended that the base plate of the capping rig

be preheated. This will insure a complete fill.

For the most consistent test results, it is suggested that the caps be applied with a vertical capper. Pour the molten Vitrobond on the base plate of the rig, and promptly place the cylinder into the molten compound to a depth so that a cap of approximately $\frac{1}{8}$ " thick will be obtained. It is essential to ascertain that each cylinder is properly aligned so that the caps will be parallel. The cylinder may be removed as soon as the Vitrobond has hardened and the other end may then be capped. The specimen may be tested two hours after the final pouring. It is not necessary to carry out any moist curing before the tests are made.

How to Use Carbo-Vitrobond Grinding Wheel Hub Compound

Jigs of the type used for the pouring of lead hubs can easily be adjusted for use with Carbo-Vitrobond, taking into account the lower shrinkage factor. New jigs can also be prepared easily to fit your own specific needs. The mandrel can be made in either one or two pieces, with the pin separate from the base plate. The mandrel should be coated with a release agent to permit easy removal. A 1% solution of General Electric Silicone Fluid SFPE in toluene has been found to be quite effective. The solution is applied by brush or spray, and the mandrel can be used 30 minutes after application. One coat will last for many runs.

Both the base plate and the template used at the top of the jig should be tapered toward the mandrel in accordance with your standards. All parts should be carefully machined because Carbo-

Vitrobond, with its excellent fluidity, will fill all cracks and crevices and may make release difficult. The pouring hole should be located at the highest point on the outside rim of the cavity, so that the cavity is completely filled. Where large diameter wheels are to be filled, two pouring holes opposite each other and air escape holes located midway between the pouring holes can be used. The hub is to be filled until the cements seep out of both openings in order to assure that no voids are present.

After the Carbo-Vitrobond has been allowed to cool, the template is given a sharp blow on a lug provided for this purpose. The action will force the template to shear off the excess cement which has accumulated at the pouring and air holes. The template and mandrel are then removed.

How to Use Vitrobond Electrical Insulator Compound

The application of specially plasticized sulfur cements varies with the types of insulator being produced by the individual manufacturer. The compound is heated in a thermostatically-controlled temperature pot and poured into the

annular space between the components.

The amount of plasticizer is varied to suit the individual customer's requirements and specifications. Special colors are also available upon request.

How to Use Vitrobond Post and Anchor Bolt Setting Compound

Drill hole in the concrete to allow for proper clearance between bolt or stud. For posts, hole should be one inch larger in diameter than the post. Masonry drills do a fast, clean and efficient job. Remove dust and debris with compressed air or portable vacuum equipment.

Place the bolt in the hole, head down. Maximum structural integrity is attained when bolts, studs,

posts, etc. are properly centered in the hole before pouring the Vitrobond.

Pour molten Vitrobond with a small ladle, or use a can with the sides pinched to form a "V" pouring spout. Fill the hole in one continuous pour. A slight overpour is suggested to insure that the level of the Vitrobond, when cool, is slightly above the surface of the adjacent concrete.

For more information about Atlas Sulfur Cements, call or write Atlas.

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