

PHYSICAL PROPERTIES SHEET



PHASECHANGE
energy solutions

PRODUCT NAME: BioPCM™ - 23Q M27
MANUFACTURER: Phase Change Energy Solutions
 120 East Pritchard Street
 Asheboro, NC
TELEPHONE: 336-629-3000
FAX: 336-629-3100

For questions regarding this product, first call [1-800-283-7887](tel:1-800-283-7887)
 If it is an emergency and there is no response, please contact the following:
For emergencies in the US and Canada, call CHEMTREC day or night at [800-424-9300](tel:800-424-9300)
For emergencies outside the US and Canada call CHEMTREC day or night at [703-527-3887](tel:703-527-3887)

| COMPONENT | DESCRIPTION | VALUES (ENGLISH) | VALUES (METRIC) |
|-----------|---|--|--|
| Film | multilayer white polyfilm | 14 mil | .3556 mm |
| Pocket | formed white polyfilm pocket | 22.5 ct 1.3"x 1.3" x .25" BioPCM® filled pods per sq. ft. | 22.5 ct 33mm x 33mm x 6mm BioPCM® filled pods per sq. ft. |
| BioPCM® | Proprietary Blend of Emulsifiers, Gelling agents, Fatty Acids, Fatty Alcohols, Fatty Esters, and their derivatives. | .3 lbs phase change materials per sq. ft. | 1.46 kilograms per sq. meter |

| PHYSICAL PROPERTIES | TEST METHOD | VALUES (ENGLISH) | VALUES (METRIC) |
|----------------------|-------------|-------------------------------|-----------------------|
| M-Value | ASTM | 27 BTU per sq. ft. | 290 BTU per sq. meter |
| Melt Point | DSC | 73.4° Fahrenheit | 23° Celsius |
| Specific Heat | DSC | 0.9-1.1 BTU/lb | ~2.1-2.5 kj/kg |
| Latent Heat | DSC | ~92.4 btu/lb | ~215 j/g |
| Thermal Conductivity | DSC | ~0.05-0.07 W/ft/K | ~0.18-0.22 W/m/K |
| Boiling Point | Thermometer | Greater than 478° F | Greater than 248° C |
| Dimensions | Ruler | 17" x 46.625" | 432mm X 1184mm |
| Total Unit Thickness | Micrometer | .25" to .35" | 6mm to 9mm |
| Weight | Scale | .51 lbs per sq. ft. | 2.49 kg per sq. meter |
| Permability | ASTM E96 | 0.09 (grains/hr*ft²*in Hg) | 5.175 ng / N's |

| FIRE TESTING | ASTM E84 | UL 723 | ASTM E800 -0 |
|-------------------|----------|--------|--------------|
| Flame Spread | 140 | 140 | passed |
| Smoke Development | 350 | 350 | |