

# Fact Sheet N°2



## Pulp manufacturing

### SOURCING

It all starts in the forest, with our key ingredient: **trees**.  
Trees are an important **renewable** resource.



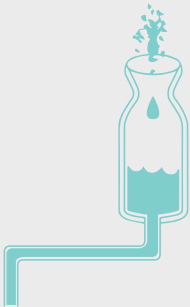
### PULPING

Wood logs and chips, or other fibrous raw materials, are reduced to a consistent sludge containing **mostly cellulose fibers**.

Mechanical pulping



Chemical pulping



### MECHANICAL VS. CHEMICAL

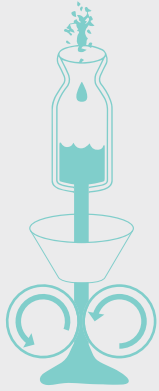
The two main pulping process classifications are: **mechanical** and **chemical**.

Most mechanical pulps are made by refining wood chips between rotating circular discs.

Mechanical pulp is used for **newsprint, magazines, books** and **packaging materials**.

In **chemical pulping**, wood chips are cooked in a chemical solution to release individual fibers.

**Chemical pulp** is used for **fine paper grades** and **higher end paperboard** and **packaging** grades.



## HIGH-YIELD PULP

High-yield pulp “yields” far more pulp with the same volume of trees than chemical processes.

The **high-yield pulp** in Kallima’s middle ply is **Bleached Chemi-ThermoMechanical Pulp (BCTMP)**, classified as semi-chemical because the chips are treated and cooked in chemical solutions before being mechanically refined and bleached to high levels of brightness.

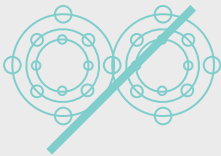
For several paper grades, BCTMP can replace chemical pulps.



## THE DE-INKING PROCESS

Recycled pulp is made by **sorting, cleaning** and **chemically processing** paper waste to remove ink and other contaminants.

The recycled pulps are added to the middle ply of Kallima so they don’t affect sheet aesthetics and print quality.



## BLEACHING

Kallima is bleached **without elemental chlorine**, which is better for the environment. Therefore, Kallima is ECF (Elemental Chlorine Free) Paperboard.

## PRESSING, FORMING AND DRYING

Pulp is either pumped to on-site paper or board machines, or dried and baled to be shipped and processed offsite.

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