1. **Friction and Static Particles**

If there is no motion, the maximum frictional force, Fmax, has not yet been reached.

When Fmax = R, the body is on the point of moving. This is called *limiting equilibrium*.

In Statics, the force of friction, F, is such that , and the direction of the friction force is **opposite** to the direction in which the body would move if the friction force were absent.

**Example**

A 10kg truck lies on a horizontal rough floor. The coefficient of friction between the trunk and the floor is .

Calculate the magnitude of the force, P, which is necessary to pull the trunk horizontally if P is applied:

a) horizontally

b) at 30O above the horizontal