Fixmaster® Anchor Bolt Grout HP

June 2012

PRODUCT DESCRIPTION

Fixmaster® Anchor Bolt Grout HP provides the following product characteristics:

Technology	Epoxy
Chemical Type	Epoxy
Appearance (Resin)	White paste
Appearance (Hardener)	Black paste
Appearance (Mixture)	Grey paste
Components	Two component - requires mixing
Mix Ratio, by volume - Resin : Hardener	1 : 1
Mix Ratio, by weight - Resin : Hardener	100 : 80
Consistency	Non-sag
Cure	Room temperature cure after mixing
Application	Grouting
Application Temperature	2 to 46 °C

Fixmaster® Anchor Bolt Grout HP is a two component,100% solids epoxy designed to anchor threaded rod, bolts, rebar dowels and smooth dowels into concrete, grout filled block, and other non reinforced masonry. Typical applications include seismic anchoring and bracing, grouting dowel bars and tie bars for full-depth concrete pavement repairs, capping paste for crack injection, and anchoring in wet and submerged applications.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Resin:

Density @ 25 °C, g/ml	1.14 to 1.4[LMS]
Viscosity, Brookfield, 25 °C, mPa·s (cP)	115,000 to 125,000[LMS]
Flash Point - See MSDS	

Hardener:

Density @ 25 °C, g/ml	0.87 to 1.06[LMS]
Viscosity, Brookfield, 25 °C, mPa·s (cP)	160,000 to 190,000[LMS]
Flash Point - See MSDS	

Mixed:

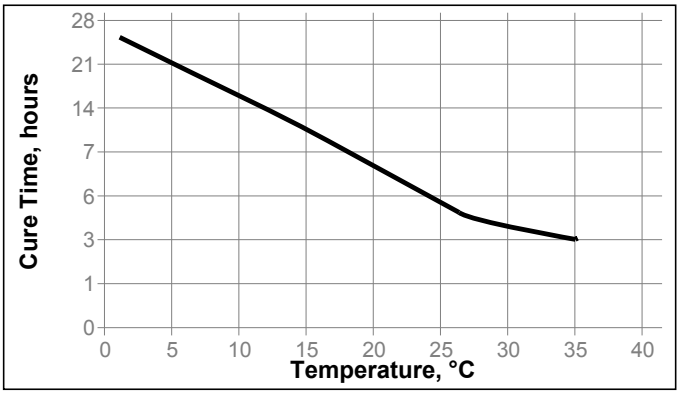
Working Time @ 25 °C, minutes	20

TYPICAL CURING PERFORMANCE

Curing Properties

Cure Time @ 25 °C, hours	4

Cure Time



TYPICAL PROPERTIES OF CURED MATERIAL

Cured @ 24 °C for 7 days, tested @ 24 °C or as noted

Physical Properties:

Compressive Strength, at yield, ASTM D695 (ISO 604):

@ 3 °C	N/mm²	75
	(psi)	(10,860)
@ 10 °C	N/mm²	72
	(psi)	(10,500)
@ 24 °C	N/mm²	79
	(psi)	(11,410)

Tensile Strength ASTM D 638 (ISO 527-2)	N/mm²	21
	(psi)	(3,080)

Elongation, at failure ASTM D 638 (ISO 527-2), %	3.3
Water Absorption, ASTM D 570 (equiv. to ISO 62), %	0.5
Linear Shrinkage, ASTM D2566, %	0.2

Cured for 2 days @ 24 °C

Physical Properties:

Bond Strength, ASTM-C882:

@ 3 °C	N/mm²	20
	(psi)	(2,850)
@ 10 °C	N/mm²	23
	(psi)	(3,300)
@ 24 °C	N/mm²	25
	(psi)	(3,580)

Cured for 14 days @ 24 °C

Physical Properties:

Bond Strength, ASTM-C882:

@ 3 °C	N/mm² (psi)	19 (2,790)
@ 10 °C	N/mm² (psi)	28 (4,090)
@ 24 °C	N/mm² (psi)	28 (3,940)

TYPICAL PERFORMANCE OF CURED MATERIAL

Tension Load (1/2"), ASTM E488 **1/2" threaded rod at *9D in 2,000 psi concrete.**	N (lb)	99,230 (22,330)

Load can be applied in 4 hours at 27°C (80F)

*9D is the embedment depth of the anchor (9X1/2"); in this example, a 1/2" threaded rod embedded 4-1/2" in 2,000 psi concrete.

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Material Safety Data Sheet (MSDS).

Directions for use:

1. Drill hole to desired diameter and depth. Clean out the hole and brush with a bristle brush. Blow out the remaining dust from the bottom of the hole. The hole should be clean of all dust, debris or other contaminants. The hole may be damp.

2. Remove plastic cap and plugs from the cartridge. Dispense a small amount of adhesive to ensure that both black and white materials flow freely and evenly from the cartridge.

3. Attach mixing nozzle to cartridge and dispense a small amount of adhesive into a waste container.

4. Fill holes 1/2 to 3/4 full by dispensing adhesive, beginning at the bottom of hole.

5. Insert the anchor bolt, threaded rod or rebar to the bottom of the hole while turning clockwise.

6. Do not touch or bolt-up until the recommended adhesive cure time has passed.

Directions for Use: (Submerged Applications)

1. Drill hole to desired diameter and depth and ensure that the walls of the hole are roughened. Clean out the hole of all debris and slurry with a pressure washer or water hose.

2. Warm the adhesive cartridge above 29°C before dispensing. Remove plastic cap and plugs from the cartridge. Dispense a small amount of adhesive to ensure that both black and white materials flow freely and evenly from the cartridge.

3. Attach mixing nozzle to cartridge and dispense a small amount of adhesive into a waste container.

4. Fill the hole **completely full**, beginning at the bottom of the hole.

5. Insert the anchor bolt, threaded rod or rebar to the bottom of the hole but **do not rotate or spin** so that turbulence is minimized. Once the anchor has reached the bottom it may then be turned 1/4 turn clockwise.

6. Allow 48 hours to cure unless water temperature exceeds 25°C, in which case 24 hours is acceptable. Temperatures below may require additional curing.

Loctite Material Specification[LMS]

LMS dated January 22, 2008. Test reports for each batch are available for the indicated properties. LMS test reports include selected QC test parameters considered appropriate to specifications for customer use. Additionally, comprehensive controls are in place to assure product quality and consistency. Special customer specification requirements may be coordinated through Henkel Quality.

Storage

Store product in the unopened container in a dry location. Material removed from containers may be contaminated during use. Do not return liquid to original container. Storage information may be indicated on the product container labeling. **Optimal Storage: 8 °C to 21 °C. Storage below 8 °C or greater than 28 °C can adversely affect product properties**. Henkel cannot assume responsibility for product which has been contaminated or stored under conditions other than those recommended. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

Conversions

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
µm / 25.4 = mil
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa x 145 = psi
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

Note

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Reference 0.1