



DESCRIPTION

GANTREX K3 Epoxy Grout is a self-leveling, easily pourable, 100% solids epoxy grout consisting of an epoxy resin, a catalyst/hardener and carefully graded and blended aggregate. It is ideal for applications subjected to shock, vibration and impact loads and machines used at high duty cycles.

APPLICATIONS

GANTREX K3 Epoxy Grout is designed to be used where a pourable, non-shrink, chemical resistant, high strength grout is required. Applications include rail on concrete installations, such as gantry cranes, container cranes, stacker/re-claimers, transfer car runways, log handling crane runways and many other types of material handling applications.

FEATURES & ADVANTAGES:

- **High Early Strength**

When properly installed, GANTREX K3 Epoxy Grout gains strength rapidly and can reach between 80% of its compressive strength in 24 hours, depending on curing conditions. When fully cured, it achieves higher compressive, tensile and flexural strengths than cement-based grouts. These characteristics are essential for crane applications with heavy wheel loads and high dynamic loads.

- **Strong Adhesive Bond**

Properly placed GANTREX K3 Epoxy Grout creates a superior bond to both the steel soleplates and concrete base ensuring that there is no relative movement between the three support components.

- **High Chemical Resistance**

GANTREX K3 Epoxy grout is a thermo-setting plastic and therefore exhibits a high resistance to most chemicals and corrosive environments.

- **Excellent Flow Characteristics**

GANTREX K3 Epoxy Grout is specifically formulated to have excellent flow characteristics when compared to other epoxy grouts. Based on a consultation with Gantrex, the aggregate content may also be field-modified to improve flow, particularly in cold weather conditions.

- **User-Friendly Packaging**

GANTREX K3 Epoxy Grout is available in economical 3 ft³ units.

- **Direct Blending in Mortar Mixer**

GANTREX K3 Epoxy Grout components can be directly blended in a mortar mixer. Other epoxy grouts may require hand or separate mixing of resin and hardener prior to the blending in the mortar mixer, resulting in higher labor costs and longer installation times.

- **Ease of Clean-Up**

Tools used for the installation of GANTREX K3 Epoxy Grout, including the mortar mixer, can be easily cleaned with soap and water solution, prior to set.

(Consult Gantrex for details, www.Gantrex.com or 1-800-242-6873)

PHYSICAL PROPERTIES

The following information is based on actual tests conducted by an independent laboratory under controlled conditions and per ASTM C579-B. Results obtained from test samples taken from an actual placement may vary.

Full Yield – Standard Flow Mix

Compressive Strength in Psi (Mpa) (6 Bag Aggregate Mix per 3 FT³ Unit)

Cure Time	50°F (10°C)	68°F (20°C)	86°F (30°C)	104°F (40°C)
1 Day	4,500 (32)	12,500 (89)	14,500 (101)	16,000 (111)
7 Days	12,500 (85)	14,500 (102)	15,500 (108)	16,000 (111)
28 Days	14,000 (99)	15,000 (104)	15,500 (108)	16,000 (111)

Other Physical Properties:

Tensile Strength at 7 Days	Per ASTM C307 = 2,176 psi (15 Mpa)
Flexural Strength at 7 Days	Per ASTM C580 = 4,496 psi (31 Mpa)
Modulus of Elasticity at 7 Days	Per ASTM C580 = 2,900,755 psi (20,000 Mpa)
Coefficient of Thermal Expansion	Per ASTM C531 = 13.1 x 10 ⁶ in/in per °F
Linear Shrinkage at 28 Days	Per ASTM C531 = -0.0021%
Creep at 80°F (27°C) at 1 Year at 2,500 (14 Mpa loading)	Per ASTM C1181 = less than 0.3%

Reduced Yield – Higher Flow Mix

Compressive Strength in Psi (Mpa) (5 Bag Aggregate Mix per 3 FT³ Unit)

Cure Time	50°F (10°C)	68°F (20°C)	86°F (30°C)	104°F (40°C)
1 Day	4,200 (29)	11,400 (79)	12,700 (88)	13,900 (96)
7 Days	10,500 (75)	13,600 (94)	14,000 (97)	15,000 (104)
28 Days	12,300 (85)	13,600 (94)	14,500 (100)	15,000 (104)

Other Physical Properties at Reduced Yield 5 Bag Mix:

<i>Tensile Strength at 7 Days</i>	<i>Per ASTM C307 = 1,741 psi (12 Mpa)</i>
<i>Flexural Strength at 7 Days</i>	<i>Per ASTM C580 = 4,206 psi (29 Mpa)</i>
<i>Modulus of Elasticity at 7 Days</i>	<i>Per ASTM C580 = 2,451,138 psi (16,900 Mpa)</i>
<i>Coefficient of Thermal Expansion</i>	<i>Per ASTM C531 = 13.1 x 10⁶ in/in per °F</i>
<i>Linear Shrinkage at 28 Days</i>	<i>Per ASTM C531 = 0.0051%</i>
<i>Creep at 80°F (27°C) at 1 Year at 2,500 psi (14 Mpa loading)</i>	<i>Per ASTM C1181 = less than 0.3%</i>

Notes: The above data are representative and do not imply that these numbers are minimum or maximum values. Test results of samples obtained in the field may vary greatly based on sampling procedure, ground and plate temperature, product temperature and aggregate loading. Please consult Gantrex for field testing procedures.

INSTALLATION GUIDELINES OVERVIEW (Contact Gantrex for detailed instructions)

1-800-242-6873

TEMPERATURE CONSIDERATIONS

FOR BEST RESULTS, GANTREX K3 EPOXY GROUT SHOULD BE TRANSPORTED, STORED AND PLACED WITH THE PRODUCT TEMPERATURE MAINTAINED BETWEEN 70°F (21°C) and 90°F (32°C). Surface temperature of the concrete base and soleplates should also be maintained in this range during placement. Consult Gantrex for cold weather or hot weather grout installations.

YIELD

Final product yield is based on accurate mixing and placing of a standard (full load) aggregate mix. Yield is expressed in the same units as the product packaging, three (3) cubic foot units.

MIXING AND PLACEMENT

A **mortar mixer**, not a cement mixer should be used to mix the 3 grout components. Place the resin (Part "A") into a clean mortar mixer and add the hardener (part "B"), while the mixer is in motion. Mix for one to two (1 to 2) minutes. Add the aggregate while the mixer is still in motion. Mix for approximately one (1) additional minute, making sure that all the aggregate is thoroughly wetted. Do not over mix. Place the grout within 30 minutes of mixing.

Place the grout using a head box (See next page). It is important that grout be poured from only one side of the soleplate or base plate to avoid air entrapment beneath. If this is not possible, consult Gantrex for air relief (vent) hole locations.

MIXING AND PLACEMENT PRECAUTIONS:

- Gantrex epoxy grout must be placed on clean and dry surfaces only.
- The concrete surface must be prepared by removing laitance and exposing the aggregate.
- Use a small jackhammer with a bushing bit to obtain a roughness of 1/8".
- After placement, avoid exposure to water for 24 hours to allow for proper curing.
- Temperature range for curing is 50°F (10°C) min. to 105°F (40°C) max.
- Pour thickness range is 1 ½" (19mm) minimum to 4" (100mm) maximum for a single pour.
- For pours outside the minimum/maximum temperatures & depths above, contact Gantrex.
- Expansion joints should be considered every 10 feet for 1 ½" pour or less for a 4" pour.

STORAGE & SHELF LIFE

The shelf life of GANTREX K3 Epoxy Grout is two (2) years from date of manufacture if the liquid components are stored in heated warehouse conditions and kept sealed in their original containers. Aggregate must be kept free from moisture & high relative humidity to maximize shelf life.

WARRANTY – One Year from date of shipment

The information and recommendations are based on GANTREX research and are presumed to be as accurate as possible. However, no guarantee of accuracy is offered since GANTREX cannot cover every possible use and application of its products, nor anticipate every variation encountered in masonry surfaces, job conditions, and installation methods used. The purchasers shall perform their own tests to determine the suitability of such products for a particular purpose.

GANTREX warrants this product to be free from defects. GANTREX makes no other warranties with respect to this product, express or implied, including without limitation, the implied warranties of merchantability or fitness for particular purpose. GANTREX's liability shall be limited in all events to supplying sufficient product to re-treat and/or repair the specific areas to which defective product has been applied. GANTREX shall have no other liability, including liability for incidental, consequential or resultant damages whether due to breach of warranty, negligence or strict liability. This warranty may not be modified or extended by representatives of GANTREX, its distributors or dealers. See our web site for more details: www.Gantrex.com.

Gantrex K3 Epoxy Grout



Photo of a typical Head Box used to increase flow across the grout area

FREIGHT CLASSIFICATION

Part A Resin	Not regulated/Non-Hazardous
Part B Hardener	Hazard Class 8, Corrosive liquid, basic, organic, n.o.s., UN 3267
Aggregate	Not regulated/Non-Hazardous

MSDS sheets are available upon request, or from our web site: www.Gantrex.com

PACKAGING

GANTREX K3 Epoxy Grout is packaged in Three cubic foot units



(3) Cubic Foot Unit Packaging

Three Cubic Foot Unit (84.9 Liters)		
Part A Resin	4.86 U.S. Gallons (18.3 Liters)	45 LB (21.8 kg)
Part B Hardener	1.05 U.S. Gallons (3.9 liters)	9 LB (4.1 kg)
Aggregate	6 x 55 LB (25 kg) Bags	330 LB (150 kg)
Total Net Weight Per (3) Cubic Foot Unit = 384 LB (174 kg)		

Contact Gantrex to request a copy of the article:

“Effective Methods for Mounting Concrete Rail Systems on Concrete Foundations”

For installation assistance, contact: Gantrex Crane Rail Installations, Inc. at 1-800-242-6873

GANTREX reserves the right to discontinue or change product specifications at any time without prior notice and without incurring any obligation whatsoever.



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