line: 
$$\frac{1}{2}d(x_{k+1}, \mathcal{X}_{f_{k+1}}^*)^2 \le \frac{(1-\alpha)^2}{2}$$

[RGB]0,0,75 $\mu_f$ )<sup>k</sup> $\mu_f \left(\frac{L_f}{2} d(x_0, \mathcal{X}_{f_0}^*)^2 - \eta^* - \eta_0\right) + \frac{\alpha}{2\mu_f} \sum_{t=0}^k (1 - \alpha \mu_f)^{k-t} \|\varepsilon_t\|^2 + \text{norm}_s tr$ :