| Parameter | Description | Units | Minimum | Maximum | Source |
|---|---|---|---|---|---|
| $k_1$ | Labile OM degradation constant | $\mathrm{yr}^{-1}$ | $1e^{-4}$ | 5.0 | (1) |
| $\widetilde{k_2}$ | Order of refractory OM degradation constant ($k_2 = \widetilde{k_2} \cdot k_1$) | – | $1e^{-4}$ | $1e^{-1}$ | (1) |
| $f_1$ | Fraction of labile OM | – | 0.02 | 0.98 | – |
| $K_{\mathrm{NH_4}}$ | Adsorption coefficient | – | 0.8 | 1.7 | (2) |
| $\gamma_{\mathrm{NH_4}}$ | $NH_4$ fraction oxidised | | 0.5 | 1.0 | – |
| $\gamma_{\mathrm{H_2S}}$ | $H_2S$ fraction oxidised | | 0.5 | 1.0 | – |
| $K^{\mathrm{ox}}_{\mathrm{PO_4}}$ | Adsorption coeff. oxic | – | 100.0 | 400.0 | (3) |
| $K^{\mathrm{anox}}_{\mathrm{PO_4}}$ | Adsorption coeff. anoxic | – | 1.3 | 2.0 | (3) |
| $k_{\mathrm{s}}$ | Kinetic P sorption | $\mathrm{yr}^{-1}$ | 0.1 | 100.0 | (4, 5) |
| $k_{\mathrm{m}}$ | Fe-bound P release | $\mathrm{yr}^{-1}$ | 0.015 | 0.02 | (4, 5) |
| $k_{\mathrm{a}}$ | Authigenic P formation | $\mathrm{yr}^{-1}$ | 0.001 | 10.0 | (4, 6) |