

# Friction

Friction is the force that opposes one object sliding over another. Various factors effect the friction between two surfaces including:

- the type of materials in contact
- the amount of pressure being applied that forces them together
- the texture of the surfaces in contact
- the area of the surfaces in contact
- whether lubricated or dry.

## Coefficient of Friction

The amount of resistance to sliding of one object over another is called the coefficient of friction. A high resistance to sliding results in a high coefficient of friction.

Friction force may be expressed as:

$$F_f = \mu N$$

where

$F_f$  = friction force (N, lb)

$\mu$  = static ( $\mu_s$ ) or kinetic ( $\mu_k$ ) frictional coefficient.

$N$  = normal force