ChemMasters

SPECIALTY CONSTRUCTION PRODUCTS

PolyTops CR Grout

Chemical Resistant Vinyl Ester Grout

P R O D U C T D A T A

Description

PolyTops CR Grout is a three component vinyl ester grout comprised of a 100% solids vinyl ester resin blend with proprietary aggregates formulated to produce an exceptionally chemical resistant grout. PolyTops CR Grout is a high modulus system with excellent bonding characteristics and tensile strengths.

Uses

PolyTops CR Grout is designed for use in situations requiring resistance to aggressive chemicals, even at elevated temperatures. PolyTops CR Grout is ideal for use in plating, chroming and steel operations yet performs well under static and dynamic loading from heavy machinery, pumps or motor bases.

Advantages

- Excellent chemical resistance especially to oxidizing solutions, acids, alkalis, oils and solvents
- Impact resistant with excellent bonding characteristics
- High strength yet fast curing for minimum downtime
- 100% reactive resin equates to low shrinkage
- Excellent flexural and tensile strengths
- Resists degradation at elevated temperatures
- Withstands immersion, fumes and spillage of solvents, caustics and organics
- Abrasion resistance exceeds that of concrete

Packaging and Yield

Each unit consists of:

Part A Resin packaged in a 5 gallon pail. Each pail contains enough resin for 1 unit of Polytops CR Grout

Part B Catalyst in plastic jugs. Eight ounces (236 ml) required for each unit of grout

Part C Aggregate packaged in 50 pound (22.7Kg) bags. Four bags required for each unit of grout

Yield 1.6 ft.^{3} (0.045m^3)

Technical Data

Typical data obtained under laboratory conditions of 70°F (21°C) with 50% humidity.

Gel Time/Pot Life	50ºF (10°C)	60 minutes
	70ºF (21°C)	45 minutes
	90ºF (32°C)	25 minutes
Compressive Strength (ASTM C-579)	14,000 psi	97 MPa
Tensile Strength (ASTM C 307)	2,500 psi	17 MPa
Flexural Strength (ASTM C-580)	3,200 psi	22MPa
Coefficient of Thermal Expansion	10-12 X 10^{-6}in/in/ºF.	

Chemical Resistance

	Concentration %	Max. °F.	°C.
Acetic Acid	75	150	65
Acetone	10	180	82
Ethyl Alcohol	95	80	27
Benzene	100	100	38
Brake Fluid		120	49
Brass Plating		180	82
Chromic Acid	20	150	65
Citric Acid	100	210	99
Ethanol	95	100	38
Formic	98	100	38
Hydraulic Fluid	100	180	82
Hydrochloric Acid	37	180	82
Hydrofluoric Acid	20	100	38
Jet Fuel (JP-4)	100	180	82
Nitric Acid	20	150	65
Phosphoric Acid	100	210	99
Silver Plating Solution		180	82
Sodium Hypochlorite	5.25	180	82
Sulfuric Acid	75	120	49
Turpentine	100	150	65
Xylene	100	120	49
Zinc Plating Bath		200	93

Contact ChemMasters technical services department for recommendations to meet your specific requirements.

Revised: Jan 2010

ChemMasters
An American Owned & Operated Company
300 EDWARDS STREET • MADISON, OHIO 44057-3112
(440) 428-2105 • FAX (440) 428-7091 • ORDER LINE: (800) 486-7866 * www.chemmasters.net

Directions

Surface Preparation: Proper surface preparation is the most critical step in successful grout placements.

Concrete must be a minimum of 28 days old. All concrete substrates must be clean and free of all dust, dirt, oils, grease, form release agents, curing or sealing compounds and any other contaminants that could adversely effect bond. For optimum bonding characteristics, roughen concrete substrate to obtain a 1/8" - 1/4" (0.3 - 0.6 cm) profile. Blockouts should be roughened with a wire brush or rotary brush hammer.

All metal, plates and bolts to be grouted must be cleaned to bright, shiny surface. All machine oils, mill scale, grease, paints or other contaminants must be removed.

Immediately prior to grout placement, vacuum or use oil free compressed air to remove any remaining dust or dirt.

Form Construction: Forms and headboxes should be constructed following the recommendations outlined in ACI 351.1R, 6.5 Formwork. All joints must be made liquid tight. Use of silicone caulk or sealant is permitted. For ease in stripping forms, coat the inside surfaces with a generous quantity of good quality automotive of floor paste wax or line tightly with polyethylene sheeting.

Pre-place clean, oil free, thin metal or stiff plastic strapping under baseplates to facilitate grout movement assuring maximum bearing potential.

Mixing: Condition PolyTops CR Grout components to approximate room temperature. Add the Part B Catalyst to the Part A Resin and mix with a drill and paddle for three minutes. Pour the mixed components into a mortar mixer and turn on mixer. Gradually add the Part C Aggregate to the mix. For the first batch of Polytops CR Grout it is recommended that only 190 of the 200 pounds of aggregate be added. This will allow the mixer to be "wet out" with resin. If the first mix is mixed with the full 200 pounds of aggregate, the first batch will be dry.

Mix well for 2-3 minutes until all aggregate is wet out and uniformly coated with vinyl ester. Begin placing immediately.

Placement: The entire batch should be placed within 20-30 minutes to avoid premature set-up. Optimum temperature of substrate and base plates is approximately 70°F (21°C). All surfaces to be grouted must be dry.

Grouts under machine bases and plates should be placed from one side only and allowed to flow to the opposite side. This procedure reduces the possibilities of creating air pockets and voids. Strapping aids in this process. Once in the forms, the grout will remain workable for up to 2 hours. Although the grout will flow easily, it should be pushed under the equipment to assure complete filling. The fresh grout can also be dragged with a chain or agitated with a vibrator to remove air pockets.

Place grout at a minimum thickness of 1/2" (1.25 cm) and no more than 2" (5 cm) in a single lift when placed in a large mass.

Curing: Grout cure time depends on the temperature of the foundation and the equipment base plate. These temperatures should be checked with a surface thermometer. Forms can be removed after approximately 1/2 of the grout's cure cycle has been completed. Equipment should not be placed into service until the grout is fully cured. Allow a minimum of two days for grout to fully cure at a surface temperature of 80ºF (26ºC) or more. Add one day of cure time for each 10ºF (12ºC) below 80ºF (26ºC).

Cleaning: Clean tools and equipment with xylene or MEK before resins dry.

Limitations

- Do not add water or solvent to any of the components.
- Do not use over frost or frozen concrete
- Do not use over concrete less than 28 days old
- Cold temperatures reduce flowability and lengthen curing times considerably
- Excessively hot temperatures increase initial flow but reduce pot life significantly

Storage

Shelf life is limited, minimum of three months from date of manufacture. Store at 70ºF (21ºC), out of sunlight, direct heat or drafts.

Cautions

Flammable Liquid: Keep away from heat or open flames. Use with adequate ventilation. May cause skin, eye and respiratory tract irritation. Do not take internally. Keep out of the reach of children.

Organic Peroxide: Keep away from all sources of heat including sunlight. May cause skin, eye and respiratory tract irritation or allergic skin reaction. Do not take internally. Keep out of the reach of children.

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

FOR BEST RESULTS AND SAFEST USAGE, USER IS SPECIFICALLY DIRECTED TO CONSULT THE CURRENT MATERIAL SAFETY DATA SHEET AND PACKAGE LABEL FOR THIS PRODUCT

Printed in U.S.A.