



# UPGRADING LIGNIN FOR VALUE-ADDED MANUFACTURING

**Domtar** aims to become a world leader in the commercialization of value-added lignin. The company is using state-of-the-art equipment to deliver Canada's first commercial lignin in dried, compounded, and modified lignin granules/pellets.

- new value-added applications for the pelletized lignin include: industrial adhesives and coatings, thermoplastic composites, rigid and flexible foams

## UTILIZING CANADA'S FORESTS: RESULTS EXPECTED

**1 TON**  
PER HOUR  
LIGNIN-BASED  
PELLETS

UP TO  
**90%**  
MOISTURE  
REMOVAL



MARKET VALUE  
OF LIGNIN  
INCREASE  
POTENTIAL  
**100%+**

## INNOVATING WITH WOOD

- lignin is a complex organic compound from wood fibre that binds to cellulose fibres and hardens and strengthens the cell walls of plants
- Domtar currently extracts and purifies lignin from its pulping processes, but because of high moisture content, non-uniform particles size, and problematic bulk flow properties this lignin is unsuitable for many applications
- Domtar installed technology that simultaneously dries, compounds and pelletizes lignin into several upgraded forms that are drop-in ready for downstream users processes

## POTENTIAL OPPORTUNITIES

**MARKET: POTENTIAL INCREASE IN MARKET VALUE OF LIGNIN AND ACCESS TO GROWING MARKETS**

**ENVIRONMENT: BIO-BASED ALTERNATIVE TO THE USE OF PETROLEUM AND OTHER FOSSIL FUELS**

**ECONOMIC: NEW PRODUCT OFFERINGS SUPPORTS PROFITABILITY AND ECONOMIC SUSTAINABILITY OF DOMTAR'S MILLS**



**DOMTAR IS AN INTEGRATED MANUFACTURER AND MARKETER OF PULP AND PAPER AND PERSONAL CARE PRODUCTS.**

**PROJECT LOCATION: WINDSOR, QUÉBEC**

*This investment in innovative Canadian technology that produces a new value-added, environmentally friendly product benefits the Canadian forestry sector, and more importantly Canada immensely.*

— Bruno Marcoccia, Director of Research and Development Pulp and Paper Division, Domtar Inc.

**Investments in Forest Transformation Program:** In 2010, Natural Resources Canada's Canadian Forest Service created the Investments in Forest Industry Transformation Program (IFIT) to support Canadian companies to develop and grow markets for new and innovative high-value products using Canada's forest resources. *For more information [www.nrncan.gc.ca/forests/federal-programs/13139](http://www.nrncan.gc.ca/forests/federal-programs/13139)*

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