DUAL CARTRIDGE ADHESIVE KIT
USAGE GUIDELINE

Atkore™
FRE Composites

Storage Temperature (adhesive):

	FRE #20-0163	FRE #20-0164
Recommended	68-77° F	68-77° F
Lower temperature limit	41° F +/-2° F	41° F +/-2° F
Upper temperature limit	90° F +/-2° F	90° F +/-2° F

Usage Temperature (adhesive):

	FRE #20-0163	FRE #20-0164
Recommended	68-77° F	68-77° F
Lower temperature limit	41° F +/-2° F	41° F +/-2° F
Upper temperature limit	90° F +/-2° F	90° F +/-2° F

Note: When the adhesive material temperature falls below the recommended temperature limit, material shall be reheated, for example by use of a heating container or blanket, until the temperature reaches the recommended temperature level. No restriction is imposed on the number of times the material may be required to be heated back to recommended usage temperature. Heating and reheating temperature shall not exceed the upper storage temperature recommended limit (90° F +/-2° F).

Substrate Temperature (parts to be bonded):

	FRE #20-0163	FRE #20-0164
Recommended	68-77° F	68-77° F
Lower temperature limit	41° F +/-2° F	41° F +/-2° F
Upper temperature limit	90° F +/-2° F	90° F +/-2° F

Cartridge Dispensing Instructions

- Static mix nozzle supplied with the kit shall not be altered in any way
- Static mix nozzle shall be changed as soon as dispensing becomes more difficult

Most probable causes:

- Mixed material inside the nozzle has cured enough to prevent normal flow of material through the nozzle
- Material in cartridge is too low in temperature

Atkore™
FRE Composites

75 Wales, Saint-André-d'Argenteuil, Québec, CANADA J0V 1X0 | +1 450 537-3311 | Fax: +1 450 537-3415
60 Greenhorn Drive, Pueblo, Colorado, 81004, USA | +1 719 565-3311 | Fax: +1 719 564-3415
Toll free: +1 888 849-9909 | frecomposites.com

DUAL CARTRIDGE ADHESIVE KIT
USAGE GUIDELINE

Atkore™
FRE Composites

Time allotment for material in static mix nozzle (to remain idle)

Maximum time allowed:

	FRE #20-0163	FRE #20-0164
Recommended	3 to 5 minutes	8 to 10 minutes
Lower temperature limit	20 to 30 minutes	45 to 60 minutes
Upper temperature limit	1.5 to 3 minutes	4 to 6 minutes

Note: Dispensing instructions apply to FRE #20-0164 and FRE #20-0163. The time allotmentsFRE# 20-0164) and ES2501 (FRE# 20-0163).

There are no ambient temperature or humidity restrictions on the use of either epoxy adhesive system provided material usage and substrate conditioning comply with recommendations (Consult ES1904 (FRE# 20-0164) & ES2501 (FRE# 20-0163) Technical Data Sheet for more details).

Note: Substrate or the material to be bonded shall be clean and dry. When the substrate temperature falls below than the recommended temperature limit, substrate shall be heated to recommended temperature level.

Expected Working Times:

		Working time (minutes)	
Material T (°F)	Substrate T (°F)	FRE #20-0163	FRE #20-0164
Recommended	Recommended	3 to 5	8 to 10
Recommended	Lower	3 to 6+	8 to 12+
Recommended	Upper	3 to 4	8 to 9
Lower	Lower	20 to 30	45 to 60
Lower	Recommended	20 to 27+	45 to 55+
Lower	Upper	20 to 25	45 to 50+
Upper	Upper	1.5 to 3	4 to 6
Upper	Recommended	1.5 to 4	4 to 6+
Upper	Lower	1.5 to 5+	4 to 7+

Note: These values are generic for epoxy adhesive and not actually based on testing to end users' *conditions*.

Potential causes of "sticky" material:

Ratio of part A to part B not correct
- Clogged nozzles on cartridges
- Air bubbles in cartridge and/or nozzle

Incomplete/inadequate mixing of part A and part B
- Incorrect mix nozzle
- Modified/altered mix nozzle
- Material too thick to mix together

Atkore™
FRE Composites
75 Wales, Saint-André-d'Argenteuil, Québec, CANADA J0V 1X0 | +1 450 537-3311 | Fax: +1 450 537-3415
60 Greenhorn Drive, Pueblo, Colorado, 81004, USA | +1 719 565-3311 | Fax: +1 719 564-3415
Toll free: +1 888 849-9909 | frecomposites.com