THERMAL BLANKET (CRYOGENICS)

ACC-MCA

APPLICATIONS

Thermal blankets for low temperature (cryogenic) are designed to maintain the boiling temperature of nitrogen, that is to -195.79 ° C. These blankets can be applied in treatments of deposits, cameras food freezing, facilities cryogenic fluids, etc.

DESCRIPTION

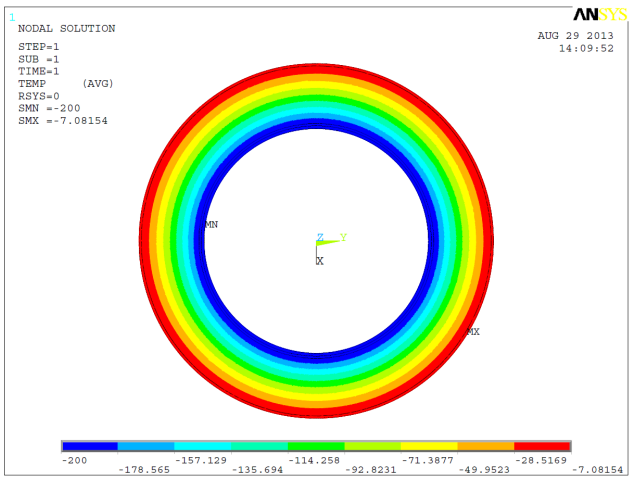
- Blankets manufactured by a special glass wool fabric type MK and an inner filling depending on the application.
- Manufacturing and finishing according to design depending on the application.
- Technical fabrics in internal and external face, fireproof siliconized treatment with one or both surfaces.
- Blanket, with a working temperature of -198°C to 232°C.
- Thermal conductivity depending on the thickness and density, according to the table.

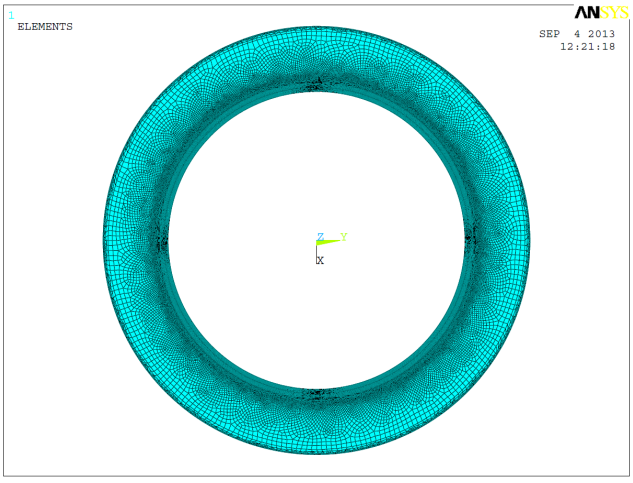
Density (kg/m3)	Thickness (mm)	K (w/K*m)
12	25	0,05
12	50	0,05
12	76	0,05
12	101	0,05
12	127	0,05
12	152	0,05
16	25	0,046
16	50	0,046
16	76	0,046
16	101	0,046
16	127	0,046

Density (kg/m3)	Thickness (mm)	K (w/K*m)
16	152	0,046
32	13	0,035
32	25	0,035
32	50	0,035
32	76	0,035
48	13	0,033
48	25	0,033
48	50	0,033
48	76	0,033
96	13	0,023
96	25	0,023

THERMAL CALCULATION

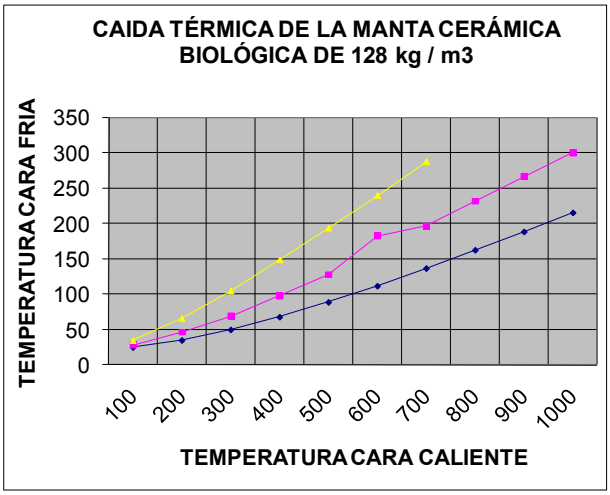
The thermal calculation is performed by FEM (Finite Element Method), where the data of cold starting and blankets made design, temperature drop is obtained in the external face.





THERMAL CURVES

Thermal behaviour at ambient temperature 20ºC and wind speed 0 m/s.



CHEMICAL ANALYSIS (average) (% by weight)	
$Si\ O_2$	61.0 – 67.0
Ca O	27.0 – 33.0
Mg O	2.5 – 6.5
$Al_2\ O_3$	< 1.0
$Fe_2\ O_3$	< 0.6

PHYSICAL FEATURES	
Colour	White blue
Thermal classification	1100 ºC
Melting Point	> 1300 ºC
Fiber diameter	3.2 microns (average)
Specific Heat at 1100 ºC	1074 J / kg K
Tensile strength	> 35 kPa (128 kg / m^3)

THERMAL CONDUCTIVITY			
W / mK	64 kg / m^3	96 kg / m^3	128 kg / m^3
200 ºC average T.	0.07	0.06	0.05
400 ºC average T.	0.10	0.09	0.08
600 ºC average T.	0.18	0.14	0.12
800 ºC average T.	0.27	0.22	0.18

PERMANENT THICKNESS LOSS (24 hours humidity)	
1100 º C	< 4.0 %

NOTE:

Physical features and thermal conductivity are in compliance with ENV 1094-7:1994 standard