

# Friction

## Laws

★ The frictional force opposes the relative motion of two surfaces.

★ The frictional force is parallel to the surfaces in contact.

★ The frictional force is directly proportional to the normal reaction.

★ The frictional force is independent of the area of contact.

★ The frictional force depends upon

the nature of the two surfaces in contact  
their state of roughness.

★ The kinetic friction is independent of the relative velocities of the surfaces

## Origin

when two objects are kept in contact

there forms an interlock between

irregular surfaces

to break the interlock

Extra force

## Types

Static Friction

Kinetic Friction

Sliding Friction

Rolling Friction