



# Controlled Room Temperature (CRT) 10/30 Thermal Technology STT-521-500 Qualified Shipping System: STP-309

## Description:

The SAF-T-TEMP™ Controlled Room Temperature 10/30 phase change energy system is designed to maintain the temperature of your payload between 10° to 30°C when used with the STP-309 packaging system. *For custom applications and sizes, please inquire.*

## Contents:

Each case of STT-521-500 Saf-T-Temp CRT contains:

- Sixteen (16) each 500 g (1.1 lb) Saf-T-Temp CRT Paks

## Performance with STP-309

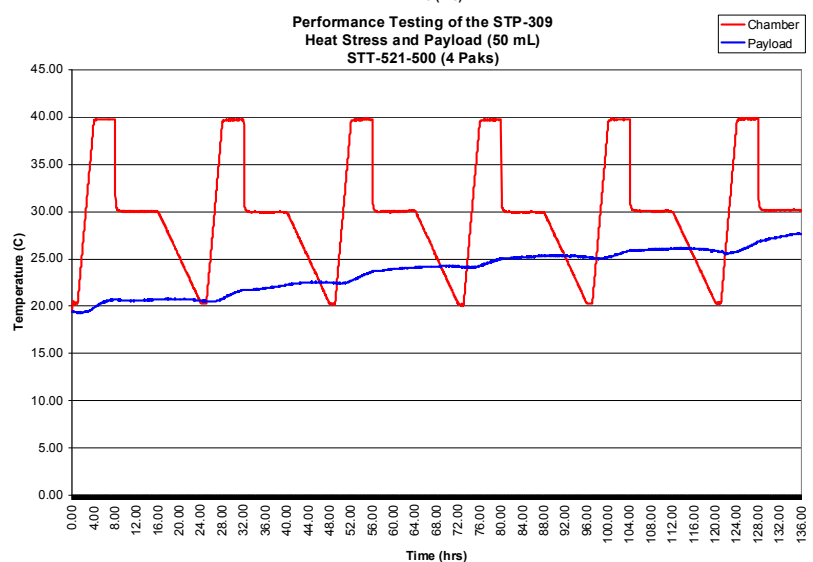
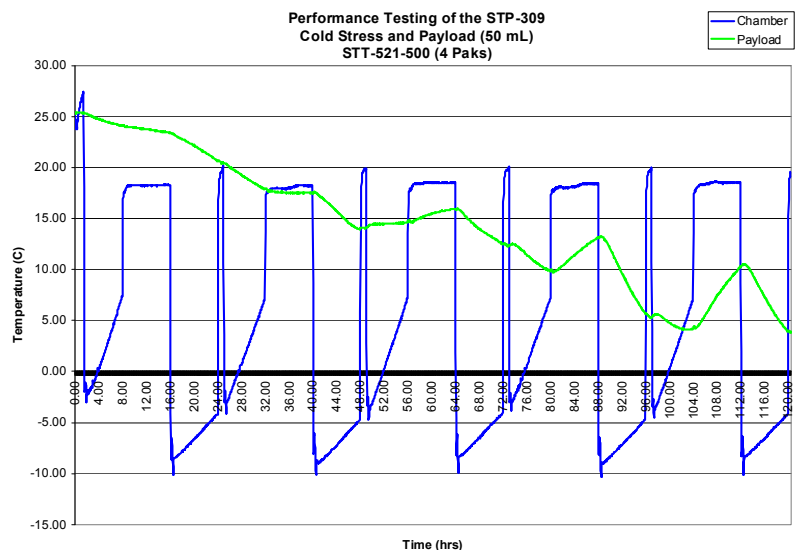
Hot and Cold stress testing was performed using Four (4) each STT-521-500 Paks in an STP-309 Insulated Shipper.

- For the Hot stress test, The CRT Paks and payloads were preconditioned at 20°C for approximately 24 hours.
- For the Cold stress test, the CRT Paks and payloads were preconditioned at 25°C for approximately 24 hours.

The sample payload consisted of 5 X 10mL vials filled with liquid. The payload was enclosed in an STP-710 Secondary Pressure Vessel.

Temperature readings reflect actual payload temperature by use of a thermocouple in contact with the product payload.

**Note:** The test data shown represents performance under the specific temperature profile indicated. Saf-T-Pak recommends the user qualify the packaging system for their individual shipment requirements.





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## Saf-T-Temp™ CRT 10/30 STP-309 - Instructions For Use

### Preconditioning:

**For maximum protection from COLD temperatures the Saf-T-Temp Paks must initially be soft/pliable.**

If hard/rigid (crystalline), place Paks into a warm water bath until they are soft/pliable, but no hotter than the upper limit of your payload.

**For maximum protection from HOT temperatures the Saf-T-Temp Paks must initially be hard/rigid (crystalline).**

If soft/pliable, refrigerate the Paks until hard/rigid (crystalline), but no colder than the lower limit of your payload.

Note: For optimal performance, be sure to precondition the payload at an appropriate temperature for 24 hours.

### Assembly of the Saf-T-Temp CRT 10/30 with the STP-309 shipping system:

1. Place two preconditioned CRT Paks into the bottom of the STP-309 Insulated Chest.



2. Place the assembled Secondary Pressure Vessel(s) with the preconditioned payload on top of the CRT Paks.



3. Place a third and fourth preconditioned CRT Pak on top of the Secondary Pressure Vessel(s). Add cushioning material to fill any voids in the package.



4. Replace the insulated cover and seal as usual.



5. The package is now ready to ship.



### HOT STRESS—Average Temperature Stress 29.8 °C

Number of Paks	Time to 25 °C (hours)	Time to 30 °C (hours)
4	80.0	>136

### COLD STRESS- Average Temperature Stress 5.3 °C

Number of Paks	Time to 15 °C (hours)	Time to 10 °C (hours)
4	45.0	83.0

