

States of Matter

Chpt 13 rev 1

1. What force must be applied to a 2.4 cm small piston to lift a 1500 kg mass on a 12.6 cm piston?
2. How much pressure is applied to you if you are 12 m under water?
3. How much pressure do you (88 kg) apply to the ground if your feet are 0.044 m²?
4. Your density is 960 kg/m³ and you're 84 kg. a) What is your volume?...b) What is your apparent weight when you're in water?...c) What is your apparent weight in air?
5. What is the buoyancy force applied to a 2.5 kg block of wood that floats?
6. How much of a load can a 24 m diameter hot air balloon lift if the balloon skin and basket have a mass of 955 kg and the hot air has a density of 0.655 kg/m³?
7. What pressure is applied top a submarine that is 2500 m below the water?
8. What is the final temperature of 350 g of water at 100° C added to 125 g of ice at 0° C