

Chart 11: Linear thermal expansion, α , against Young's modulus, E

The chart guides in selecting materials when thermal stress is important. The contours show the thermal stress generated, per $^{\circ}\text{C}$ temperature change, in a constrained sample. They define the guide line

$$\alpha E = C \text{ MPa/K} \text{ (constant thermal stress per K)}$$

The value of the constant C increases towards the upper right.

