

Chlorine Solutions in Molten Alkali Chlorides

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Electronic absorption spectra of gaseous chlorine and their saturated solutions in molten alkali chlorides were studied in wide ranges of temperature and wavelength. It was found that gaseous chlorine has a wide absorption band between 20 000 and 43 500 cm^{-1} . There is a tendency to both widening of the band and shifting of the absorption maximum to the short-waves region with rising temperature.

The absorption bands of saturated solutions of chlorine in all molten alkali chlorides show a maximum in the neighborhood of 30 000 cm^{-1} . A good correlation was found between the optical density of molten salt- Cl_2 systems and the solubility of chlorine.

Key words: Chlorine; Molten Alkali Chlorides; EAS; Solutions.