

Surface Tension

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Abstract:-

Today's article is about surface tension of a liquid. In 1981, Agnes Pokels published her work on surface tension with the help of sir Raleigh on Nature journal.

By definition, liquid surface in fact always behave like a stretched membrane and tends to contract to the smallest possible area. This property of a liquid surface is known as surface tension. The physical property of the top layer that is the surface or the interface of a liquid differs considerably from that of the bulk of the liquid. Another order Razer blade made of steel which is about eight times heavier than water usually sinks in water. However when it is placed in small piece of tissue paper and floats on water the dish people will soon become white in sync living the needle or rageblade floating on a slightly depressed water surface. Some insects can walk on the water surface producing a depression on it without

waiting the legs. It is all due to the property of surface tension.

Because of this property the drops of for rain assumes a nearest medical shop while falling through air and a small quantity of Mercury gathers up into globules instead of prosperity into thin film on a glass surface. For given volume of Sphere has the smallest surface therefore the drops become spherical except for slight flattening due to gravity. A drop of liquid not influenced by gravity will take and exactly spherical shape. This can be shown by dropping some olive oil into a mixture of water and alcohol which has the same density as oil. The oil gathers into a sphere.

Short edges of Glass rods and tube around it by hitting them until they become soft for surface tension then pulls the edges into a circular shape. Since a Liquid of lower surface tension spreads more readily soap is added to spraying mixtures. Soap solution has a surface tension smaller than that of pure water. Thus providing quality of paint depends on its surface tension the surface tension of water prevents it passing through the ports in umbrella or tent fabric. Touching the inside of an umbrella or a tent which is water

outside will break the surface of the water and make it flow in. Tiny bits of camphor scraped into addition of clean water that dart about in all direction. Camphor dissolves rapidly at a short corner and reduces surface tension of water more at that point. The higher tension at the opposite side pulls it away.

Molecular theory of surface tension:-

Molecular forces are of electrical origin and short range. They act up to a few molecular dimensions and practically vanish beyond that. In gases the distance between the molecules are about ten fold those in liquid and solid. This explains why molecular forces are negligible in gases. The short range nature of the molecular forces is also evident from the fact that the density or elastic properties of liquids and solids do not depend upon the size of the piece.

Reference:-

Electroacoustic- AB Gupta
Quora

Image:- Live science