



COMPARISON OF PHYSICAL CHARACTERISTICS FOR VARIOUS EPOXY GROUTS - TECHNICAL GUIDE #610

REVISED: 02/2023

VERSION: P

DESCRIPTION

This bulletin compares the key physical properties and associated product information of the major 3-component epoxy grouts within the ITW Performance Polymers product offerings.

PHYSICAL PROPERTIES

	CHOCKFAST RED	CHOCKFAST RED SG	ESCOWELD 7505E/7530	CHOCKFAST RED VERSAFLOW
TECHNICAL BULLETIN	617	618	1612	1040
COMPRESSIVE STRENGTH ASTM C581 (MOD)	15,250 psi (105 MPa)	18,120 psi (124.9 MPa)	14,000 psi (96.5 MPa)	14,100 psi (97.2 MPa)
COMPRESSIVE MODULUS OF ELASTICITY ASTM C582	2,000,000 psi (13,793 MPa)	1,970,000 psi (13,582 MPa)	1,800,000 psi (12,411 MPa)	1,600,000 psi (11,000 MPa)
LINEAR SHRINKAGE ASTM C531	0.023%	0.009%	-0.016%	0.046%
COEFFICIENT OF LINEAR THERMAL EXPANSION ASTM C531	11.9 X 10 ⁻⁶ in/in/ °F (21.4 X 10 ⁻⁶ cm/cm/ °C)	10.8 X 10 ⁻⁶ in/in/ °F (19.4 X 10 ⁻⁶ cm/cm/ °C)	14.6 x 10 ⁻⁶ in/in/°F (25.2 X 10 ⁻⁶ cm/cm/ °C)	19.1 x 10 ⁻⁶ in/in/°F (34.4 x 10 ⁻⁶ mm/mm/°C)
FLEXURAL STRENGTH ASTM C582	4,025 psi (27.7 MPa)	4,800 psi (33 MPa)	4,700 psi (32.4 MPa)	5,200 psi (35.9 MPa)
FLEXURAL MODULUS OF ELASTICITY ASTM C582	2.00 X 10 ⁶ psi (13,790 MPa)	2.62 X 10 ⁶ psi (18,064 MPa)	1.8 x 10 ⁶ psi (12,410 MPa)	1.55 x 10 ⁶ psi (10,700 MPa)
TENSILE STRENGTH ASTM D638	1,890 psi (13.0 MPa)	2,130 psi (14.7 MPa)	2,100 psi (14.5 MPa)	2,300 psi (15.9 MPa)
FIRE RESISTANCE ASTM D637	Self-Extinguishing	Self-Extinguishing	Self-Extinguishing	Self-Extinguishing
SPECIFIC GRAVITY	2.06	2.24	2.00	2.04

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PRODUCT INFORMATION

	CHOCKFAST RED	CHOCKFAST RED SG	ESCOWELD 7505E/7530	CHOCKFAST RED VERSAFLOW
COVERAGE PER UNIT	1.6 ft ³ (45.3 L)	1.6 ft ³ (45.3 L)	2.4 ft ³ (68 L)	2.2 ft ³ (61.7 L)
EFFECTIVE POUR RANGE*	2 - 18 in * (50 - 450 mm)	1 - 4 in * (25 - 100 mm)	1½- 18 in * (38 - 450 mm)	1 - 8 in * (25 - 100 mm)
CURE TIME (APPROXIMATE)	60°F (16°C) – 54 hours 72°F (22°C) – 36 hours 80°F (27°C) – 24 hours 90°F (32°C) – 18 hours	60°F (16°C) – 48 hours 70°F (21°C) – 24 hours	60°F (16°C) – 48 hours 70°F (21°C) – 36 hours 80°F (27°C) – 24 hours 90°F (32°C) – 12 hours	60°F (16°C) – 54 hours 72°F (22°C) – 36 hours 80°F (27°C) – 24 hours 90°F (32°C) – 18 hours
WORKING TIME AT 70°F (21°C)	3 hours	1 hour	2 hours	2.5 hours
CLEAN UP	Water	Water	Water	Water or IMPAX IXT-59 or similar epoxy solvent
PACKAGING PER UNIT	Resin: 1.6 gal. (6.1 L) Hardener: 0.9 gal.(3.4 L) Agg: 5 Bags @ 46 lb. (21 kg)	Resin: 2.4 gal (9.05 L) Hardener: 0.43 gal (1.63 L) Agg: 4 Bags @ 46 lb. (21 kg)	Resin: 2.57 gal (9.7 L) Hardener: 1.12 gal (4.2 L) Agg: 5 Bags @ 53 lb (24 kg)	Resin: 3.5 gal (13.3 L) Hardener: 1.3 gal (4.9 L) Agg: 5 Bags @ 50 lb (22.7 kg)
UNIT WEIGHT	207 lbs. (94 kg)	207 lbs. (94 kg)	305 lbs. (138 kg)	293.6 lb (133.2 kg)
SHELF LIFE	2 yrs. dry storage	2 yrs. dry storage	2 yrs. dry storage	2 yrs. dry storage

* Individual pours may be performed outside of these limits with recommendations by highly experienced installers. Please consult your local representative of the Chockfast Worldwide distributor network or the ITW Technical Services team for an in-depth application review and recommendations.

NOTE: The physical properties quoted above are for laboratory prepared specimens. Tests on specimens from a job site may not be identical.

REFERENCE

For any additional information or recommendations beyond the typical ones listed in this document, please contact your local representative of our Worldwide Distributor Network or ITW Performance Polymers for further support.

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