

C-Cl (Carbon-Chlorine)

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The C-Cl phase diagram was unknown in [Massalski2].

Figure 1 shows a partial C-Cl phase diagram between CCl_4 and Cl determined by [1975Aba] by means of thermal analysis. The existence of C_7Cl_5 , C_5Cl_4 , C_7Cl_8 , C_4Cl_5 , and CCl_3 is reported in [2007Vil] outside the composition range shown in Fig. 1.

Table 1 shows C-Cl crystal structure data. In addition to the two forms of CCl_4 given in Table 1, [1975Aba]

observed a metastable fcc form of CCl_4 forming below -27.1°C .

References

- 1975Aba:** M. Abassalti and M. Michaud, Chlorine-Carbon Tetrachloride System. Polymorphism of Tetrachloride, *Rev. Chim. Min.*, 1975, **12**(2), p 134-138, in French
- 2007Vil:** P. Villars and K. Cenzual, *Pearson's Crystal Data CD-ROM*, ASM International, OH, 2007

Table 1 C-Cl crystal structure data

Phase	Composition, at.% Cl	Pearson symbol	Space group	Strukturbericht designation	Prototype
βCCl_4	80	o^{**}
αCCl_4	80	$mC160$	$C12/c1$...	CBr_4
(Cl)	100	$oC8$	$Cmca$	A14	I

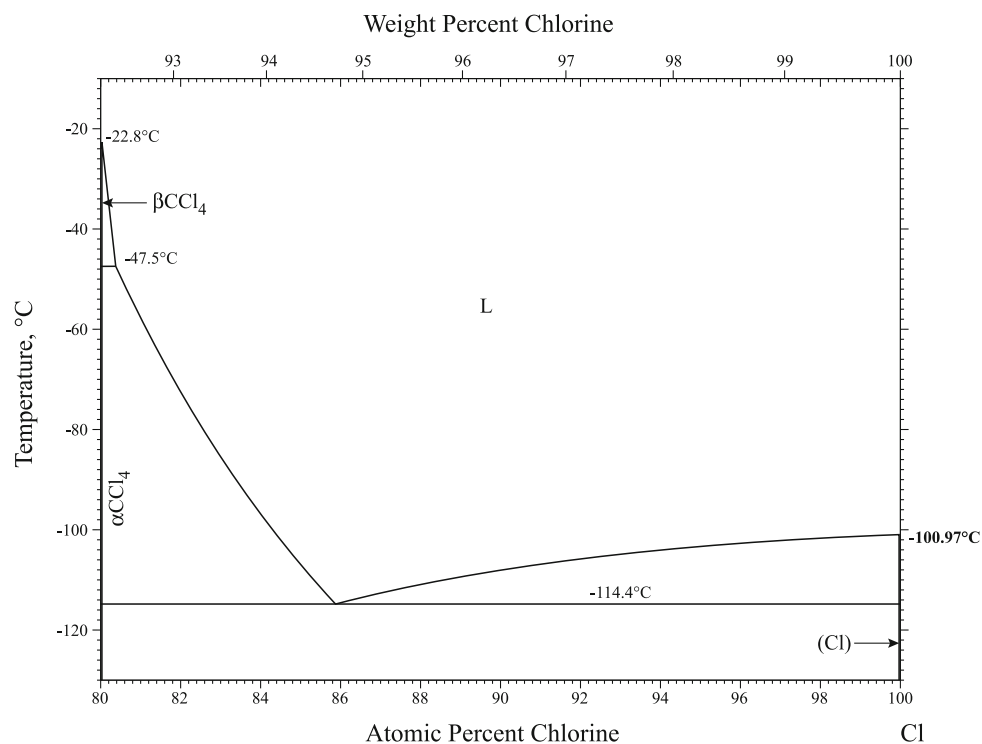


Fig. 1 C-Cl phase diagram