

Ag – Cl (Silver – Chlorine)

Phase diagram

In solid (Ag) there are 10^{-5} at% Cl soluble [Massalski].

Due to considerations published by Gulyaev et al. [68 Gul] these authors calculated a melting point depression of 10^{-3} K at the eutectic point, which occurs at a concentration of about 10^{-3} at% Cl.

AgCl melts at 730 K.

Crystal structure

The only one compound occurring in this system is AgCl. The crystal structure is cubic of NaCl-type with the lattice constant

$$a = 0.55491 \text{ nm} [25 \text{ Bar}].$$

At high pressure a hexagonal modification has been found (HgS-type). The lattice parameters are:

$$a = 0.406 \text{ nm}$$

$$c = 0.702 \text{ nm} \quad [70 \text{ Kab}].$$

References

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- [68 Gul] Gulyaev, B.B., Dvorshkaya, G.F., in: "Phase Diagrams of Metallic Systems", Savitskii, E.M. (ed.), Nauka Publ., Moscow (1968)
- [70 Kab] Kabalkina, S.S., Shcherbakov, M.O., Vereshchagin, L.F.: Dokl. Akad. Nauk SSSR **193** (1970) 1015
- [Massalski] Massalski, T.B. (Editor-in-Chief): "Binary Alloy Phase Diagrams", Second Edition, The Materials Information Society, ASM International, Materials Park, Ohio (1992)