



## **RECORD KEEPING / TECHNICAL ASPECTS**

### **TIMBER SUBFLOORS**

We strongly recommend you keep a record of your moisture and humidity readings prior to installation to accurately determine acclimatisation. These measurements will be definitely required by the manufacturer or supplier if there are any future problems. Create a starting position by taking at least 30 moisture readings of sub flooring and other wood materials such as door frames , lower walls , backs of furniture etc. average the readings which should be within a narrow range around **2-3%**, one or two random readings which are significantly higher do not necessarily indicate a problem, however wider spreads require investigation and will indicate that the job site equilibrium has not been established. If the moisture content of the subfloor is **12%** or less this is considered a good dry reading .

Average a similar number of readings from the flooring and acclimatise the flooring to within **2-3%** of the environmental readings.

### **CONCRETE SLABS AND SCREEDS**

Moisture in concrete slabs and screeds cannot be measured in direct relation to timber . BS 8021 suggests that the slab should be a maximum of **75% relative humidity or 5% moisture content** this is calculated using a humidity box . However we suggest that reading of **35-40% relative humidity or 2-3% moisture content** is ideal . This may be difficult to obtain in practice and it is often more practical to apply a surface dpm either polythene (where 18mm ply is used) or paint on type (where the hardwood flooring is directly bonded to the subfloor , make sure the two are compatible).

Concrete slabs can take notoriously long periods to dry and we suggest you allow approximately 1 day per millimetre of slab depth. ( 1 month per inch).

### **FLOOR LEVELS**

Subfloor levels should be accurate to about 3mm over a length of 3 metres. Avoid high and low spots and clean the subfloor.

### **NORMAL LIVING CONDITIONS IN USE**

BS 8201 gives an indication of moisture contents to suit different situations

<b>UNHEATED</b>	<b>15% - 19%</b>
<b>INTERMITTENT HEATING</b>	<b>10% - 14%</b>
<b>CONTINUOUS HEATING</b>	<b>9% - 11%</b>
<b>UNDER FLOOR HEATING</b>	<b>6% - 8%</b>
<b>AVERAGE TEMPERATURE</b>	<b>15C - 25CELCIUS</b>
<b>AVERAGE RELATIVE HUMIDITY</b>	<b>35% - 55%</b>



If average conditions remain within these limits , short term variations should not affect the stability of the floor.

As a guide a 1% change of moisture content in your hardwood floor can produce a 2mm expansion per linear metre across the grain . dependant on wood species and the floor being fully nailed.

## EQUILIBRIUM MOISTURE CONTENT (EMC )

By taking the normal relative humidity reading and temperature in your room you can work out, from the table below, the expected moisture content of your hardwood flooring in service and allow for any expansion or contraction . The hardwood flooring you are about to install should be within 2-3% of these figures.

	15 %	20 %	25 %	30 %	35 %	40 %	45 %	50 %	55 %	60 %	65 %	70 %	75 %	80 %
<b>0c</b>	3.7	4.6	5.5	6.3	7.1	7.9	8.7	9.5	10.4	11.3	12.4	13.5	14.9	16.5
<b>5c</b>	3.7	4.6	5.5	6.3	7.1	7.9	8.7	9.5	10.4	11.3	12.4	13.5	14.9	16.5
<b>10c</b>	3.6	4.6	5.5	6.3	7.1	7.9	8.7	9.5	10.3	11.2	12.3	13.4	14.8	16.4
<b>15c</b>	3.6	4.6	5.4	6.3	7	7.8	8.6	9.4	10.2	11.1	12.1	13.3	14.6	16.2
<b>20c</b>	3.6	4.5	5.4	6.2	7	7.7	8.5	9.3	10.1	11	12	13.1	14.5	16
<b>25c</b>	3.5	4.4	5.3	6.1	6.9	7.6	8.4	9.1	9.9	10.8	11.8	12.9	14.2	15.8
<b>30c</b>	3.4	4.3	5.2	6	6.7	7.5	8.2	9	9.8	10.6	11.6	12.7	14	15.5

<b>key</b>	
<b>Degrees centigrade</b>	
<b>Relative Humidity</b>	
<b>Comfort zone</b>	
<b>Moisture content %</b>	

Note : Keep a record of all your readings for later reference and warranty enquires.

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