

Flash Points and Fire Points of n-Alcohols by Using Cleveland Open-cup Apparatus

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The flash points and the fire points are the best known and most widely used flammability property for the evaluation of the flammability hazard of flammable and combustible liquids. The flash point is a primary property used to determine the fire and explosion hazards of a liquid. The regulations for the safe handling, transportation, and storage of such substances are dependent on this classification, and the flash points are therefore of great important in the chemical industry. The fire point is the temperature of the flammable liquid at which there will be flaming combustion, sustained 5 seconds in response to the pilot flame. In this study, the flash point and fire point were measured to present raw data of the flammable risk assessment for n-alcohols by using Cleveland open-cup apparatus(ASTM D 92). In the case of n-alcohols, the flash points and the fire points of have been found to be identical. The flash points and the fire points of n-propanol, n-butanol, n-pentanol, n-hexanol, n-heptanol and n-octanol were 32°C, 44°C, 53°C, 65°C, 82°C and 92°C, respectively.