EQUIPMENT FOUNDATION SYSTEMS

Chockfast®

ITW QUICKSET

High Strength, Rapid-Setting, Multi-purpose Epoxy

Technical Bulletin # 1033A

Bulletin Description

ITW QUICKSET is a two-component high strength, fast-setting, multi-purpose epoxy with a convenient mixing ratio of 1:1 by volume.

Use & Benefits

ITW QUICKSET can be used as a liquid shim, an anchoring adhesive or as a structural gap filler. It is recommended for applications requiring rapid turnaround of equipment but not for equipment requiring precise alignment (i.e. less than 0.005" or 0.127 mm movement over the life of the equipment).

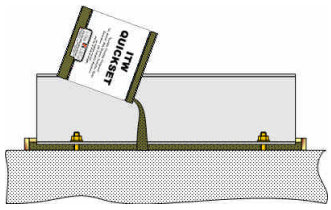
ITW QUICKSET can be quickly mixed and applied under concrete blocks, between steel plates or between concrete and steel. ITW QUICKSET was designed to fill a void within 15 minutes then harden to 78 shore D in 30 minutes and 84 Shore D in 4 hours at a concrete / steel temperature of 70° F (21° C). ITW QUICKSET will reach a minimum compressive strength of 14,500 psi (101.5 MPa) in about 6 hours at 70° F (21° C).

Design Considerations

Because ITW QUICKSET was designed to be installed within 15 minutes after mixing, the void area it fills must be of a size that can be completely filled within that time based on the application method chosen. ITW QUICKSET is a hot curing epoxy so the temperature of the epoxy, the temperature of the concrete or steel and the ambient temperature must be taken into consideration when installing it. A maximum thickness of 18mm (3/4 inch) recommended at 21° C (70° F) but ITW QUICKSET can be applied at ambient temperatures between 40° F and 85° F (5° C and 29° C). For applications outside either of these ranges contact the Engineering Services Department at ITW Polymer Technologies.

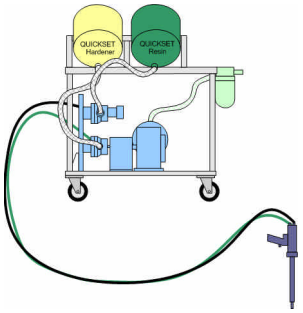
Application Instructions

ITW QUICKSET comes in 300 ml x 300 ml dual cartridge tubes, gallon cans, 5 gallon buckets or 55 gallon drums. It can be mixed and applied by either mixing it with a Jiffy Mixing blade for 3 minutes then pouring it in place or by using a manual or automated mixing and dispensing system.



The convenient 300ml x 300ml (21 fl.oz) side-by-side, dual component cartridges comes with a static mixing nozzle and requires an application gun to dispense it. Hand or air operated application guns are not available through ITW Polymer Technologies but can be obtained at large hardware and construction equipment suppliers.

An automated mixing and dispensing system is recommended when it is necessary to apply a large volume of the epoxy in a short period of time. An automated dispensing system consists of metering pumps, hoses and a manually operated dispensing gun with a static mixing nozzle.



Depending on the temperature of the concrete or steel, the thickness of the gap to be filled and the importance of a fast cure rate, ITW QUICKSET epoxy resin and hardener may need to be individually pre-mixed prior to dispensing. It should also be preconditioned for 24 hours while still in the drum to 65°F to 75°F (18°C to 24°C) prior to dispensing.

Please consult ITW Polymer Technologies for additional information.

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ITW Philadelphia Resins Registered to ISO 9001:2000 File No. A3790
ITW Performance Polymers Europe ISO 9001:2000 Q 05420

Physical Properties

COMPRESSIVE STRENGTH:	14,500 psi (101.49 MPa)	ASTM D-695
COMPRESSIVE MODULUS OF ELASTICITY:	347,000 psi (2392.5 MPa)	ASTM D-695
LINEAR SHRINKAGE:	< 0.5%	ASTM D-2566
FLEXURAL STRENGTH:	15,400 psi (106.18 MPa)	ASTM C-580
FLEXURAL MODULUS OF ELASTICITY:	191,000 psi (1316.9 MPa)	ASTM D-580
TENSILE STRENGTH:	8,800 psi (60.67 MPa)	ASTM D-638
TENSILE MODULUS:	191,000 psi (1316.9 MPa)	ASTM D-638
TENSILE LAP SHEAR STRENGTH:	908 psi (6.26 MPa) after 30 min. >1,300 psi (9 MPa) after 7 days	ASTM D-1002
% ELONGATION AT BREAK:	5.9%	ASTM D-638
SPECIFIC GRAVITY OF RESIN:	1.17	
VISCOSITY OF RESIN:	48,800 cps @ 10 RPM using Viscosity Brookfield Viscometer Spindle #3	
SPECIFIC GRAVITY OF HARDENER:	1.66	
VISCOSITY OF HARDENER:	8,800 cps @ 20 RPM using Viscosity Brookfield Viscometer Spindle #3	
MIXED VISCOSITY:	27,000 cps @ 20 RPM using Viscosity Brookfield Viscometer Spindle #3	
GEL TIME @ 75° F (24°C):	15 min 100 gram mass	
SHORE D HARDNESS:	70 @ 30 Minutes @ 70oF 78 @ 1 Hour 82 @ 4 Hours 84 @ 1 Day	
FIRE RESISTANCE:	Self Extinguishing	ASTM D 635

Product Information

UNIT COVERAGE:	**Dual Tube Cartridge:** 37 in.^{3} (600ml) **2 gal Unit**: 435 in.^{3} (7.1 L) **10 gal Unit**: 2,282 in.^{3} (37.4 L) **110 gal unit**: 21,131 in.^{3} (346.3 L)
APPLICATION TEMPERATURE:	41°F (5°C) to 95°F (35°C)
PACKAGING per Unit:	**Dual Tube Cartridge:** Resin - 0.8lbs (0.36 kg), Hardener – 1.1 lbs (0.5 kg) **2 gal Unit**: Resin – 9.3 lbs. (4.2 kg), Hardener – 12.86 lbs. (5.8 kg) in two (2) 1 gal cans **10 gal Unit**: Resin – 48.5 lbs. (22 kg), Hardener – 68 lbs. (30.8 kg)) in two (2) 5 gal cans **110 gal unit**: Resin – 441 lbs. (200 kg), Hardener – 641 lbs. (291 kg) in two (2) 55 gal drums
CURE TIME (approximate):	6 hours @ 21° C (70° F)
POT LIFE:	15 min. @ 21° C (70° F)
SHELF LIFE:	2 years
CLEAN UP:	IXT-59 or similar epoxy solvent

Date 01/2009

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