Adhesive and Tools

CHAMPION MIX® (EPOXY ADHESIVE)

The CHAMPION MIX system is a two-part adhesive (1-to-1 mix ratio), epoxy resin system, designed to permanently bond fittings and joints of fiberglass reinforced epoxy conduit. It is also designed for use with pultruded polyester and vinyl ester components. Each cartridge system contains resin, hardener and one plastic static mixer. An adhesive gun is required for applying the adhesive (ordered separately). Under normal conditions, it takes approximately 45 minutes for the CM-2040 and CM-2070 adhesives to harden at their rated temperatures. If a faster setting adhesive is desired, there are Champion Mix adhesives available that gel much faster. The "Fast Gel" adhesives can be specified by adding the suffixes, "-FG" or "-SFG" to the item numbers. Because the "Fast Gel" and "Super-Fast Gel" adhesives set up quicker, additional mixing tubes may be required.

The epoxy adhesive is also available in three convenient dispensing tube sizes: 50 ML, 150 ML and 300 ML.

For further information, use your smart phone's camera or QR code scanner to learn more about **Champion Mix adhesives**.

For further information, use your smart phone's camera or QR code scanner to learn more about **Champion's Epoxy Adhesive Calculator**.

	ITEM NO	SIZE	TEMPERATURE RANGE	APPROXIMATE CURING TIME
☐	CM-570	50 ML	70°F (21°C) and above	30–45 minutes
☐	CM-570-FG	50 ML	70°F (21°C) and above	20–30 minutes
☐	CM-570-SFG	50 ML	70°F (21°C) and above	3–7 minutes
☐	CM-540	50 ML	40°–70°F (4°C–21°C)	30–45 minutes
☐	CM-540-FG	50 ML	40°–70°F (4°C–21°C)	20–30 minutes
☐	CM-540-SFG	50 ML	40°–70°F (4°C–21°C)	3–7 minutes
☐	CM-1070	150 ML	70°F (21°C) and above	30–45 minutes
☐	CM-1070-FG	150 ML	70°F (21°C) and above	20–30 minutes
☐	CM-1070-SFG	150 ML	70°F (21°C) and above	3–7 minutes
☐	CM-1040	150 ML	40°–70°F (4°C–21°C)	30–45 minutes
☐	CM-1040-FG	150 ML	40°–70°F (4°C–21°C)	20–30 minutes
☐	CM-1040-SFG	150 ML	40°–70°F (4°C–21°C)	3–7 minutes
☐	CM-2070	300 ML	70°F (21°C) and above	30–45 minutes
☐	CM-2070-FG	300 ML	70°F (21°C) and above	20–30 minutes
☐	CM-2070-SFG	300 ML	70°F (21°C) and above	3–7 minutes
☐	CM-2040	300 ML	40°–70°F (4°C–21°C)	30–45 minutes
☐	CM-2040-FG	300 ML	40°–70°F (4°C–21°C)	20–30 minutes
☐	CM-2040-SFG	300 ML	40°–70°F (4°C–21°C)	3–7 minutes

50 ML Tubes

150 ML Tubes

300 ML Tubes

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Estimated Number of Joints Per Container
(estimated only – varies depending on amount of adhesive applied per application)

50 ML	
SIZE	JOINTS PER CONTAINER
3/4"	16
1"	14
1-1/4"	12
1-1/2"	10
2"	8
2-1/2"	6
3"	5
3-1/2"	5
4"	4
5"	3
6"	2

150 ML	
SIZE	JOINTS PER CONTAINER
3/4"	50
1"	42
1-1/4"	36
1-1/2"	30
2"	25
2-1/2"	20
3"	17
3-1/2"	15
4"	14
5"	10
6"	7

300 ML	
SIZE	JOINTS PER CONTAINER
3/4"	100
1"	85
1-1/4"	75
1-1/2"	60
2"	50
2-1/2"	40
3"	35
3-1/2"	30
4"	25
5"	20
6"	15

ADHESIVE GUNS

Champion Fiberglass adhesive guns are available for all three adhesive tube sizes; 50 ML, 80 ML and 300 ML.

	ITEM NO	ADHESIVE TUBE SIZE
☐	CM-AG-5	50 ML
☐	CM-AG-10	150 ML
☐	CM-AG-20	300 ML

CMAG-5

CMAG-10

CMAG-20

BATTERY-POWERED ADHESIVE GUN

Champion Fiberglass 18V Li-Io battery-powered adhesive guns are only available for the 300 ML adhesive tube sizes. This powerful 18V cordless drive system is supplied with a sturdy 300 ML dispensing cartridge carriage.

Other features include:

- Flow control – instant drive disengagement when trigger is released
- Lightweight ergonomic design – reduces wrist and arm strain
- Rapid battery charging – 30 minutes
- Battery fuel gauge – indicates charging power battery level

All battery-powered adhesive guns are supplied fully assembled and supplied with one (1) 18V Li-Io battery and (1) 18V charger.

	ITEM NO	ADHESIVE TUBE SIZE
☐	CMAG-20-B	300 ML

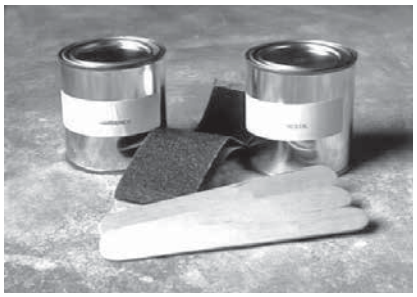
CMAG-20-B

MIXING TIPS

Champion Fiberglass mixing tips are required for mixing together the two-part epoxy adhesive supplied in tubes. They are available for all three adhesive tube sizes; 50 ML, 150 ML and 300 ML.

	ITEM NO	ADHESIVE TUBE SIZE
☐	CM-MT-5	50 ML
☐	CM-MT-10	150 ML
☐	CM-MT-20	300 ML

EPOXY ADHESIVE KIT



Champion Fiberglass Epoxy Adhesive Kit, contains two cans, one with base epoxy adhesive (black color) and the other with hardener (white color), stir sticks, sand paper for abrading conduit surfaces and an instruction sheet. When properly mixed, the adhesive will be evenly grey.

The adhesive kit is offered for three different ambient curing temperatures:

- Item# CF-1070, for 70°F (21°C) ambient temperature (standard grade)
- Item# CF-1040, for 40°F (4°C) ambient temperature (special grade)
- Item# CF-1020, for 20°F (-7°C) ambient temperature (special grade)

Adhesive curing time is dependent on the ambient temperature. As a guideline, the CF-1070 adhesive is cured at 75°F (29°C) in one hour. Contact Champion Fiberglass for curing information at extreme temperatures (high or low). Champion Fiberglass adhesive can be used for bonding fiberglass and PVC together.

Estimated Number of Joints Per Kit
(estimated only – varies depending on amount of adhesive applied per application)

SIZE	JOINTS PER KIT
3/4"	40
1"	35
1-1/4"	30
1-1/2"	25
2"	20
2-1/2"	18

SIZE	JOINTS PER KIT
3"	15
3-1/2"	13
4"	10
5"	8
6"	6
8"	4

BENDING HANDLES

Champion Bending Handles are made from machined steel and available for IPS and XW conduit sizes 3/4" through 2". These bending handles provide additional leverage during the field hand bending process when using a PVC hotbox.

	ITEM NO	CONDUIT SIZE (IPS)
☐	CBH-075	3/4"
☐	CBH-100	1"
☐	CBH-125	1-1/4"
☐	CBH-150	1-1/2"
☐	CBH-200	2"

	ITEM NO	CONDUIT SIZE (XW)
☐	CBHX-075	3/4"
☐	CBHX-100	1"
☐	CBHX-125	1-1/4"
☐	CBHX-150	1-1/2"
☐	CBHX-200	2"

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CHAMPION DUCT FIBERGLASS REPAIR KIT™

The Champion Duct Fiberglass Repair Kit™ is a water-activated, fast curing, in-field fiberglass conduit repair system, ideal for cracks, breaks, reinforcing joints, rebuilding conduit wall strength and corrosion proofing — in virtually any situation, even underwater!

The Champion Duct Fiberglass Repair Kit™ includes a strong fiberglass knitted tape, precoated with fast setting water-activated urethane resin.

The Champion Duct Fiberglass Repair Kit™ can be installed by one person with no special tools, and provides for quick, in-field repairs, repairing conduits in as little as 30 minutes.

The Champion Duct Fiberglass Repair Kit™ is Used for:

Routine and Emergency Conduit Repairs • Structural Reinforcement
Sealing Joints • Rebuilding Conduit side Walls • Corrosion Proofing
Abrasion Protection • Repairs in Hard to Reach Areas

The Champion Duct Fiberglass Repair Kit™ is Used By:

Petrochemical • Industrial processing • Pulp and paper • Military • Marine
Irrigation • Power generation • Facilities maintenance • Water/wastewater
Manufacturing • Food processing • Pharmaceutical • Automotive

Champion Duct Fiberglass Repair Kit™ Contents:

- Knitted fiberglass tape with water-activated, fast setting polyurethane resin
- Gloves for easy clean-up
- Detailed instructions

Description:

Each kit contains a roll of knitted fiberglass tape precoated with water activated polyurethane resin enclosed in a sealed foil pouch, latex gloves and printed instructions.

Technical Information

Compatibility and Chemical Resistance: The Champion Duct Fiberglass Repair Kit™ combined may be used with any type of fiberglass conduit or piping and is generally compatible with the following classes of chemicals: hydrocarbons, petrochemicals, fuels, organics, acids, bases, water, steam, salts and slurries. The durability of the repair may be affected by very strong acids (pH under 3) or bases (pH over 12).

Shelf Life: 2 years from date of purchase when stored at 40°F to 83°F (5°C to 28°C).

Color: Black

Tensile Strength: 24,950 psi / in width/172 MPa (ASTM D 3039)

Modulus: 62,505 psi / 4309 MPa (ASTM D 3039)

Flexural Yield Strength: 12,005 psi / 82.77 MPa (ASTM 790)

Durometer Hardness: 63 Shore D (ASTM D 2240)

Temperature/Heat Resistance: From -20°F up to 250°F (-29°C to 121°C)—continuous. From 250°F to 500°F (121°C to 260°C)—temporary exposures. If possible, the conduit/pipe should be at ambient temperature before application.

Champion Duct Fiberglass Repair Kit™ is compliant with US DOT 49CFR parts 192 and 195. Testing was performed under the guidelines of ASME PCC-2, Article 4.1.

Set Time: Tack free in 3 to 5 minutes at ambient temperatures of 50°F to 80°F (10°C to 27°C). Set time is slower below 50°F and faster above 80°F.

Cure Time: Normally cures in 30 minutes at ambient temperatures between 50°F to 80°F (10°C to 27°C). Longer cure times may occur when ambient temperature is less than 50°F (10°C). Heat may be applied to accelerate cure times. Cure time is greatly accelerated at extremely high ambient or pipe surface temperatures. The **UNOPENED** foil pouch may be immersed in cool water for at least 15 minutes to slow set and cure times and to provide ease of handling.

Ordering Information

PART NUMBER: BLACK	CHAMPION DUCT FIBERGLASS REPAIR KIT™ SYSTEM SIZE (PACKAGED 10 PER CASE)	WEIGHT LBS/KGS
CF-RK2x4-BLK	2" x 4'/5.08cm x 1.2m	4/1.8
CF-RK2x12-BLK	2" x 12'/5.08cm x 3.6m	6/2.7
CF-RK4x12-BLK	4" x 12'/10.16cm x 3.6m	8/3.6
CF-RK4x25-BLK	4" x 25'/10.16cm x 7.62m	14/6.3

Champion Duct Fiberglass Repair Kit™ does not contain any Volatile Organic Compound (VOC) as defined in the USA for regulatory purposes (ASTM used as a guideline).

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