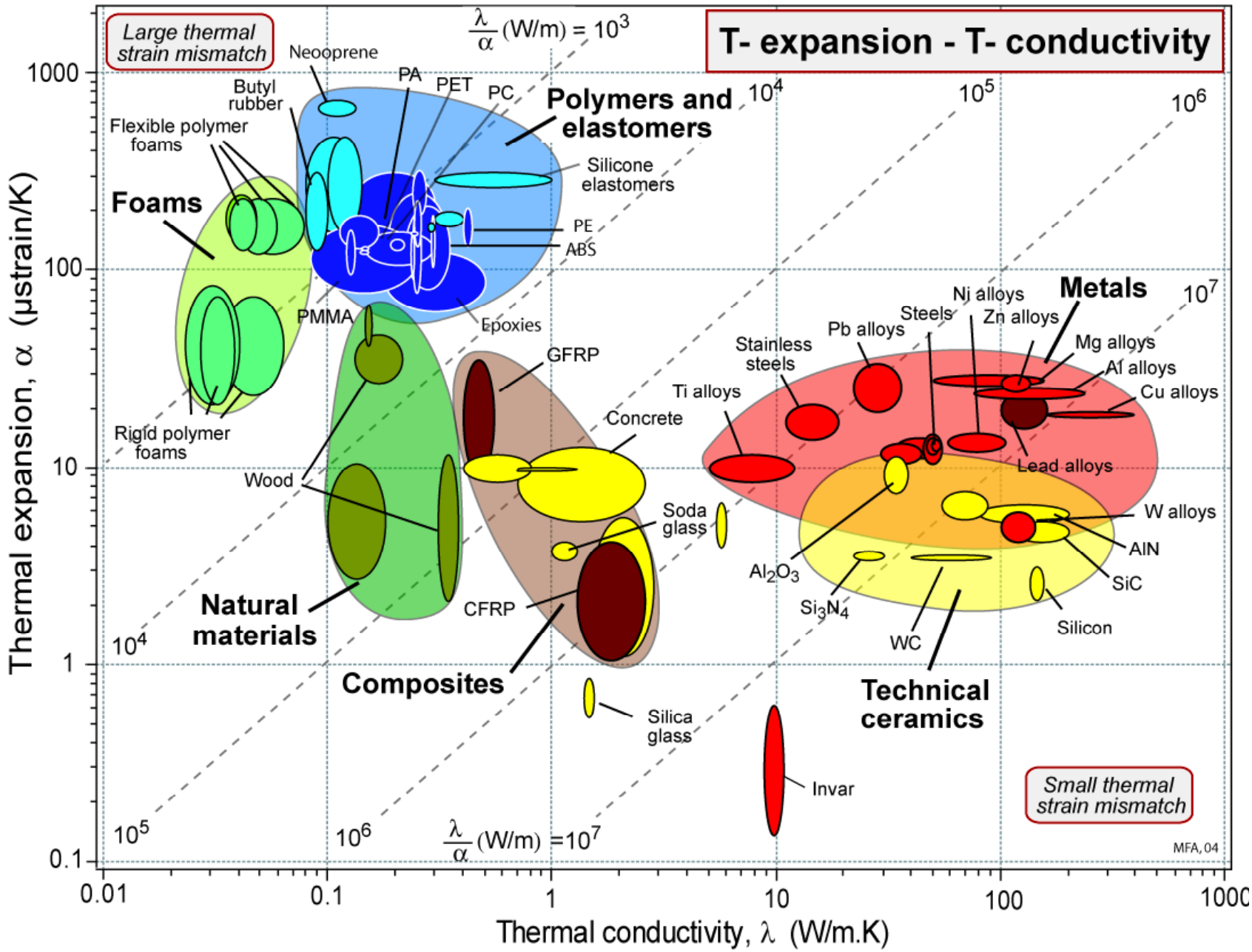
T- expansion - T- conductivity
Large thermal strain mismatch
Small thermal strain mismatch
λ/α (W/m) = 10^3
λ/α (W/m) =10^7
10^4
10^5
10^6
10^7
Polymers and elastomers
Neooprene
Butyl rubber
Flexible polymer foams
PA
PET
PC
Silicone elastomers
PE
ABS
Epoxies
PMMA
Foams
Rigid polymer foams
Wood
Natural materials
GFRP
Concrete
Soda glass
CFRP
Composites
Silica glass
Invar
Metals
Nj alloys
Zn alloys
Steels
Pb alloys
Stainless steels
Ti alloys
Mg alloys
Al alloys
Cu alloys
Lead alloys
W alloys
AlN
SiC
Silicon
Al2O3
Si3N4
WC
Technical ceramics
MFA, 04
Thermal expansion, α (μstrain/K)
Thermal conductivity, λ (W/m.K)
1000
100
10
1
0.1
0.01
0.1
1
10
100
1000