

EcoSynthetix

Sustainable solutions for wood

Visit us: Hall 26,
Stand J13

27 – 31 May 2019
Hannover • Germany
ligna.de



LIGNA

EcoSynthetix -Innovative bio based solutions

- ▶ Established for over 20 years, Toronto based EcoSynthetix has a global footprint that delivers sustainable solutions to solve the challenges of the modern world
- ▶ Our innovative approach and applied technology transforms the worlds natural building blocks into materials that deliver superior performance in multiple industrial applications
- ▶ With an extensive research center and production facilities in Europe and North America, EcoSynthetix creates and delivers answers that can drive change



DuraBind - Strength, naturally

- ▶ Through patented technology we are able to take natural materials and effectively enhance them
- ▶ By adding functionality we can maintain natural strength but add additional properties than can be adapted for the desired end use
- ▶ Our raw materials are sourced globally, are readily available and are truly natural
- ▶ Our powder materials can be transported more sustainably than any liquid and can be used either directly or converted freshly like resins on the customer site.



Competency in application

- ▶ With extensive development and application facilities EcoSynthetix has the capabilities to create tailor made solutions
- ▶ Through its established partnership with Chimar Hellas we have over 40 years of experience in the wood industry



Sustainable adhesives solutions for formaldehyde reduction

Reducing or eliminating formaldehyde in wood glues with friendly solutions that deliver on technical performance and reduce cost



OSB Oriented Strand Board -Up to OSB3 standard

- Bio solution - Cost saving additive proven to replaces up to 30% of MDI
- Reduced VOC level , lower release agent demand



Particle Board

- Comprehensive system solution
- Binder, tackifier, catalyst



MDF/HDF Medium Density Fiberboard

- Technical solution for enhanced distribution of NAF glues
- Speed, Cost savings, reduced release agent demand



OSB Oriented Strand Board

OSB leads the way in today's formaldehyde free composite wood products
The majority of European board is produced using pMDI

- ▶ DuraBind is commercially proven to replace up to 30% pMDI in boards up to OSB 3 standard
 - ▶ Substitute pMDI with equal bond strength
 - ▶ Immediate cost savings with a bio based material not subject to frequent price volatility
 - ▶ Reduction of total VOC content (DuraBind is certified VOC free *)
 - ▶ Total lowering of emissions in the workplace
 - ▶ Reduced release agent demand



PB Particle Board

Significant demand for a viable N.A.F Particle board has lead to the creation of a sustainable glue system that delivers on technical and commercial performance

- ▶ DuraBind adhesive system* proven to replace formaldehyde resins
 - ▶ Sustainable bio based adhesive system
 - ▶ Bio based tackifier
 - ▶ Innovative new catalyst system combines to ensure press factor goals are met

**DuraBind system proven to use the lowest commercial levels of MDI in commercial PB*



MDF Medium Density Fiber Board

Formaldehyde reduction or elimination in glue systems is a key industrial priority

Pending new emission standards from 2020 will continue to drive change

- ▶ DuraBind combines with MDI to create a uniquely stable emulsion that can be added early in the blow line in MDF production
 - ▶ Lower total resin demand V.s UF
 - ▶ Superior resin distribution compared to MDI systems
 - ▶ Cost savings with a bio based material which is not subject to frequent price volatility
 - ▶ Reduction of total VOC content (DuraBind is certified VOC free *)
 - ▶ Total lower production line emissions

Particle Board - Mind the gap ?

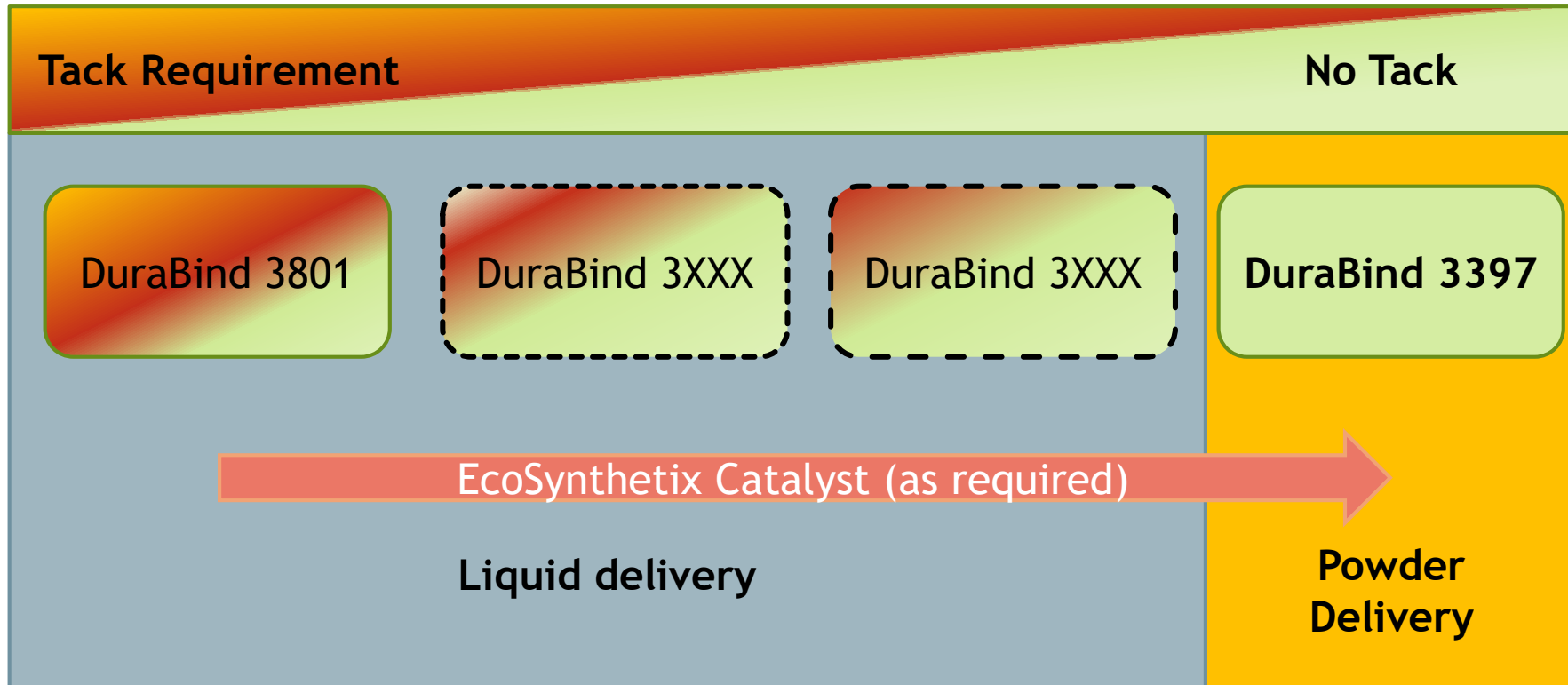
- ▶ Formaldehyde resin systems continue to dominate in the production of particle boards
 - ▶ Current alternative systems are not able to achieve speed and technical performance characteristics
 - ▶ Formaldehyde glues provide a good degree of tack -essential on todays presses for crossing the gap from formation to pressing
 - ▶ pMDI has no tack, expensive tackifiers are required
 - ▶ pMDI requires the need for release agents
 - ▶ pMDI has challenges to achieve viable press factors
 - ▶ pMDI is volatile in price and supply

DuraBind -Closing the gap

► DuraBind, Durabind tack, DuraBind speed

- **DuraBind** - proven to work with lowest levels of pMDI in current commercial operations.
- A bio based binder that creates a highly uniform distribution of the glue throughout the board.
- Reduces the need for release agent by up to 25% vs pMDI
- **Durabind tack** - a new, novel bio based tackifier that combines with DuraBind to deliver results and eliminates the problems of crossing the gap between forming and pressing.
- **DuraBind speed** - a catalyst that can be added to ensure commercially viable press factors are achieved

DuraBind for Particle Board



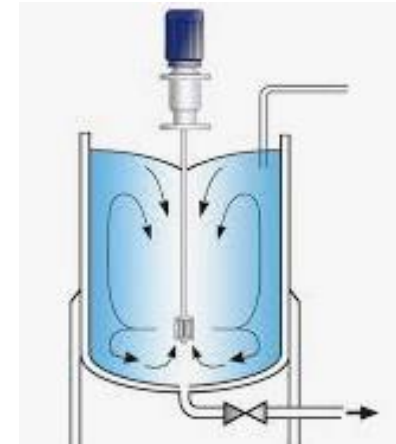
DuraBind for OSB - Low cost transportation, environmentally friendly

DuraBind 3397



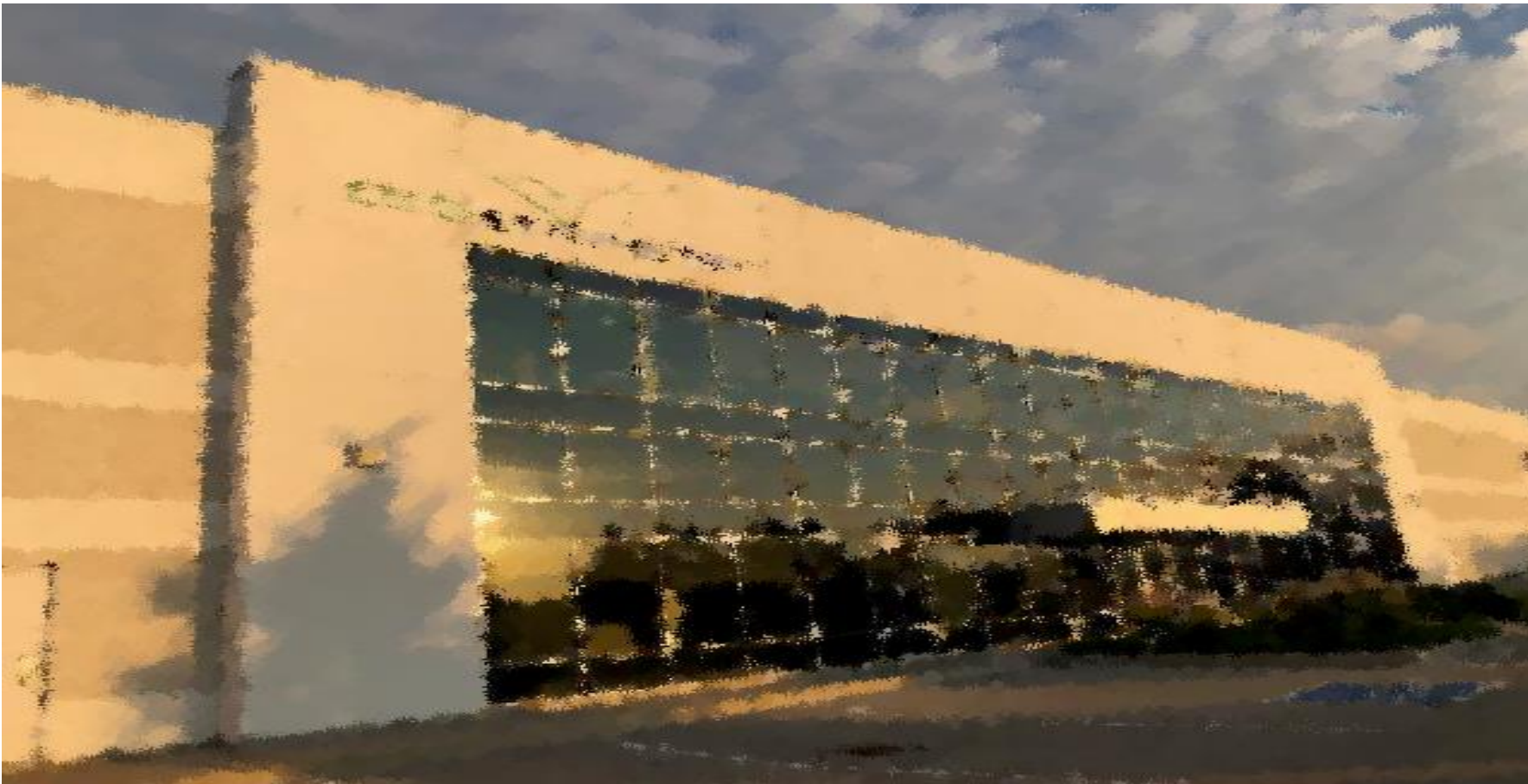
Eco Catalyst (as required)

**Powder
Delivery**



**On site glue -
always fresh, always available**

do you have questions ?





Please contact EcoSynthetix

► Canada Headquarters

3365 Mainway

Burlington

L7M 1A6

Canada

www.ecosynthetix.com

pgreenall@ecosynthetix.com