

The Importance of Moisture / Humidity Control



Ecomerchant Fact Sheet No2

Importance of Humidity Control in the home

Moisture in house air can be a problem when there is either too little or too much. Air that is too dry can cause timber to shrink causing joints to open. Air that is too damp can cause timber to swell causing joints to crack, v-joint sealers to crack/blister, paint to blister/peel, stiff operation of windows and doors, condensation, timber to bow or twist, glass to crack and mould growth.

Relative Humidity Relative humidity is a percentage. It tells you how much moisture is in the air relative to the maximum amount the air can hold at that temperature. For instance, when air at a given temperature contains all the water vapour it can hold at that temperature, the relative humidity is 100 per cent. If the humidity is higher than 100 per cent, moisture will begin to condense from the air. If the air contains only half the water it can hold at that temperature, the relative humidity is 50 per cent. Warm air can hold more moisture than cool air therefore the colder the temperature the higher the relative humidity. The relative humidity of air will change as the temperature changes, even though the actual amount of moisture in air does not. For example, as air cools, the relative humidity rises.

The Right Moisture Levels Generally, the 'right' moisture level - the relative humidity - in your house is less than 50-55 per cent. At less than 50 per cent relative humidity it is unlikely that mould will grow indoors. There are cases when 50 per cent relative humidity is too high. For instance, if there is condensation on your windows in cold weather, it's a good idea to lower your relative humidity to as low as 30 per cent by increasing your inside temperature and ventilation. In regions where there are months of cool, damp weather or hot, muggy weather, ventilation just adds more moisture to indoor air. If excessive moisture is a problem then a dehumidifier is an effective way of dealing with this. Sometimes, reducing relative humidity won't solve moisture problems. Defects in insulation or the air barrier in walls and ceilings can cause cold spots in your house. They show up as areas where there is always condensation, even if relative humidity is 50 per cent or less. A dehumidifier won't solve this problem; you will need help from a qualified builder or insulation specialist.

What Causes Moisture in Air? Moisture can come into your home from many places:- Outside sources include the soil around your house, surface water drainage and damp outdoor air. Breathing and perspiration by you, your family and your pets are a major source of indoor moisture. Showering, bathing, drying clothes indoors, venting clothes dryers indoors, washing dishes and floors. Most houses have more than one source of moisture. Moisture can cause problems once in a while, or all the time. A little prevention can keep excess moisture out of your home's air and prevent both occasional and continual problems.

To check the moisture level - relative humidity - in your house, you can use a 'hygrometer'. A hygrometer is an inexpensive, easy-to-use instrument, sometimes called a humidity sensor or relative humidity indicator. There are mechanical and electronic hygrometers. Electronic hygrometers cost from around £20 to £60. Responsibility for problems in timber products resulting from humidity extremes during occupancy rests with the homeowner