# Typical data

## Grade 50 – Quantitative Filter*

**Quantitative acid hardened low ash cellulose filter paper with fine retention and slow flow rate. The surface is highly glazed keeping paper free from loose fibers. It is strong when wet allowing precipitate removal by scrapping and also vacuum filtration in a Buchner or 3 piece funnel.**

| | | |
|---|---|---|
| Grade: | | 50 |
| Type: | | CF |
| Description: | | Hardened low ash |
| Composition: | Fiber type | 100% cotton fiber |
| | Including binder? | No |
| Filtration speed: | Fast/medium/slow | Slow |

| Property | Description | Data | Units |
|---|---|---|---|
| Basis weight | Weight of 1 sq meter of filter paper | 96 | $g/m^2$ |
| Typical thickness | Thickness under a defined pressure and contact area | 115 | µm @ 53 kPa |
| Filtration speed | Volume of water filtered through the filter paper using a defined area, pressure and time | 13 | mL/2 min |
| Maximum operating temperature | The maximum temperature the product can withstand for 1 hour | N/A | °C |
| Ash value | Ash content remaining after firing the filter paper at approximately 800°C | 0.015 | % |
| Autoclavability | Capability of withstanding treatment under 121°C and steam for 20 min | Yes | |
| Surface characteristics | Smooth/creped | Smooth | |
| Air retention efficiency | Retention efficiency of filter in air using 0.3 µm particles at a flow rate of 32 L/min using an area of 100 $cm^2$ | N/A | % |
| Particle retention efficiency in liquid | Particle retention rating of filter at 98% efficiency in liquid | 2.1 | µm |
| Wet burst | The maximum pressure wet filter paper can withstand using an exposed area of 1 sq inch | 6 | psi |
| Wet burst - applicational use | The maximum vacuum pressure the filter paper can withstand during use in 100 mm diameter Büchner funnel | 404 | inches $H_2O$ |
| Alpha cellulose content minimum | | N/A | % |
| Phase separation functionality | The capability of separating water and organic solvent | N/A | N/A |
| Chemical compatibility HCl | Capability of withstanding HCl | 1.00 | mol/L |
| Chemical compatibility NaOH | Capability of withstanding NaOH | 1.00 | mol/L |

*Typical data only and does not represent a product specification

# Trace element composition – ppm

| | | | | | |
|---|---|---|---|---|---|
| Silver | (Ag) | < 0.2 | Aluminum | (Al) | < 0.4 |
| Arsenic | (As) | < 0.4 | Sodium | (Na) | 11.6 |
| Beryllium | (Be) | < 0.1 | Magnesium | (Mg) | 4.7 |
| Cobalt | (Co) | < 0.4 | Potassium | (K) | 4.9 |
| Chromium | (Cr) | 0.5 | Calcium | (Ca) | 68.0 |
| Copper | (Cu) | < 0.2 | Iron | (Fe) | 3.9 |
| Mercury | (Hg) | < 0.4 | Strontium | (Sr) | < 0.1 |
| Lithium | (Li) | < 0.2 | Titanium | (Ti) | < 0.5 |
| Manganese | (Mn) | < 0.1 | Zirconium | (Zr) | < 0.1 |
| Nickel | (Ni) | < 1.0 | Barium | (Ba) | 0.2 |
| Antimony | (Sb) | < 2.0 | Zinc | (Zn) | 1.9 |
| Lead | (Pb) | < 1.0 | Phosphorus | (P) | < 2.0 |
| Boron | (B) | < 0.3 | Silicon | (Si) | 147.0 |

**Note:** Samples were digested with 6 mL $HNO_3$, 1 mL $H_2O_2$ and 3 mL HF and then tested by ICP-MS






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