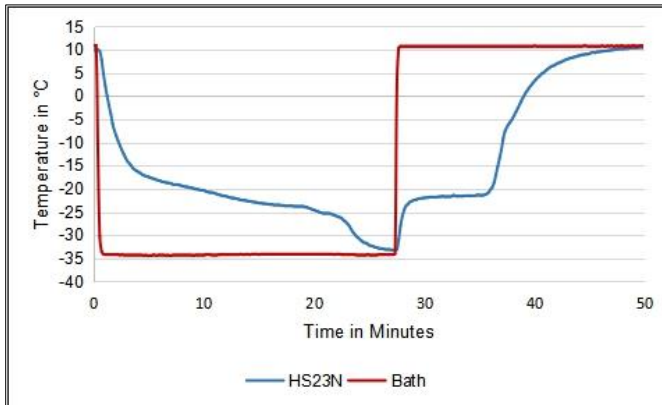


TECHNICAL DATA SHEET OF savE® HS23N

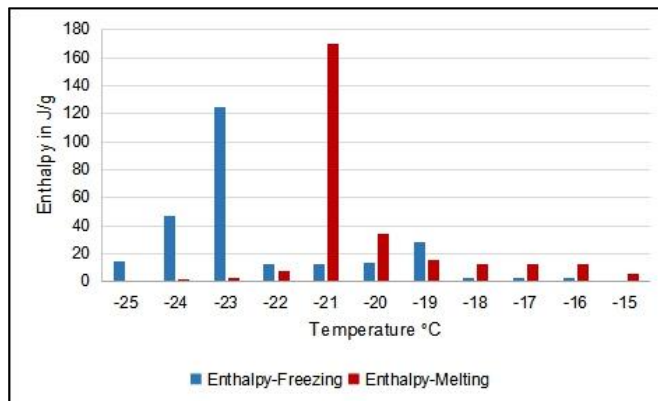
Technical specification:

Product : savE® HS23N
 Description : Inorganic phase change material
 Appearance : Blue liquid @25 °C

Phase transition temperature range and stored thermal energy*



Temperature vs time curve



Enthalpy vs temperature curve

Property	Value**	Test method	Test conditions (if any)
Phase transition temperature			
Melting	-22 °C	PLUSS® T-History	@ -13 °C Liquid bath
Freezing	-23 °C	PLUSS® T-History	@ -33 °C Liquid bath
Nucleation temperature	-23 °C	PLUSS® T-History	@ -33 °C Liquid bath
Latent heat/enthalpy			
Liquid	274 kJ/kg	PLUSS® T-History	@ -25 to -15 °C
Solid	261 kJ/kg	PLUSS® T-History	@ -15 to -25 °C
Density			
Liquid	1155 kg/m ³	ASTM D891-95	@ 30 °C
Solid	1078 kg/m ³	ASTM D891-95	@ -33 °C
Specific heat			
Liquid	3.40 kJ/kgK	PLUSS® T-History	@ 30 °C
Solid	1.58 kJ/kgK	PLUSS® T-History	@ -30 °C
Thermal conductivity			
Liquid	0.702 W/mK	KD2Pro	@ 30 °C
Solid	4.976 W/mK	KD2Pro	@ -21 °C
Number of cycles tested	~2000	PLUSS® Internal	
Maximum operating temperature	90 °C		
Flammability	No		

* Determined by T-history

**Nominal Valu[es. Actual values mentioned in test certificate.

Compatibility data available on request.

PCM is available in bulk, pouches or in containers of choice (Refer to Document **301_PCM Encapsulation**).

Pluss Advanced Technologies Ltd.
 B-205, Tower B – Pioneer Urban Square, Sec 62, Gurugram-122101, Haryana, India
 Telephone: +91 - 124 - 4309490/91/92
 E-mail: info@pluss.co.in | Web: www.pluss.co

PLUSS-TDS-DOC-023 Version no.-R0, 15-Feb-2022

The information given here is meant as a guide to determining suitability of our products for a desired application. It is based on tests carried out by our laboratories and data selected from literature and shall in no event be held to constitute or imply any warranty. The products are intended for use in industrial applications. The users should test the materials before use and satisfy themselves with regard to contents and suitability in the desired application. Our formal specifications define the limits of our commitment. Recommendation herein may not be construed as freedom to infringe/operate under any third party patents. In the event of a proven claim, our liability is limited only to replacement of our material and in no case shall we be liable for special, incidental or consequential damages arising out of usage of our material. This datasheet is subject to change without notice. For detailed safety and handling information regarding these products, please refer to Safety Data Sheet and Bulking handling instruction which is available on request.