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Kinetics of the gas-phase reactions of OH radicals with alkanes and cycloalkanes

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Abstract. The available database concerning rate constants for gas-phase reactions of the hydroxyl (OH) radical with alkanes through early 2003 is presented over the entire temperature range for which measurements have been made (~180-2000 K). Measurements made using relative rate methods are re-evaluated using recent rate data for the reference compound (generally recommendations from this review). In general, whenever more than one study has been carried out over an overlapping temperature range, recommended rate constants or temperaturedependent rate expressions are presented. The recommended 298 K rate constants, temperature-dependent parameters, and temperature ranges over which these recommendations are applicable are listed in Table 1.

■ Final Revised Paper (PDF, 948 KB)
■ Discussion Paper (ACPD)

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