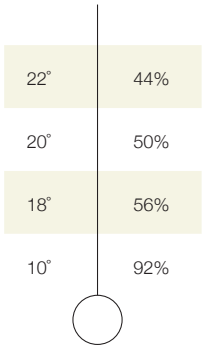
Acclimatising board ready for processing

Please note these important tables (especially in winter) and print them off to help your production team.

Difference of temperature between the pallet and the printing shop	Time for adjustment in the printing shop before unpacking in hours		
5°C	10	11	12
10°C	20	22	24
15°C	30	34	35
20°C	40	46	50
Volume of the pallet in m^3	0,7	1,0	1,4



Definition of terms

- Climate is the environmental condition described by temperature and humidity
- Humidity is the content of water vapour in the air
- Absolute humidity is the mass of water vapour in $1m^3$ of saturated air at a certain temperature
- Maximum humidity is the amount of water vapour in $1m^2$ of saturated air at a certain temperature
- Relative humidity is the percentage of absolute and maximum humidity at a certain temperature.

General facts

- Remove the packing film from around board and pallet only after climate adjustment, immediately before printing (see chart above)
- Warm air is able to absorb more moisture than cold air, this means that at the same relative humidity in cold air there is less water vapour than in warm air.

e.g. $1m^3$ air is containing at 100% saturation ca.	A relative humidity of 50% at 20° C at the same moisture content is equivalent to:
4g water at 0°C	92% at 10°C
9g water at 10°C	56% at 18°C
17g water at 20°C	44% at 22° C

This shows the influence of temperature on relative humidity

Interaction Climate Board

- The absolute humidity is the mass of water contained in the mass of board. This is expressed as a percentage of the mass of board. This is an important figure for producing board with an equal humid figure, which is sometimes neglected during printing and processing though it is very important e.g. for a perfect creasing
- Board is always trying to get into equilibrium with the surrounding air. The equilibrium humidity is the relation between the surrounding air of a pile of board and the air between the single sheets
- If the equilibrium humidity is equivalent to the relative humidity of the surrounding air no humidity will be given off or absorbed by the board
- The relative humidity measured in the pile will show at which relative humidity of the surrounding air the board will be in equilibrium.

NOTICE: Different raw materials (pulp, mechanical pulp, waste paper) have different absolute humidities at the same relative humidity e.g.at 23°C/50%r.h.

Mechanical pulp	9.5%abs
Pulp	6.5%abs

Call 0118 9425505 | www.varsitypackaging.co.uk

Bourne House, Bourne Close, Calcot , Reading, Berkshire, RG31 7BS **F:** 0118 9420715 | **E:** sales@varsitypackaging.co.uk