## **FRICTION**

## Friction force is of two types.

- (a) Kinetic
- (b) Static

## **KINETIC FRICTION**: $f_k = \mu_k N$

The proportionality constant  $\mu_k$  is called the coefficient of kinetic friction and its value depends on the nature of the two surfaces in contact.

## **STATIC FRICTION:**

It exists between the two surfaces when there is tendency of relative motion but no relative motion along the two contact surfaces.

This means static friction is a variable and self adjusting force. However it has a maximum value called limiting friction.

$$\begin{array}{l} f_{max} = \mu_s N \\ 0 \, \leq \, f_s \, \leq \, f_{smax} \end{array}$$



