



**PAPER
EXCELLENCE**

HOW WE MAKE KRAFT PULP

Kraft pulp is a distinctively high-strength type of pulp and a key building block of many familiar and important products in our daily lives. This includes such things as printing and writing papers; tissues, coffee filters and other consumer products; and specialized applications like fibre cement and Japanese washi paper.

We manufacture high-quality softwood and hardwood kraft chemical pulps, and chemi-thermo-mechanical pulps, that in turn are used to make packaging, papers, tissues, towels, and other specialty products.

The essential elements for making kraft pulp are wood fibre, water, chemicals and heat.

THE KRAFT PULPING PROCESS

We make kraft pulp by mixing wood fibres with a solution of caustic soda and sodium sulphide, and cooking them inside a digester. This separates the fibres from the lignin, which is a natural glue-like substance that binds them together. Our production facilities are designed to recover and reuse much of the water, chemicals and steam used in the process.

PUTTING SAWMILL LEFTOVERS TO USE

The fibre we use to make kraft pulp is mainly made up of leftovers from lumber mills. These wood chips and shavings were once considered waste and sent to landfills or burned. We match tree species and other pulp characteristics with customers' end-use requirements, and control blending and bleaching to exacting specifications.

ENVIROMENTAL ASSURANCE

As with all products from our Canadian mills, our kraft pulp is made from responsibly sourced fibre and in facilities that have achieved sector-leading greenhouse gas reductions. We use a lower-impact elemental chlorine-free bleaching process. And with our chain-of-custody systems (using FSC®, PEFC™ and SFI®)¹ we can provide pulp that is certified as originating from sustainably managed forests for those customers wishing additional assurance.

PAPER EXCELLENCE CARES ABOUT CERTIFICATION

Paper Excellence buys fibre from local sawmills and forest tenure holders and owners. We also manage some forests in Nova Scotia.



ABOUT US

Paper Excellence is a diversified manufacturer of pulp and specialty, printing and writing, and packaging papers. We believe in the enduring value of wood-based products in global markets, and have built a large network of mills and chipping plants to produce them competitively. Through our distinct approach to operational excellence, we deliver high-quality and cost-effective products to international customers.

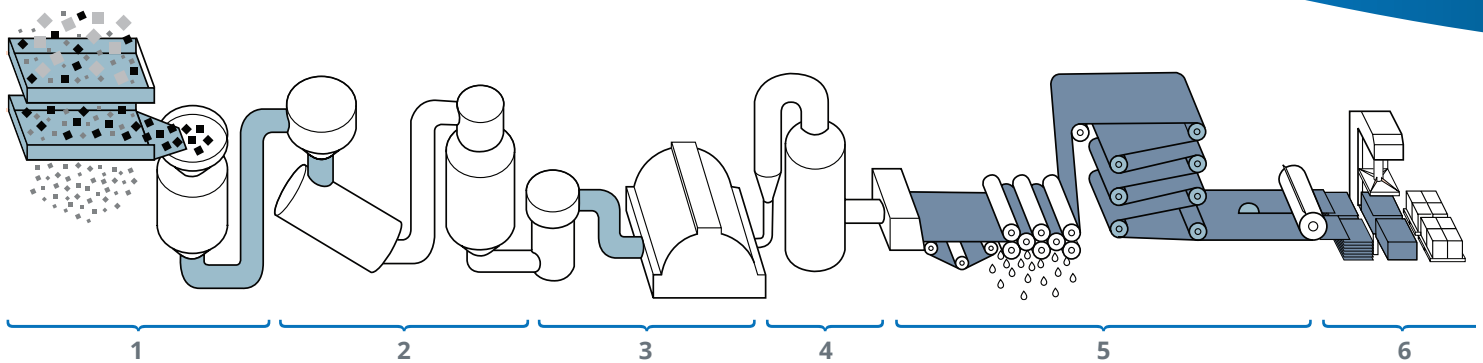
Paper Excellence has a combined annual pulp production capacity of 2.1 million tonnes.

- » Crofton
- » Howe Sound
- » Mackenzie
- » Meadow Lake
- » Northern Pulp
- » Skookumchuck

¹ FSC=Forest Stewardship Council | PEFC=Programme for the Enforcement of Forest Certification
SFI=Sustainable Forestry Initiative

HOW WE MAKE KRAFT PULP

THE KRAFT PULP PROCESS



1 WOOD CHIPS

Kraft pulp (a type of chemical pulp) is made using raw wood (both soft wood and hard wood) chips which are pre-steamed in steaming vessel. Steamed chips are then cooked inside a pressurized digester with a combination of chemicals and heat to dissolve the lignin glue which holds the wood fibres together.

2 DIGESTER AND BLOW TANK

The digester's pressure is relieved into a blow tank which separates the chips into unbleached pulp fibre.

3 SCREEN AND WASHING

Residual chemicals are removed and recycled in the brown stock washing stage.

4 BLEACHING

The pulp is then bleached to its recognized bright white color in the bleach plant.

5 PRESSING AND DRYING

The bleached pulp is then diluted to a slurry where it is sprayed across a pulp machine screen to form the pulp mat and begin the dewatering process of pressing and drying in the dryer section.

6 PULP BALES

The dried pulp is then cut and baled into 400 kg bales on the baling line in preparation for transport around the world.

Paper Excellence sells its kraft pulp externally to customers around the world. Some of Paper Excellence's Canadian mills also produce a type of mechanical pulp, referred to as thermo-mechanical pulp or TMP, for use in making their own paper products (see "How we Make Paper" fact sheet). Our Meadow Lake mill makes Bleached Chemi Thermal Mechanical Pulp (BCTMP) which is a hybrid of kraft and TMP.

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