



ChemMasters®

Kemset™ Grout

Precision Non-shrink
Nonmetallic Grout

SPECIALTY CONSTRUCTION PRODUCTS

P R O D U C T D A T A

DESCRIPTION

ChemMasters' Kemset Grout is a high strength cementitious non-shrink nonmetallic grout. Kemset Grout is ideal for use in precision grouting applications especially where a fluid consistency non-shrink grout is required. Meets ASTM Standards C1107, Grade C and CRD C-621-92.

ADVANTAGES

- Controlled expansion for high tolerance placements
- Does not segregate or bleed at high fluid consistency for ease in placing with standard equipment or grout pumps
- High compressive strengths at plastic, flowable, or fluid consistency
- Free of chloride ions or other additives known to cause oxidation and deterioration of concrete or base plates
- Provides maximum load bearing capacity

USES

- | | |
|----------------------|-----------------------|
| Building Columns | Hand Rails |
| Bridge Beams | Boiler Plates |
| Sewers | Precast Beams |
| Precast Columns | Dowels |
| Fence Posts | Highway Barriers |
| Anchor Bolts | Base Plates |
| Bed Plates | Underpinnings |
| Pre Cast Wall Panels | Structural Column |
| Pipes/Sleeves | Machinery Base plates |
| Sole Plates | Machine Bases |

TECHNICAL DATA

Packaging / Part Numbers		
lbs / kg	Pallet	Part #
50 / 23	60	F2300.50

Yield per 50 lb (22.7 kg) bag		
	ft ³	m ³
Plastic	0.42	0.012
Flowable	0.43	0.012
Fluid	0.45	0.013

VOLUME GROUTING

Flow ASTM C 827 Water / 50 lb of Kemset Grout			
	Pints	Liters	
Plastic	8 to 9	3.8	100 to 125%
Flowable	9 to 9.5	4.3	126 to 145%
Fluid	9.5 to 10	4.7	20 to 30 sec *

* Fluid grout tested in flow cone according to CRD C611

Set Times ASTM 191/Vicat Method minutes to set		
	Initial	Final
Plastic	26	32
Flowable	42	117
Fluid	48	231

Compressive Strength ASTM C109 2" cube psi @ __ days (average of 3)				
	1	3	7	28
Plastic	5,700	6,900	8,700	9,800
Flowable	4,400	5,800	7,400	8,300
Fluid	4,200	5,400	7,000	7,600

Expansion ASTM 1090 / CRD C 621 Moist Cured % expansion at _ days				
	1	3	7	28
Fluid	0.01%	0.01%	0.01%	0.01%

Early Expansion ASTM C 827 3" x 6" cylinders (average of 2)	
Fluid	0.9%

For applications over 2 inches (5cm) deep, Kemset Grout may be extended with up to 25 pounds (11 Kg) of clean, SSD 3/8" (0.95 cm) pea gravel per bag. With 10 pints (4.7L) of water, yield will increase to approximately 0.6 ft³ (0.017m³)



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Flow will decrease significantly when including pea gravel in the mix.

DIRECTIONS

Grouting is best accomplished at between 40°F and 90°F (4°C and 32°C). For temperatures outside that range follow the guidelines established by ACI for cold or hot weather grouting or consult ChemMasters for additional recommendations.

PREPARATION: The concrete substrate must be clean and free of any curing or sealing compounds, dust, dirt, oil or grease. The base should be textured where possible using a small chipping hammer. Presoak the substrate with water for 24 hours to prevent premature drying of the grout. Proper Curing is required. See Curing.

FORMING: Forms will be required for most grouting applications. Top edges of forms must be higher than bottom of base plate to be grouted. Seal bottom edges of forms to prevent grout from leaking. Construct forms with a gap at least 2" (5 cm), between form and base being grouted. Construct a head box to direct flow of grout from front to back. Allow at least a 1" (2.5 cm) gap at backside of form to facilitate flow and allow air to escape in front of grout flow. All forms in contact with the grout must be coated with ChemMasters' **Release** or **Safe-Slip**.

MIXING: A paddle type mortar mixer, grout pump, or heavy duty 1/2" drill with mixing prop are required. Place about 80% of required water, for desired consistency, into clean but pre-wet mixer or container. Use only as much water as needed to properly place the grout do not exceed 10 pints per 50 lbs of **Kemset Grout**. Adding excess water decreases strength and expansion. When using aggregate add it to water, do not add sand or cement to **Kemset Grout**. With mixer blades operating, open bag, gradually empty into mixer, mix for about 1 minute, then add remaining water, and mix for 3 to 4 minutes. Following this sequence should eliminate lumping and keep mixer clean and free of excess buildup. If possible mix enough **Kemset Grout** in each batch to fill void completely so that there are no cold joints or air pockets. If this is not possible it may be necessary to have more than one mixer to ensure that all grout is placed quickly.

PLACEMENT: Always place grout from front to back with a steady continuous flow to push air out in front of grout flow ensuring maximum surface bearing of the plate or base. Do not vibrate grout. **Kemset Grout**

must be placed quickly and with minimal delays from batch to batch. **Kemset Grout** loses fluidity quickly within 1 to 2 minutes if the material is not moving.

CURING: Proper curing is required! As soon as curing can be done without marring the surface wet cure the exposed surface or apply a high quality curing compound, such as ChemMasters' **Polyseal, Polyseal WB, Safe Cure 1200, or Safe Cure 1200 Clear**. If wet curing follow the guidelines in ACI 351, *Grouting for Support of Equipment and Machinery*.

CLEANUP: Clean tools and equipment with warm water before material dries or hardens.

LIMITATIONS

- Do not apply to frost covered or frozen surfaces or at substrate or ambient temperatures below 40°F (4°C). Follow ACI 305 *Hot Weather Concreting* and 306 *Cold Weather Concreting* guidelines for placement at temperatures >90°F (32°C) or <40°F (4°C)
- ChemMasters recommends the use of ChemGrout mixers and pumps for placements under large base-plates or with a difficult configuration
- Contact ChemMasters' Technical Service Department for special recommendations on precision grouting, dry pack situations or unusual circumstances

Precautions:

DANGER: Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. May cause respiratory irritation. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure if inhaled.

Precautionary Statements: Obtain special instruction before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Wash hands and skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

Keep out of reach of children.

Proper application is the responsibility of the user. ChemMasters can only make technical recommendations and cannot provide quality control on the jobsite.

This Product is Formulated and Labeled for Industrial and Commercial Use Only

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