Reaction number	Reaction	Rate coefficient (cm^3 $molecule^{-1}$ s^{-1})
(R1)	$SO_2 + OH + M \rightarrow H_2SO_4 + M$	$ko \cdot 0.6^{\left(1+\left(\log_{10}(fc \cdot M \cdot 1.5\times10^{12})\right)^2\right)^{-1}}$
(R2)	$DMS + OH \rightarrow SO_2$	$9.6 \times 10^{-12} \cdot e^{-234/T}$
(R3)	$DMS + OH \rightarrow 0.75 \cdot SO_2 + 0.5 \cdot HO_2 + 0.029 \cdot SOA_{LV} + 0.114 \cdot SOA_{SV}$	$\frac{(1.7\times10^{-42} \cdot e^{7810/T}[O_2])}{(1+5.5\times10^{-31} e^{7460/T}[O_2])}$
(R4)	$DMS + NO_3 \rightarrow SO_2 + HNO_3$	$1.9 \times 10^{-13} \cdot e^{-520/T}$
(R5)	$monoterpene + OH \rightarrow 0.15 \cdot SOA_{SV}$	$1.2 \times 10^{-11} \cdot e^{-440/T}$
(R6)	$monoterpene + O_3 \rightarrow 0.15 \cdot SOA_{LV}$	$8.05 \times 10^{-16} \cdot e^{-640/T}$
(R7)	$monoterpene + NO_3 \rightarrow 0.15 \cdot SOA_{SV}$	$1.2 \times 10^{-12} \cdot e^{-490/T}$
(R8)	$isoprene + OH \rightarrow 0.05 \cdot SOA_{SV}$	$2.7 \times 10^{-11} \cdot e^{-390/T}$
(R9)	$isoprene + O_3 \rightarrow 0.05 \cdot SOA_{SV}$	$1.03 \times 10^{-14} \cdot e^{-1995/T}$
(R10)	$isoprene + NO_3 \rightarrow 0.05 \cdot SOA_{SV}$	$3.15 \times 10^{-12} \cdot e^{-450/T}$
(R11)	$HO_2, + HO_2 \rightarrow H_2O_2$	$(3.5 \times 10^{-13} \cdot e^{430/T} + 1.7 \times 10^{-33} \cdot e^{1000/T}) \cdot (1 + 1.4 \times 10^{-21} \cdot [H_2O] \cdot e^{2200/T})$
(R12)	$H_2O_2 + OH \rightarrow H_2O_2 + HO_2$	$2.9 \times 10^{-12} \cdot e^{-160/T}$
(R13)	$H_2O_2 + h\nu \rightarrow 2 \cdot OH$	