

COMPARISON OF KRAFT & THERMOMECHANICAL PULP (TMP) FIBERS

Kraft Pulp	TMP
Low Yield (45-50%)	High Yield (97-98)
More Long Fibers (up to 90%)	Fewer Long Fibers (approx. 40%)
Fewer Fines (<10%)	More Fines (20-40%)
Easily Collapsed, Flexible Fibers (apparent density 564 kg/m ³)	Less Collapsed, Less Flexible Fibers (apparent density 314-364 kg/m ³)
Fiber Surface Composition, Approx. 3.4-16.2% lignin, 1.4-8.3% extractives	Fiber Surface Composition, Approx. 35% lignin, 15% extractives
Bulk Lignin Content, <5%	Bulk Lignin Content, Approx. 28%
Greater Fiber Shrinking and Swelling, Less Lignin.	Less Shrinking and Swelling, More Lignin
Stretch (3.0 %)	Stretch (1.84-2.28 %)
Greater Burst, Breaking Length, Tear (4.52 KPam ² /g, 6130 m, 8-8.6 mNm ² /g)	Lower Burst, Breaking Length, Tear (1.6-2.1 kPam ² /g, 3200-4150 m, 8.0-8.6 mNm ² /g)
R 14 Bauer McNett Fraction (Very long) 54.1%	R 14 Bauer McNett Fraction (Very long) 2.8-6.9%
P14/R48 (Long) 35.7%	P14/R48 (Long) 46.6-50.2%
P48/R100 (Middle) 4.9%	P48/R100 (Middle) 11.0-15.4%
P100 (Fines) 5.3%	P100 (Fines) 30.7-35.5%