savENRG™

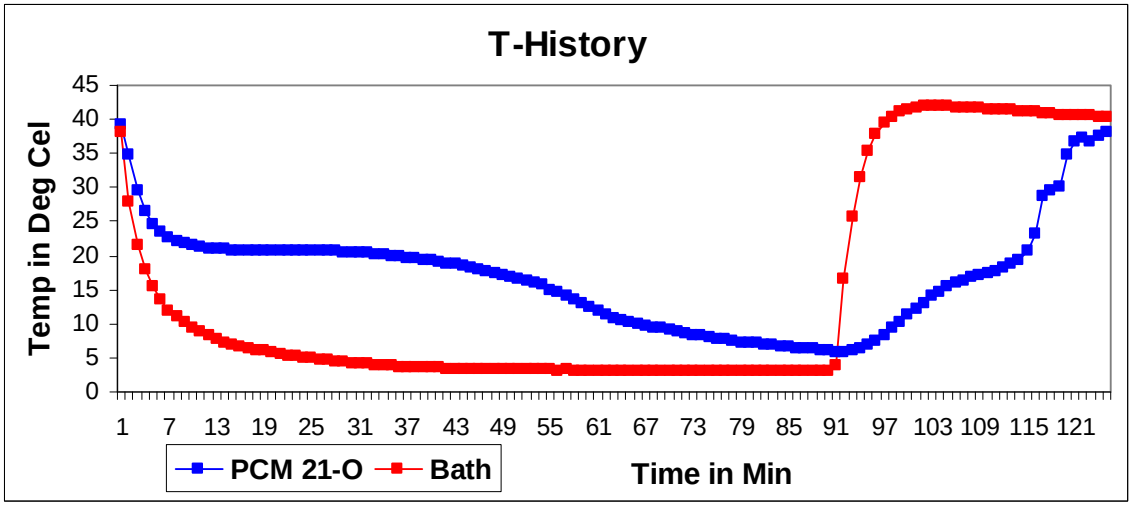
# PCM 21P*

Phase Change Materials (PCM) are hydrated salts / organics that have large amount of heat energy stored in the form of Latent Heat which is absorbed or released when the materials change state from solid to liquid or liquid to solid. The PCM retains its latent heat without any change in physical or chemical properties over thousands of cycles. Various specific temperature PCM's are commercially available in the market (varying between -35$^0$C to 90$^0$C) depending upon the applications.

**Technical Specification:**

Description : Organic materials

Appearance : Light to dark coloured material




A 30g sample is taken in a test tube and placed in a temperature controlled bath. A temperature sensor is placed in the test tube and bath to record the temperatures using a datalogger. The bath is maintained at around 4 $^0$C during the freezing cycle and at around 40 $^0$C during the melting cycle.

| Property | Value | Test Method | Test Conditions (if any) |
|---|---|---|---|
| Freezing Temp. ($^0$C) | 21 | T - History | @ 4 $^0$C Bath |
| Latent Heat (kJ/kg) | 120 | DSC | |
| Base Material | Organic chemicals | - | |
| Congruent Melting | Yes | - | |
| Sub Cooling | No | T-History | |
| Flammability | May be combustible at high temperature | | |
| Thermal Stability (cycles) | Under test | Internal | |
| Max. Operating Temp. ($^0$C) | | ~80 | |

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