

Oct. 1

FACTORS THAT AFFECT VISCOSITY

1) Temperature

As you increase temperature, you decrease a fluid's viscosity. As you decrease temperature, you increase a fluid's viscosity. (It is opposite for gasses)

Ex) Trying to get through the mall when everyone is moving slow (Cold) parcels or moving fast (Hot).

2) Concentration

-The amount of a substance dissolved in a specific volume.

-Increasing the concentration (Bulkiness), increases the viscosity.

Ex) Trying to get through the mall when everyone is carrying parcels.

3) Attractive Forces

If the attractive forces are strong, it is difficult for the particles to pull away thereby the fluid flows slowly and is more viscous.

ex) Moving through a crowded mall where everyone is wearing velcro sneakers. Your sneakers will stick to someone else's velcro.

4) Particle Size

The smaller the particle size, the faster the fluid flows and is less viscous.

Ex) Moving through a crowded mall either in a small group or a large group

VISCOSITY& *FRICTION*?

- Friction resists movement.
- The greater the friction, the greater the viscosity.
- The particles are holding on tightly to each other.

Viscosity changes with temperature

-The viscosity of a liquid decreases when it is heated and increases when it is cool.

Journal

- 1) Explain the above effect using the particle theory
- 2) Apply: Asphalt is the black, stick material that binds gravel in the pavement that covers streets and highways. Explain why paving is almost always done during the summer months.

Important

Journal Response

How particle Theory of matter relates to Viscosity .

Increasing temperature, will increase energy of the particles which causes the particles to move faster. As they move quickly they bump into each other more quickly and interact for a shorter period of time (shorter interactions) reducing internal friction or stress and therefore decreasing viscosity.