

FRICTION

Friction :

It is that force which opposes the relative motion between the two surfaces that are in contact with each other.

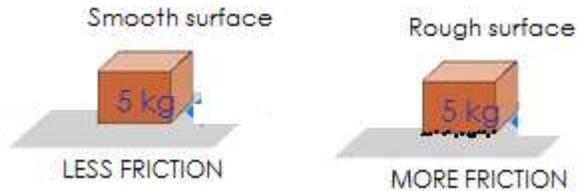
This is the resisting force between the two bodies in contact which prevents either body to move smoothly and continuously.

Properties:

- Always opposes relative motion - i.e., slows down
- Produces heat
- Causes wear and tear

Factors which affect the force of friction:

- Smoothness of surface :



- Solid liquid and gas :



- Weight of the object :



- Area of surface of contact:



Type of friction

Figure

Static friction (No Motion) (Very high)	
Sliding friction (Sliding Motion) (Less)	
Rolling friction (Rolling Motion) (very less)	

Advantages of friction

1. Shoes are treaded to increase friction to enhance grip
2. Fixing a nail on the wall required friction
3. Friction between our feet and ground is required to walk.

Disadvantage of friction

1. Soles of shoes wear down.
2. Heating of machinery
3. Tyres of cars and buses wear out

Ways to increase friction:

- Soles of shoes and tyres are corrugated and rough
- Brake pads are rough
- Wrestlers rub their hands with soil

Methods of reducing friction:

- Using lubricants
- Using Ball bearings
- Polishing the surfaces
- Using wheels and rollers
- By streamlining
- By sprinkling soft, slippery fine powder on the surfaces