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Tflex™ CR607 Directions for Use

Application Note

Date: 11/27/2020

This application note provides general instructions for use for Tflex™ CR607.

Overview

Tflex™ CR607 is a soft, compliant, high thermal conductivity dispensable gap filler providing the lowest thermal resistance and highest reliability available. The 1:1 mix is dispensable through a wide variety of dispensing equipment. It is an A+B material that cures in place after dispensing and mixing to perfectly fill the gap.

Shipping and Storage

Shelf Life: Shelf life for Tflex™ CR607 is 6 months from date of manufacture.

Storage Conditions: Tflex™ CR607 should be stored in original product packaging until ready for use. Recommended storage conditions are up to 35°C, with no special requirements on relative humidity when stored in original packaging. For cartridges, the direction to store the material is referred to the arrow from carton or sticker as in vertical tip-down dispense orientation).
Packaging: Tflex™ CR607 can be provided with below standard packages to support various application options.

TYPE	FILL VOLUME	FILL WEIGHT
50cc side-by-side cartridge (2x25cc)	48 cc	160 g
200cc side-by-side cartridge (2x100cc)	215 cc	730 g
400cc side-by-side cartridge (2x200cc)	394 cc	1340 g
1-gallon pail x2	4070 cc	14kg x2
5-gallons pail x2	5820 cc	20kg x2

Application and Clean-up

Mixing: Tflex™ CR607 is a two-part, silicone-based system and therefore requires mixing before use. Mixing should be done at a 1:1 ratio of part A (blue) to part B (white). Material should be used with matching part A and B batch numbers. Disposable plastic static mixing nozzles can be used to mix parts A and B together. Static mixing nozzles can be attached to the ends of cartridges or automated dispensing systems. Static mixing nozzles with a minimum of 18 mixing elements at large diameter or 12 elements at small diameter are recommended to achieve proper mixing.

Before attaching mixing nozzle, a small amount of material should be purged out of each cartridge to align pistons evenly and fill any air space in the tip of the cartridge.

Static mixing nozzle flow rate and mixing performance:

# OF ELEMENTS	ELEMENT DIAMETER	FLOW RATE	MIXING
12	12.6 mm	22 g/min	Incomplete
12	6.4 mm	5 g/min	Complete
12	9.3 mm	15 g/min	Complete
18	12.6 mm	16 g/min	Complete
24	12.6 mm	14 g/min	Complete

Flow rates measured from 200-cc side-by-side cartridge with 2K dispenser at 90 psi (6.2 bar) on 2.5-in (6.35-cm) cylinder.

Dispensing: Material can be dispensed with manual dispensing guns or with automated dispensing systems for high volume in-line manufacturing.

Manual dispensing guns (Nordson EFD):

50 cc

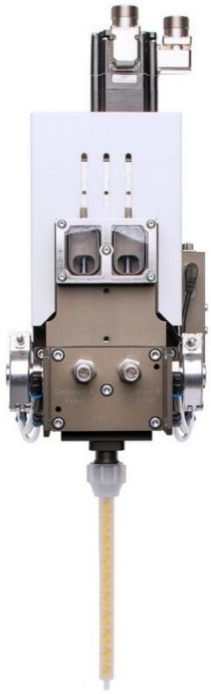
200 cc

Pneumatic dispensing guns (Cox, Newborn):

50 cc: Cox A25

200 cc: Newborn VR200A83

Automated dispensing (Scheugenpflug): material can be supplied from cartridges or pails.



Dos P016 TCA volumetric piston dispenser

Dispensing Cell

A90C, material supplied from cartridges

A280 2-part, material supplied from pails

Automated dispensing (Graco): material can be supplied from cartridges or pails.

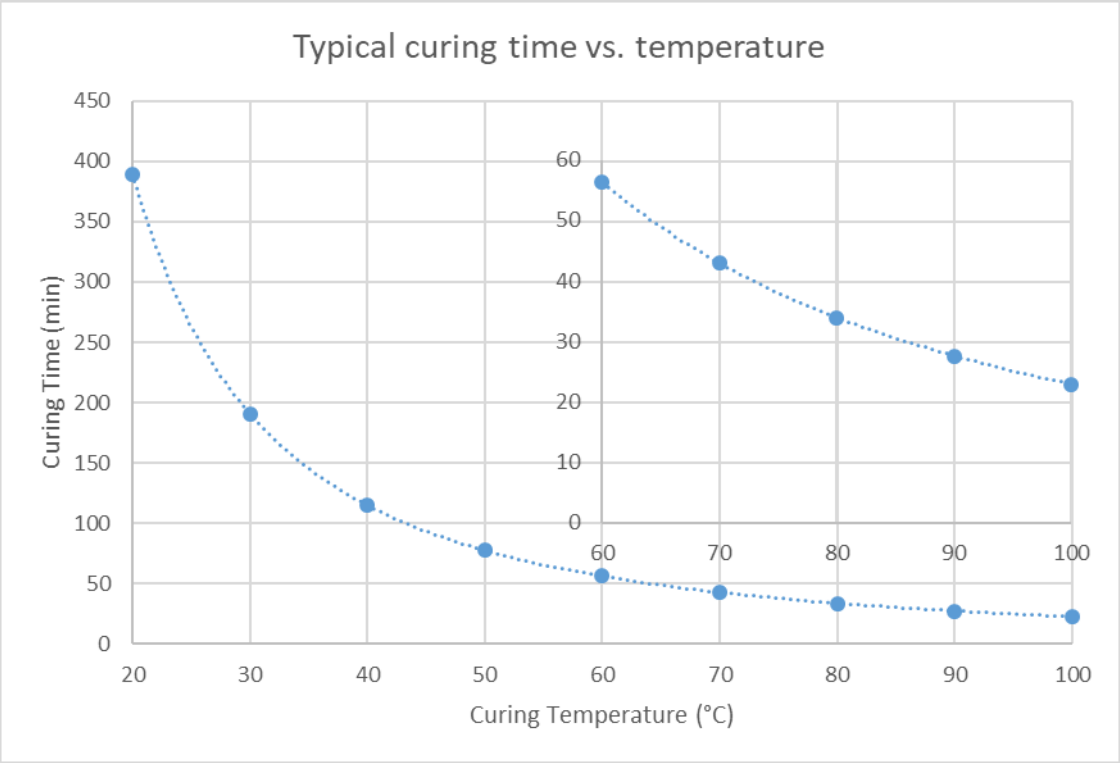
PR-X Meter, Mix, and Dispense Solution

UniXact C300 Dispensing Cell

PR-X: material supplied from cartridges

DynaMite 190 HD: material supplied from pails

Pot life and Cure time: At 25°C pot life (double viscosity) is greater than 60 minutes, and curing is achieved within 24 hours.



Cure Inhibition: Tflex™ CR607 is a silicone-based material that requires proper curing to fully function. Various compounds have been proven to cause problems by inhibiting the curing of silicone systems. These compounds typically include: tin, sulfur, phosphorous, nitrogen-containing compounds, urethanes, compounds containing antimony, arsenic, tellurium, and selenium, residual solvents or monomers, and some primers. Do not use latex gloves when handling uncured material.

Exposure to solvents: Tflex™ CR607 is a silicone material filled with thermally conductive fillers. Exposure to organic solvents and strong bases can result in swelling or removal of the silicone carrier material resulting in degradation or loss of performance. For specific chemical resistance consult Chemical Resistance Tables for silicone materials such as the one listed at the following URL:
https://www.engineeringtoolbox.com/silicone-chemical-resistance-d_1879.html

Clean-up: Excess material can be cleaned up using a dry rag. Residual silicone oil can be removed using a clean rag and acetone solvent.

First Aid: Safe handling, disposal, and first aid measures are included in the SDS. Please read the SDS before using or handling this product. For further questions, please contact Laird.