

DETAILED KINETIC MECHANISM OF OXIDATION AND COMBUSTION OF ISO-PENTANE AND ISO-HEXANE

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Abstract: A detailed kinetic mechanism of oxidation and combustion of iso-pentane and iso-hexane has been developed and validated. The mechanism is shown to describe satisfactorily both high- and low-temperature (multistage) spontaneous ignition and laminar flame propagation in mixtures of iso-pentane and iso-hexane with air of different composition. The mechanism comprises 127 chemical species and 1581 reversible reactions.

Keywords: iso-pentane; iso-hexane; kinetic mechanisms; spontaneous ignition; multi-stage oxidation; flame propagation

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