

Density, Surface Tension and Viscosity of Liquid SnZn Alloys with Na Addition

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In this work data for liquid SnZn alloys with Na addition are presented. The physicochemical properties, viscosity, density and surface tension, were measured using the discharge crucible method (DC) [1]. The experiments were conducted for Sn15Zn alloys with 0.1, 0.2, 0.5, 1.0, 3.0 and 5.0 % Na (at %). The measurements of properties of Sn15Zn+Na were performed over 548-823K temperature range. The results show that the addition of Na to Sn15Zn causes the decrease of density, surface tension and viscosity compared to eutectic SnZn alloy [2]. The obtained values of surface tension were compared with Butler model and with the Moelwyn-Huges, Sichen-Boygen-Seetharaman, Seetharaman-Sichen, Kozlov-Romanov-Petrov and Kaptay models for viscosity. The received a consistent physicochemical properties database for eutectic SnZn with Na additions.

References

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