

Characteristic Charts of NEOCERAM

Fig. 1 Thermal expansion

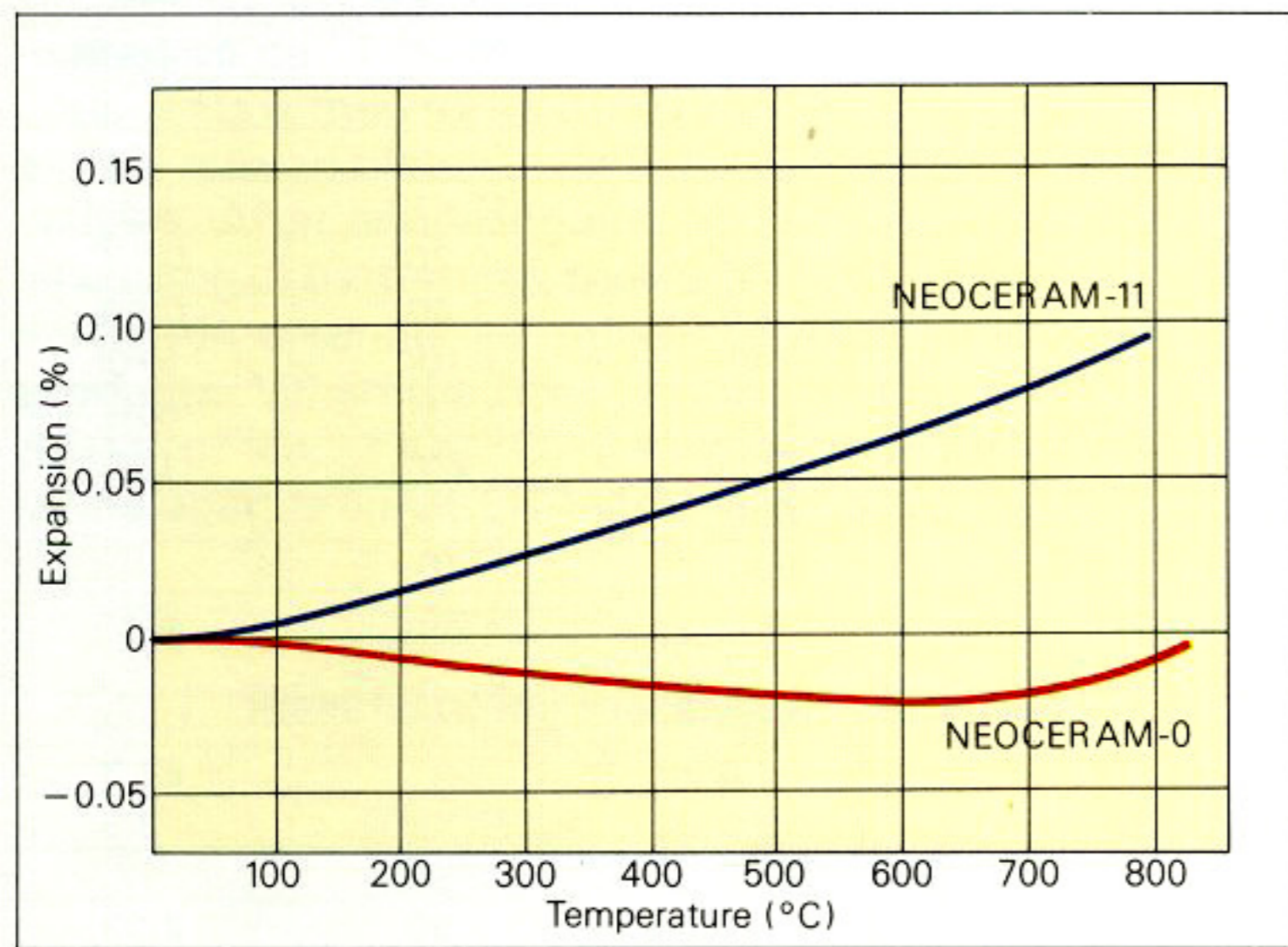


Fig. 3 Specific heat

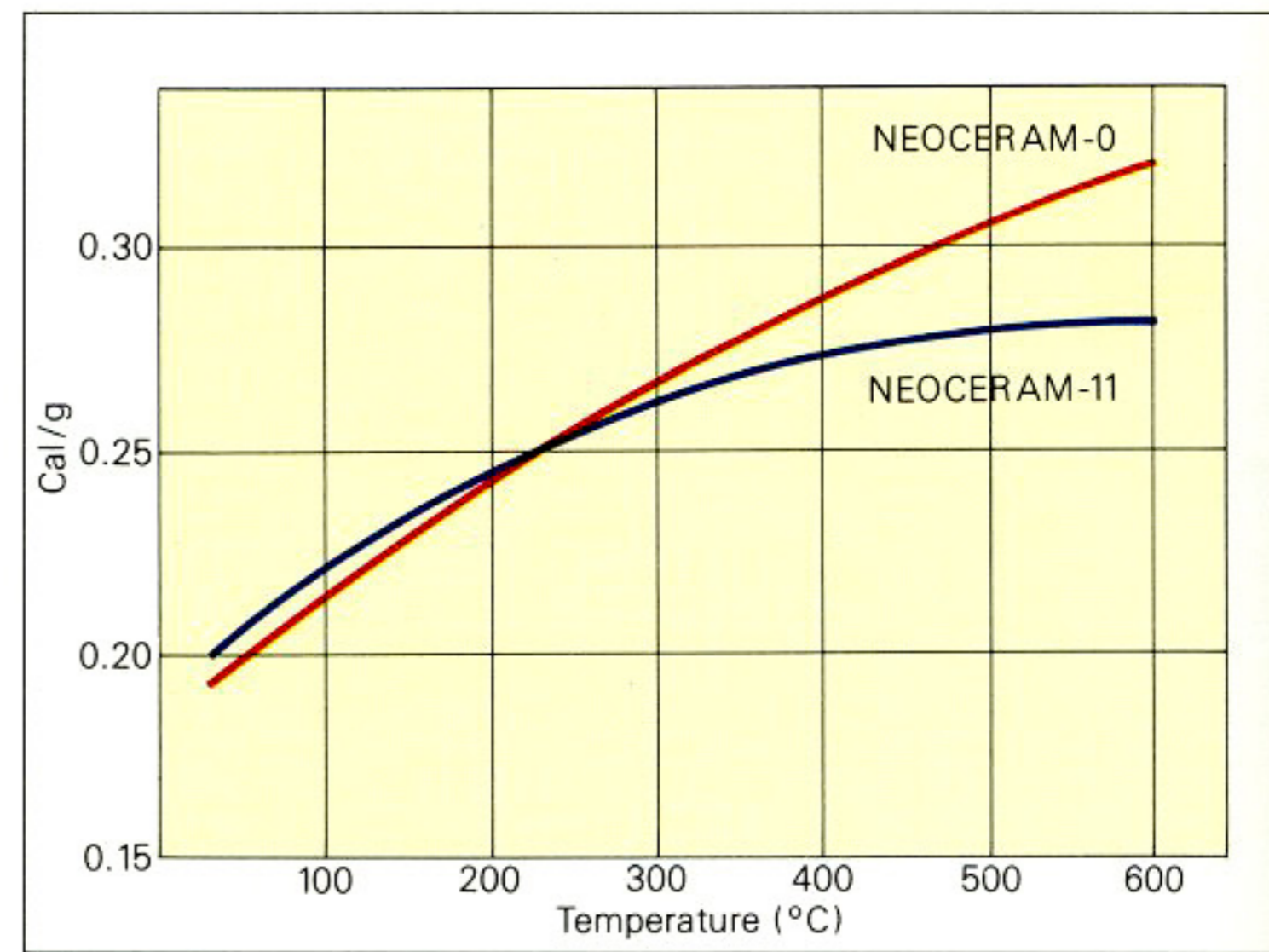


Fig. 2 Thermal conductivity

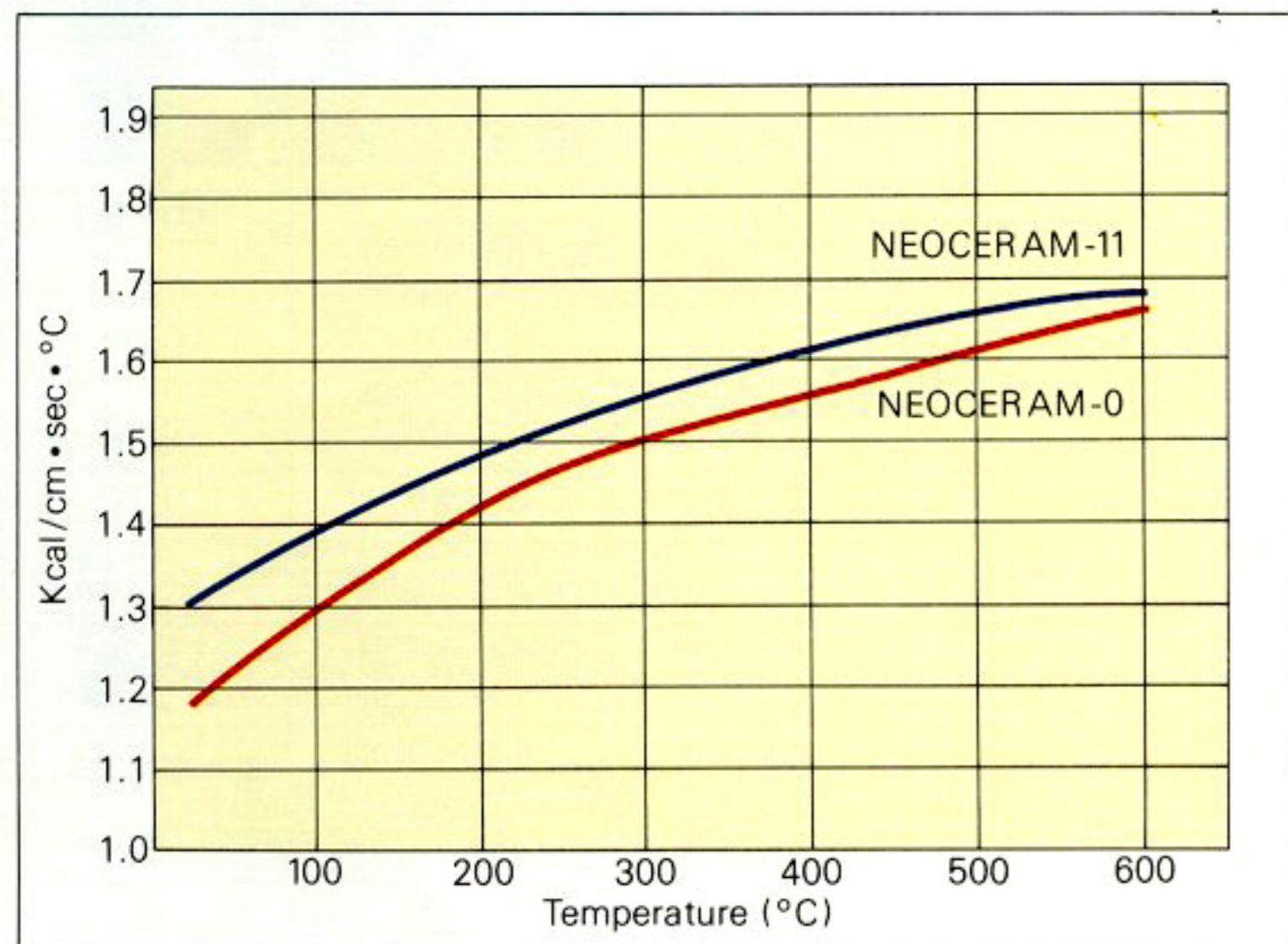
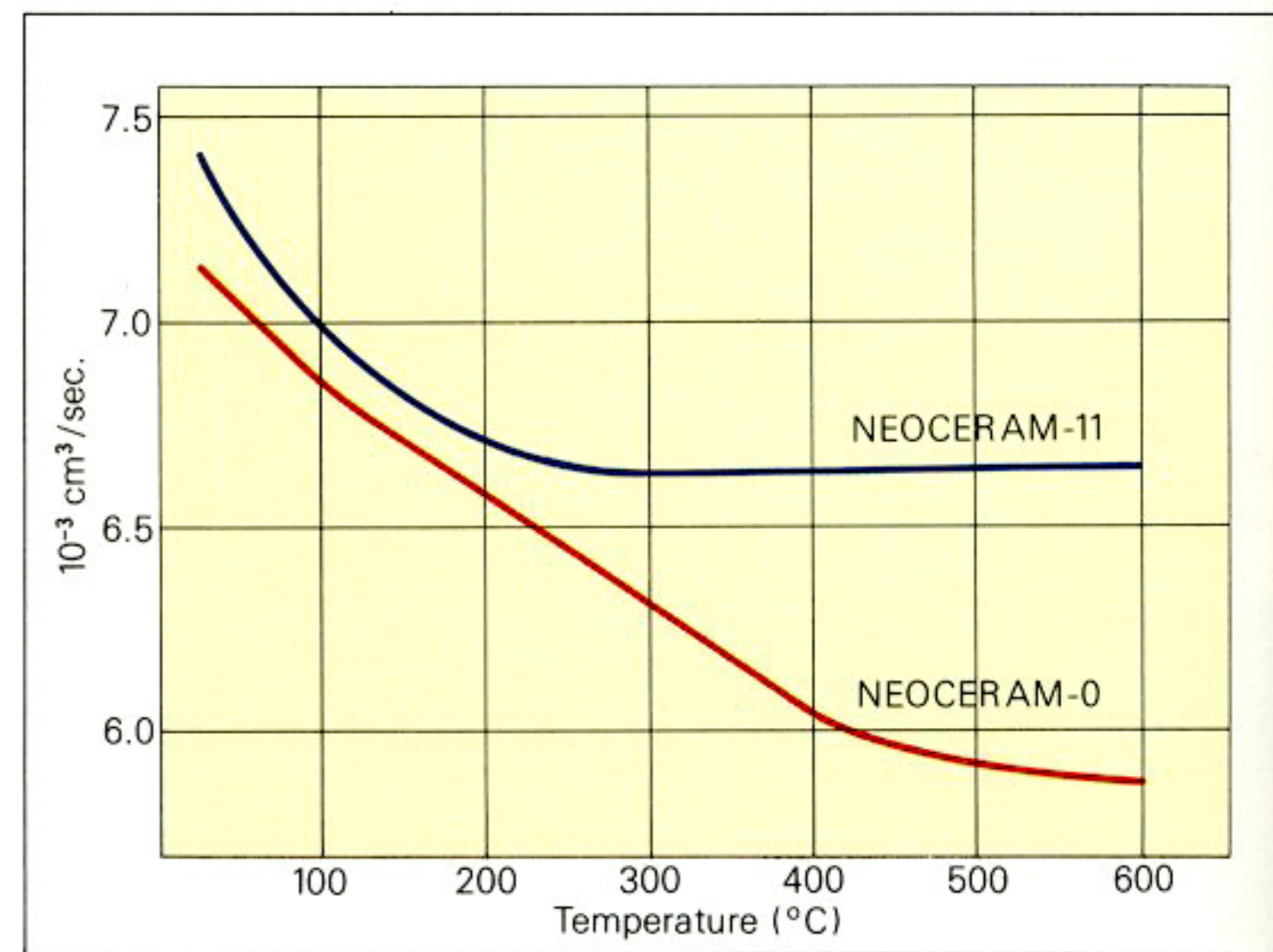


Fig. 4 Thermal diffusivity



NEOCERAM-0 has extremely high thermal shock resistance because its thermal expansion coefficient is virtually zero in the temperature range from room temperature to 800°C (see Fig. 1). Although its maximum service temperature is limited to 740°C for continuous use, NEOCERAM-0 can withstand quenching from 800 to 0°C.

NEOCERAM-0 shows high transmittance for wave lengths covering the visible and infrared region (see Fig. 7), which facilitates the application of NEOCERAM-0 for window panels of heating equipment.

Compared with ordinary heat resistant glass, NEOCERAM-0 has higher hardness, higher bending strength and higher impact strength (see Table on page 3). As seen from Fig. 5, bending strength increases with increasing temperature up to 750°C, which makes this material advantageous for various industrial applications.