

FORZE DI ATTRITO

ATTRITO STATICO

$$\vec{F}_{\text{atts}} = \mu_s P_{\perp} \quad (\text{modulo})$$
$$\vec{F}_{\text{atts}} = \mu_s \vec{P}_{\perp} \quad (\text{vettore})$$

$$\vec{F}_{\text{att}} = \mu_{\text{att}} \vec{F}_{P_{\perp}}$$
$$\vec{F}_{P_{\perp}} = \vec{P}_{\perp}$$

ATTRITO DINAMICO

$$\vec{F}_{\text{attd}} = \mu_d P_{\perp}$$
$$\vec{F}_{\text{attd}} = \mu_d \vec{P}_{\perp}$$

ES

$$m = 63,7 \text{ g} = 0,0637 \text{ kg.}$$

$$P_{\perp} = mg = 0,0637 \text{ kg} \times 9,81 \frac{\text{m}}{\text{s}^2} = 0,624897 \text{ N} = 0,625 \text{ N}$$

$$F_{\text{el}} = 0,2 \text{ N} = \vec{F}_{\text{attd}}$$

$$\vec{F}_{\text{attd}} = \mu_d P_{\perp} \quad \mu_d = \frac{\vec{F}_{\text{attd}}}{P_{\perp}} = \frac{0,2 \text{ N}}{0,63 \text{ N}} = 0,32$$

$$\vec{F}_{\text{atts}} = 0,3 \text{ N}$$

$$\mu_s = \frac{0,3 \text{ N}}{0,63 \text{ N}} = 0,48$$