

$$\frac{1}{2}d(x_{k+1},\mathcal{X}_{f_{k+1}}^*)^2\leq \frac{(1}{2}$$

$$\begin{aligned} & \text{[RGB]}0,0,60-\alpha\mu_f)^k\mu_f(\frac{L_f}{2}d(x_0,\mathcal{X}_{f_0}^*)^2-\eta^*-\eta_0)\\ +\frac{\alpha}{2\mu_f}\sum_{t=0}^k& (1-\alpha\mu_f)^{k-t}||\varepsilon_t||^2+\frac{\eta^*}{2}\\ & \text{[RGB]}0,0,240+\eta_0\mu_f^2\alpha. \end{aligned}$$