Thermal Expansion/Contraction Work Sheet

This work sheet is designed to aid you in determining what expansion and contraction your King StarBoard® part will experience.

CONTRACTION

A = _____ ºF. What is the approximate temperature at the time of fabrication?

B = _____ ºF. What is the lowest temperature you part will experience in the place of services?

Subtract B from A.

This gives you the temperature difference for shrinkage due to cold.

EXPANSION

A = _____ ºF. What is the approximate temperature at the time of fabrication?

B = _____ ºF. What is the highest temperature you part will experience in the place of services?

Subtract B from A.

This gives you the temperature difference for expansion due to heat.

Let's call the difference "D" = _____ ºF.

To calculate the amount you part will expand or contract, multiply the following:

D ºF	x	L or W inches	x	.00006	=	E or C inches
D = temp. difference expansion		**L or W** = Length or Width of part		**.00006** = coefficient of King StarBoard		**E or C** = amount of expansion or contraction

Example: If a King StarBoard® sheet was being cut in a shop at 70º F and the highest temperature the part will experience is 100º F, the Temperatue Difference (D) is 30.
The part is 96 inches, so the expansion is"

30º F	x	96"	x	.00006	=	.173 or approximately 3/16"
(temp difference)		(length of part)		(coefficient)		(expansion)