7. Product types

Product type	Paper type	Density [kg/m³]
Reference	! Only used for testing the moisture meter!	
300 paper	Tissue, filter paper	300 kg/m³
350 paper	Tissue, filter paper	350 kg/m³
400 paper	Tissue, filter paper	400 kg/m³
450 paper	Tissue, filter paper	450 kg/m³
500 paper	Low density cardboard	500 kg/m³
550 paper	Low density cardboard	550 kg/m³
600 paper	Very low density paper	600 kg/m³
650 paper	Low density paper	650 kg/m³
700 paper	Low density paper	700 kg/m³
750 paper	Corrugating medium, fluting, Schrenz	750 kg/m³
800 paper	Newsprint	800 kg/m³
850 paper	Kraft liner, brown	850 kg/m³
900 paper	Kraft liner, white, top; test liner, brown	900 kg/m³
950 paper	Test liner, white; copying paper	950 kg/m³
1000 paper	Copying paper, LWC uncoated	1,000 kg/m³
1050 paper	Satin-finish copying paper	1,050 kg/m³
1100 paper	Satin-finish copying paper	1,100 kg/m³
1200 paper	LWC calendered	1,200 kg/m³
1300 paper	Brochure paper	1,300 kg/m³
1400 paper	Brochure paper	1,400 kg/m³
1500 paper	High density brochure paper	1,500 kg/m³
1600 paper	Very high density brochure paper	1,600 kg/m³

7.1 Selecting the product type

Due to the wide range of different types of papers in use, there are no default product type categories. The humimeter PM5's readings are based on a paper stack or roll densities, which is why density is the decisive factor for the different product types.

The product type overview contains suggestions for different paper types and their associated densities [kg/m³].

$$\text{Density}\left[\frac{\text{kg}}{\text{m}^3}\right] = \frac{\text{Grammage}\ \left[\frac{\text{g}}{\text{m}^2}\right]}{\text{Thickness paper sheet [mm]}}$$

$$\text{Density}\left[\frac{\text{kg}}{\text{m}^3}\right] = \frac{\text{Weight paper roll [kg]}}{\text{Volume paper roll [m}^3\text{]}}$$

$$\text{Density}\left[\frac{\text{kg}}{\text{m}^3}\right] = \frac{\text{Weight paper pile [kg]}}{\text{Volume paper pile [m}^3\text{]}}$$

If you wish to obtain very precise moisture content readings, please take a one-off comparative measurement with your online moisture content analyser or the standardised oven-drying method (ISO 287). To do so, proceed as follows:

1. Gauge your paper (roll or stack) density in relation to values for the different product types shown above and take a number of moisture readings using the product type most likely to deliver realistic values.

2. Next, record the actual moisture content reading obtained through your online moisture analysis or perform a reference moisture content analysis in accordance with EN ISO 287.

3. Compare the readings recorded for the different product types with those of the actual moisture content established using the reference measurement. From now on, always use the product type that most closely matches the reference measurement.

» Note: You can change the product type name to a name of your choice (e.g. to the name of the paper). For more information on doing so, please contact your dealer.

7.2 How moisture content is defined

The device measures and shows a material's moisture content. The moisture content readings it displays are calculated in relation to the material's overall mass:

$$\%WG = \frac{M_n - M_t}{M_n} \times 100$$