



**Nansulate®**, patented  
 Insulation  
 Corrosion Prevention  
 Mold Resistance  
 Lead Encapsulation

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### Temperature Gradient Chart

Demonstrates surface temperature differences achieved at various high temperatures  
 Metal substrate

Temp F of hot surface	100-120	170-190	191-210	211-230	231-250
Temp C of hot surface	38-49	77-88	89-99	100-110	111-121
3 coats (7 mils) Surface temperature difference shown	10-18F (5-10C)	20-35F (12-19C)	40-55F (20-27C)	60-75F (30-36C)	78-93 (37-44C)

**NOTE:** Testing is currently being conducted on samples of higher dry mil thicknesses and at higher temperature ranges (250-400F) in order to show the extra benefit achieved with subsequent coats of Nansulate®.

### Oil/Cylinder Gradient

Demonstrates temperature differences achieved between heated oil and outer wall surface.

- 1) Substrate is 2" dia. stainless cylinder with wall thickness of .065 in. and 14 mils DFT (approx. 6 coats) of Nansulate® Translucent High Heat.
- 2) Heated cooking oil to 325 deg F and poured into cylinder, taking temperature readings of oil and outer wall at the same time.
- 3) Following are temperatures at various points of cooling ; first figure is oil temperature, second is outer wall temperature. (all temperatures are in F)

Oil Temp	Outer Wall Temp
250	135
212	120
204	119
190	115
180	109
169	109
165	104
141	97

*Sources for information:*

Temperature Gradient Chart: Figures were averaged from five testing applications. Applications include: Testing beginning May 4, 2005 by Protan S.A. on coated steel panels. Testing beginning May 31, 2005 by Protan S.A. on oil pipeline used on AM3 platform where petroleum is transferred to the continent. Testing done beginning July 4, 2005 by Nansulate Asia on coated metal panel. Testing beginning March 15, 2005 in house by Industrial Nanotech, Inc. on coated metal panels, Testing beginning June 2004 in house by Princeton Polymer Laboratory on coated metal panels.

Oil/Cylinder Gradient: Testing information from Mobeq Industrial Products, Ltd from in house testing.