

distribution of gallium results. Since cooling rate during and after solidification affects the size of the cored grains, the rate of diffusion or homogenization depends on the diameter of the cored grains; as diameter decreases, the rate of homogenization increases(3).

pressure effects in the
m system:

hardness were determined
aining 0.37 to 1.26 wt.-%
density decrease with in-
ardness increases because
The author's data are
estigators.

pressure on alpha phase
genized alloy is presented.
ha-delta phase mixtures
om temperature storage is
e observed behaviour of
esented.

on
ta phase region extends
the plutonium-gallium
ion of appropriate quan-
ta phase over a much wider
temperature.

zed plutonium-gallium
mena. During nonequili-
s epsilon and epsilon
a type of segregation,
in gallium content with-
aving a much higher gall-
grain boundary. Using
etermined that the cored
oy range from 0.1 wt.-%
Ga at the centre. Cor-
te anneal in the 400 -
occurs and a uniform

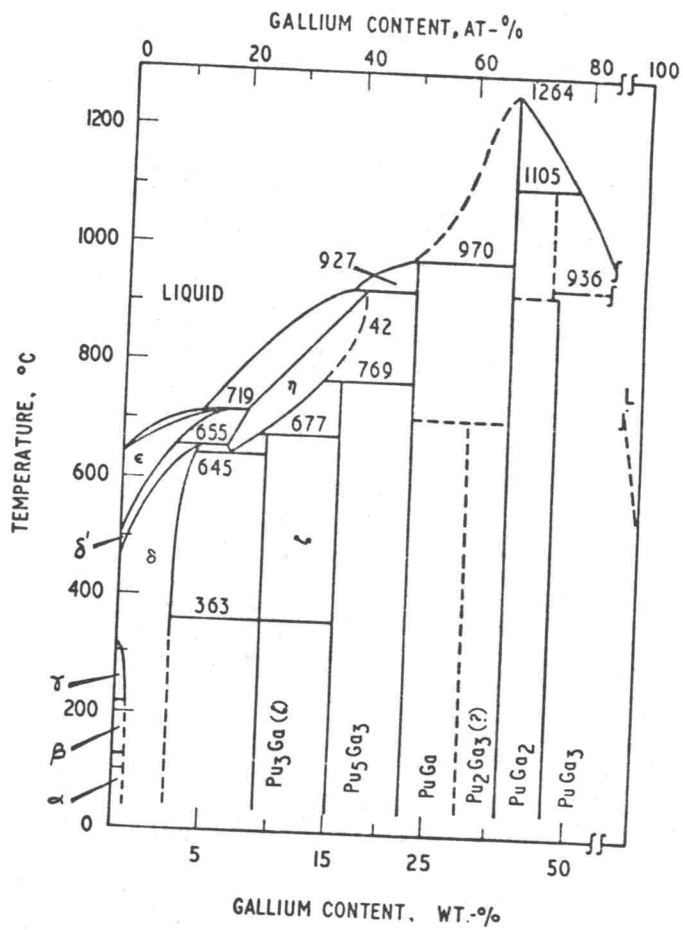


Fig 6-A Pu-Ga Phase Diagram after Ellinger(1).

1.3 The second phenomenological feature concerns metastability with respect to the application of pressure(4). In alloys containing less than 1.2 wt.-% Ga, the stabilized delta phase irreversibly transforms to alpha phase in proportion to the pressure applied. Above 1.2 wt.-% Ga, the formation of alpha