

Leather-moisture-meter

LM 5



- ◇ You have to reduce machine down-time?
- ◇ You have problems of flatness because of corrugation?
- ◇ You have fabrication problems due to extension and contraction?
- ◇ You have problems with colour registration or colour saturation?
- ◇ Moisture fluctuation arises during production process?
- ◇ It is vital to prove your delivery quality in the field service?

- ☑ Optimise maintenance time by recognizing possible wet streaks in due time!
- ☑ You should immediately react if the problem of moisture fluctuation arises!
- ☑ Check your products before delivery!
- ☑ Take care that your documentation of the production process is accurate!
- ☑ Optimise your drying costs!
- ☑ Use a non-destructive measuring method!



Moisture that is either too high or too low increases your costs!

- × Ideal to find wet streaks, easy to handle
- × Small, handy, accurate, in-situ application possible wherever needed
- × Measuring process only needs a few seconds



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General about material moisture:



In the field of moisture measuring there are two kinds of moisture:
Relative equilibrium moisture content and absolute moisture of material.



The relative equilibrium moisture content of a material indicates the relative moisture of ambient air counterbalancing the material. In this condition the material does not absorb or release any moisture.



The absolute moisture of material indicates the percentage water content of a material referred to the total weight (paper, grain, ...) and with some materials (wood) referred to the dry mass.



Almost all materials in our surroundings are hygroscopic. This means that they soak with moisture from the surroundings or set moisture free.

Everything depends on the content of moisture!



In case grain becomes mouldy or farmers dry wheat too long, they have to sell it at a lower price. The less moisture grain contains the lighter it becomes.



If, for example, two pieces of the same kind of material (e.g. wood) containing different levels of moisture are glued together, the pieces can break apart due to loss of moisture and shrinkage of one piece resulting from that loss. Who does not know those beautiful but shaky wooden floors as a result of loss of moisture?



Another example: Two pieces of leather, one containing much moisture and the other a moisture value adapted to the air, are sewed together. The effect is the same as the one above. The moist piece of leather releases moisture into the air while shrinking at the same time. The result you get is a wavy seam.



If grain or chips of wood are stored in a much too moist place they become mouldy, thus resulting in a considerable degradation of quality. There can also be problems in further processing or even a standstill of machines.



You buy water at a high product price, for example in coffee, paper etc. Or take biomass fuels where additionally the utilization ratio quite soon decreases by half with increasing water content.



Iron in reinforced concrete bridges rusts and Rembrandt's paintings in museums fade or get cracks.

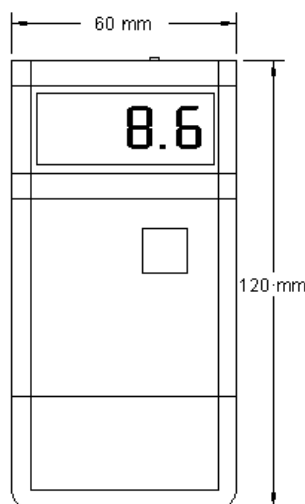
In order to avoid these costly mistakes, moisture of materials in manufacturing and treatment processes must be checked in order to give you the chance to take suitable measures in time.

A wide range of other instruments and external sensors can

be found at www.scigiene.com

Application description for measuring moisture in leather (device LM5):

After determining the correct switch position according to EN20287-conforming methods, the **leather moisture measuring device LM5** is put on a pile of leather skins that is at least 10 mm thick. Press firmly onto it. The moisture content of leather can now be seen on the display.



Technical data:

Measurement principle	dielectrically
Measuring range	8 to 20% moisture of leather (at S2)
Automatic temperature compensation	0,05%/K
Depth of measuring	5 (8) mm
Operation temperature range	5 °C to +35 °C (41 °F to 95 °F)
Power supply	9V alkaline battery or NiCd-accumulator
Current consumption	approx. 5 mA
Automatic shut-off	after approx. 90 sec., and/or during large measuring range excess
Charge of the battery	empty => display BAT
Display	three-digit-LC-display
Resolution of display	0,1% moisture of material
Dimensions	60 x 120 x 26 mm
Weight without battery	approx. 140 grams
Part number	10018
Delivery	wooden case, proof plate, case protection made of rubber