

PROJECT Name	
PROJECT Location	
CONTRACTOR Name(s)	
THIRD PARTY TESTING Name	

PROJECT STAGE	DATE	FIVE STAR <sup>®</sup> REPRESENTATIVE PRESENT? (CIRCLE)	
PLANNING		YES	NO
PRE-GROUT MEETING		YES	NO
GROUT INSTALLATION		YES	NO

# **CEMENTITIOUS GROUT**

FIVE STAR® PRODUCT(S) USED

LOT#(S) [10-DIGITS]

EPOXY GROUT			
FIVE STAR <sup>®</sup> PRODUCT(S) USED			
LU1#(3) [.	[2119ום-11		
RESIN			
HARDENER			
AGGREGATE			

# CEMENTITIOUS Grouting EPOXY Grouting



# **CEMENTITIOUS GROUT**

Temperature (Environment and Material Pre-Conditioning) Refer to Five Star® Technical Bulletins 101 & 102			
1.1	Material/Equipment/Environment pre- conditioned and monitored for 72 hours (or as required) prior to installation.	□ YES □ N/A	
1.2	Temperature control (tents, heaters/coolers, etc.) available and recommended before grouting and to remain in place until material has fully cured (three days minimum).	□ YES □ N/A	
1.3	Environment including concrete foundation, equipment, etc. is between 50°F - 90°F (10°C - 32°C), Optimal 75°F (24 °C).	□ YES TEMP:°F	
1.4	Temperature of grout (check multiple bags of material by inserting thermometer into middle of bag).	TEMP:ºF	

Fou	Foundation Surface Preparation		
2.1	Foundation has fully cured, reached its required strength, is fully hydrated, crack free, and ready to be grouted per the Project Engineer. Project Engineer Approval (signature):	□ YES □ N/A	
2.2	Temperature of foundation	TEMP:°F	
2.3	Concrete should be mechanically roughened to remove surface laitance and expose aggregate.	□ YES	
2.4	Foundation is clean and free of contaminants (oil, grease, concrete dust).	□ YES	
2.5	Foundation has been pre-soaked 8 – 24 hours attaining a saturated surface dry (SSD) condition.	□ YES	
2.6	All water has been vacuumed out of anchor bolt holes and voids in foundation.	□ YES	

Equipment/Baseplate Preparation		
3.1	Equipment/Baseplate are properly aligned, secured, and ready to be grouted.	□ YES
3.2	Grout depth appropriate for grout material selected.	□ YES
3.3	Adequate clearance between equipment/baseplate and foundation as per specification requirements (2-inch minimum clearance recommended).	□ YES CLEARANCE: in.
3.4	Temperature of equipment/baseplate	TEMP: °F
3.5	Configuration of bottom of baseplate to be grouted verified/observed.	□ YES
3.6	Bonding surface (bottom of plate) clean, free of oil, grease, rust.	□ YES
3.7	Surfaces where bond is not desired (jack bolts, anchor bolts, finish surfaces, etc.) adequately protected with "bond break materials" to ensure grout does not adhere/bond to them.	□ YES
3.8	Air relief holes (1/4-inch diameter minimum) installed at high spots and "air trap locations".	□ YES □ N/A
3.9	6-inch grout fill holes installed if/where grout flow from short side will not adequately flow grout to the location.	□ YES □ N/A
3.10	Shims / Jack Screw Landing Plates, preferably stainless, have radius corners and are a minimum of 2" from the edge of the baseplate.	□ YES

# **EPOXY GROUT**

Grout Component & Equipment/Foundation Pre-			
Cond	litioning Refer to Five Star® Technical	Bulletins 200 & 201	
1.1	Material/Equipment/Environment pre- conditioned and monitored for 72 hours (or as required) prior to installation.	□ YES □ N/A	
1.2	Temperature control (tents, heaters/coolers, etc.) available and before grouting and recommended to remain in place until material has reached its desired strength.	□ YES □ N/A	
1.3	Environment including concrete foundation, equipment, baseplates/skids etc. is between 60°F - 90°F (16°C-32 °C), Optimal 75°F (24 °C).	□ YES TEMP:°F	
1.4	Grout components (resin, hardener and aggregate) pre-conditioned to 70°F - 90°F (21°C- 32°C), Optimal 75°F (24°C).	□ YES □ N/A TEMP:°F	

#### **Foundation Surface Preparation** Foundation has fully cured, reached its required strength, is fully hydrated, crack free, and ready □ YES to be grouted per the Project Engineer. 2.1 □ N/A Project Engineer Approval (signature): °F 2.2 Temperature of foundation TEMP: Concrete should be mechanically roughened to 2.3 □ YES remove surface laitance and expose aggregate. Foundation is clean and free of contaminants 2.4 (oil, grease, concrete dust). □ YES 2.5 Foundation concrete surface is completely dry. □ YES All water has been vacuumed out of anchor bolt 2.6 □ YES holes and voids in foundation.

Equipment/Baseplate Preparation		
3.1	Equipment/Baseplate are properly aligned, secured and ready to be grouted	□ YES
3.2	Grout depth appropriate for grout material selected	□ YES
3.3	Adequate clearance between equipment/baseplate and foundation as per specification requirements (2-inch minimum clearance recommended).	□ YES CLEARANCE: in.
3.4	Temperature of equipment/baseplate	TEMP: °F
3.5	Configuration of bottom of baseplate to be grouted verified/observed.	□ YES
3.6	Bonding surface (bottom of plate) clean, free of oil, grease, rust and roughened if required.	□ YES □ ROUGHENED
3.7	Surfaces where bond is not desired (jack bolts, anchor bolts, finish surfaces, etc.) adequately protected with "bond break materials" to ensure grout does not adhere/bond to them.	□ YES
3.8	Air relief holes (1/4 inch to 1/2-inch diameter) installed at high spots and "air trap locations".	□ YES
3.9	6-inch grout fill holes installed if/where grout flow from short side will not adequately flow grout to the location.	□ YES
3.10	Shims / Jack Screw Landing Plates, preferably stainless, have radius corners and are a minimum of 2" from the edge of the baseplate.	□ YES

# CEMENTITIOUS Grouting EPOXY Grouting



🗆 YES

□ N/A

□ YES

□ YES

TOTAL #:

## **CEMENTITIOUS GROUT**

For	Forms		
4.1	Forms are constructed from rigid nonabsorbent materials and are securely anchored to concrete and strong enough to resist forces developed during grout placement.	□ YES	
4.2	Formwork has been caulked and tested to be liquid tight.	□ YES	
4.3	Interior of forms have been treated with a bond-breaker material (i.e. 2 coats of paste wax, polyethylene film, etc.).	□ YES	
4.4	Sufficient clearance has been left for pouring /pumping grout and venting of air on opposite side of pour.	□ YES	
4.5	Forms are level and extend at least 1 inch above bottom of equipment baseplate.	□ YES	
4.6	Perimeter chamfers are incorporated into grout and/or forms will be stripped and chamfers will be cut into grout material prior to set.	□ YES	
4.7	Exposed grout surfaces (shoulders) are minimized. (Shoulders greater than 2 inches are not allowed.)	□ YES	
4.8	6-inch grout fill holes installed, where required, to aid in grout flow across entire flow direction.	□ YES	

After forms are constructed, verify the grout volume required based on the length, width, and depth of the grout to be installed. This is critical to determining that there is sufficient material on hand to execute the installation.

Cor	Control/Construction Joints		
5.1	Control/construction joints considered for easier installation on large pours (Considered for large pour with grout flowing more than four feet).	□ YES □ N/A	
5.2	Control/expansion/isolation joints made from a rigid material and securely anchored to concrete foundation.	□ YES □ N/A	

Mixer and Mixing Equipment			
6.1	Mortar mixer required OR multiple mortar mixers required. Portable mixer, mixing paddle and mixing bucket(s) available for small unit mixing. Note 1	□ YES TOTAL #:  □ N/A	_
6.2	Cement mixer allowed. (Cement mixer may only be used with permission in writing from Five Star Products.)	□ YES □ N/A	
6.3	Temperature of mixer at time of mixing.	TEMP:	_°F
6.4	Mixer(s) is/are clean, dry, and in good working order (mixer inspected and tested).	□ YES	
6.5	Mixer(s) is/are sized appropriate for grout pour (grout volume should not exceed half the capacity of the mixer).	🗆 YES	
6.6	Adequate supply of cold <b>potable water</b> available for mixing.	□ YES	
6.7	Temperature of aggregate (taken from thermometer inserted into middle of bag situated in middle of bag pile) at time of mixing.	TEMP:	°F
6.8	Temperature of water	TEMP:	_°F
6.9	Containers for precise water measurement (per grout manufacturer's recommended range min/max) available and used.	🗆 YES	
6.10	Mixing instructions available, reviewed, and understood.	□ YES	
6.11	Mixer pre-wetted and drained.	□ YES	
6.12	Test batch mixed and consistency verified.	□ YES □ N/A	

# **EPOXY GROUT**

Form	Forms		
4.1	Forms are constructed from rigid nonabsorbent materials and are securely anchored to concrete and strong enough to resist forces developed during grout placement.	□ YES	
4.2	Formwork has been caulked and determined to be liquid tight.	□ YES	
4.3	Interior of forms have been treated with a bond-breaker material (i.e. two coats of paste wax, polyethylene film, etc.).	□ YES	
4.4	Sufficient space has been left for venting of air on opposite side of pour.	□ YES	
4.5	Forms are level and extend at least 1 inch above bottom of equipment baseplate.	□ YES	
4.6	Perimeter chamfers are incorporated into base plate and into formwork.	□ YES	
4.7	Exposed grout shoulders are all 3 inches or less.	□ YES	
4.8	6-inch grout fill holes installed, where required, to aid in grout flow across entire flow direction.	□ YES	

After forms are constructed, verify the grout volume required based on the length, width, and depth of the grout to be installed. This is critical to determining that there is sufficient material on hand to execute the installation.

#### **Control/Construction Joints**

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5.1	Control/construction joints installed. (Recommended every 4 – 6 feet along the direction on large pours.)	□ YES □ N/A
5.2	Control/construction joints made from a rigid material and securely attached to concrete foundation.	□ YES □ N/A

# Mixer and Mixing6.1Jiffy type mixer(s), portable drill(s) available for<br/>resin and hardener on large units.<br/>Portable mixer, mixing paddle and mixing<br/>bucket(s) available for small unit mixing.<br/>Note 16.2Mortar mixer required (except for small pours<br/>utilizing small, hand mixed, single-bag aggregate<br/>units).<br/>Multiple mortar mixers required.6.3Mixer(s) is/are clean, dry, and in good working<br/>order (mixer inspected and tested).6.4Mixer(s) is/are sized appropriate for grout pour<br/>(grout volume should not exceed ½ the capacity

6.4	Mixer(s) is/are sized appropriate for grout pour (grout volume should not exceed ½ the capacity of the mixer).	□ YES
6.5	Mixing instructions available, reviewed, and understood.	□ YES
6.6	Temperature of mixer at time of mixing.	TEMP:°F
6.7	Temperature of liquids (resin and hardener) at time of mixing.	TEMP:°F
6.8	Temperature of aggregate (taken from thermometer inserted into middle of bag situated in middle of bag pile) at time of mixing.	TEMP:ºF
6.9	Aggregate bag quantity added as specified/required. First batch may use 1 bag less aggregate for wetting of mixer	# bags/batch

<sup>Note 1</sup> A substantial drill/mixer is required for small unit mixing (i.e. hand operated drywall mud/grout mixer or 7.5 amp ½ inch corded drill and mixing paddle).

# CEMENTITIOUS Grouting EPOXY Grouting



# **EPOXY GROUT**

Age	Aggregate Extension Refer to Five Star® Technical Bulletin 105		
7.1	Aggregate extension required (% by weight in conformance with grout manufacturer).	□ YES □ N/A	
7.2	Aggregate available in measured quantities in conjunction with mix design.	□ YES	
7.3	Aggregate washed (free of fines), pre-soaked, and drained (free of standing water) to have a consistent water content.	□ YES □ N/A	
7.4	Temperature of aggregate	TEMP:°F	

**CEMENTITIOUS GROUT** 

Placement		
8.1	Gravity Placement Planned	□ YES □ N/A
8.1.1	Forms accommodate placement across shortest distance.	□ YES
8.1.2	Headbox, funnel, cone, etc. of sufficient size and plunger available to develop additional head.	□ YES
8.2	Pump Placement Planned	□ YES □ N/A
8.2.1	Pump(s) is/are clean and in good working order (inspected and tested).	🗆 YES
8.2.2	Hoses are clean and connections liquid tight (inspected and tested).	□ YES
8.2.3	Pump and hoses to be "pre-wetted" with appropriate grout slurry / lubricating material and material properly disposed of prior to pumping.	□ YES
8.2.4	Screen available to pre-screen grout before putting in pump hopper.	□ YES
8.2.5	Pump operator trained on pump operation.	□ YES
8.3	Area/equipment protected from grout splashes.	□ YES

Fini	Finishing		
9.1	Grout is in contact with the bottom of the equipment baseplate and is finished even with the bottom of the equipment baseplate.	□ YES	
9.2	Grout is finished flush (vertically) with the baseplate or is cut back at a 45° angle with the bottom edge of the equipment baseplate.	□ YES	
9.3	There are no areas of unconfined grout greater than 2 inches wide.	□ YES	

Test	Testing Refer to Five Star® Technical Bulletin 109		
10.1	QC Testing Plan reviewed and understood (ASTM C109 Restrained testing planned).	□ YES	
10.2	Brass cube molds with covers available and are clean, dry, and in good working order.	□ YES	
10.3	Alternate test method planned for aggregate extended grout.	□ YES	
10.4	Samples taken at appropriate time during installation.	□ YES	
10.5	An area has been reserved to store cubes on-site near installation (in the same environmental conditions) for 24 hours prior to moving them to another location.	□ YES	

Place	ement	
8.1	Gravity Placement Planned	□ YES □ N/A
8.1.1	Forms accommodate placement across shortest distance.	□ YES
8.1.2	Headbox, funnel, cone, etc. of sufficient size and plunger available to develop additional head.	□ YES
8.2	Pump Placement Planned	□ YES □ N/A
8.2.1	Pump(s) is/are clean, dry, and in good working order (inspected and tested).	□ YES
8.2.2	Hoses are clean and connections liquid tight (inspected and tested).	□ YES
8.2.3	Pump and hoses to be "pre-wetted" with appropriate grout slurry / lubricating material and material properly disposed of prior to pumping.	□ YES
8.2.4	Pump operator trained on pump operation.	□ YES
8.3	Area/equipment protected from grout splashes.	□ YES

Finishing		
9.1	Grout is in contact with the bottom of the equipment baseplate and is finished even with the bottom of the equipment baseplate.	□ YES
9.2	Grout is finished flush (vertically) with the bottom edge of the baseplate /or has been formed previously at a 45° angle into the formwork.	□ YES
9.3	There are no areas of unconfined grout greater than 3 inches wide.	□ YES □ NO
9.4	There are shoulders greater than 3 inches wide / reinforced with rebar.	□ YES □ NO □ YES □ NO

Test	Testing Refer to Five Star® Technical Bulletins 210	
10.1	QC Testing Plan reviewed and understood (in direct accordance with ASTM C579 Method B Load Rate 2).	□ YES
10.2	Brass cube molds with covers available and are clean, dry, and in good working order.	□ YES
10.3	Samples taken at appropriate time during installation.	□ YES
10.4	An area has been reserved to store cubes on-site near installation (in the same environmental conditions) for 24 hours prior to moving them to another location.	□ YES

### For information 1-800-243-2206 • FiveStarProducts.com

# CEMENTITIOUS Grouting EPOXY Grouting



# **EPOXY GROUT**

Curing		
11 1	Forms to romain in place for initial cure (24 hours)	□ YES
11.1		🗆 N/A
11.6	Temperature monitoring/control in place for duration of cure at a minimum of 60 °F; if not make notation of cure temperature.	□ YES TEMP:°F

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Curing		
11.1	Forms to remain in place for initial cure (24 hours).	□ YES □ N/A
11.2	Forms to be removed and material cut-back and moisture applied for initial cure (24 hours).	□ YES □ N/A
11.3	Flooding or covering with water selected as cure method.	□ YES (Initial 24 hrs.) □ YES (Last 48 hrs.) □ N/A
11.4	Misting and keeping grout wet selected as cure method.	□ YES (Initial 24 hrs.) □ YES (Last 48 hrs.) □ N/A
11.5	Covering with wet burlap/blankets selected as cure method.	□ YES (Initial 24 hrs.) □ YES (Last 48 hrs.) □ N/A
11.6	Curing Agent used after 24 hours following Curing Agent manufacturer's recommendations.	□ YES □ N/A
11.7	Temperature monitoring/control and moisture monitoring/control in place for duration of cure.	□ YES

Clean-Up		
12.1	Ample supply of water available for clean-up.	□ YES
12.2	Ample supply of water-soluble detergent (i.e. Dawn or Tide) available for clean-up.	□ YES
12.3	Scouring agent (aggregate, sand, etc.) available for clean-up.	□ YES
12.4	Pressure washer available and in good working order (inspected and tested).	□ YES
12.5	Plan for capturing and disposing of clean-up materials, rinse water, and waste materials considered and equipment available.	□ YES

Clean-Up		
12.1	Ample supply of water available for clean-up.	□ YES
12.2	Ample supply of water-soluble detergent (i.e. Dawn or Tide) available for clean-up.	□ YES
12.3	Scouring agent (aggregate, sand, etc.) available for clean-up.	🗆 YES
12.4	Pressure washer available and in good working order (inspected and tested).	□ YES
12.5	Plan for capturing and disposing of clean-up materials, rinse water, and waste materials considered and equipment available.	□ YES

THERE ARE MANY VARIABLES THAT CAN IMPACT A SUCCESSFUL GROUTING INSTALLATION. THIS CHECKLIST IS PROVIDED ONLY AS A TOOL. WHILE EVERY REASONABLE EFFORT HAS BEEN MADE TO ENSURE THIS INFORMATION IS ACCURATE AND AUTHORITATIVE, FIVE STAR PRODUCTS, INC. DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THIS INFORMATION. FIVE STAR PRODUCTS, INC. DOES NOT MAKE ANY GUARANTEES, EITHER EXPLICIT OR IMPLIED, ON THE OUTCOME OF YOUR INSTALLATION. THE USER OF THESE DOCUMENTS REMAINS SOLELY RESPONSIBLE FOR THE SPECIFICATION OF ALL METHODS, MATERIALS, AND PRACTICES.



## EXCEPTIONS AND NOTES (include Inspection Step Number and applicable details)

Step	Exception / Notes