

HUNTSMAN

Enriching lives through innovation

Polyurethanes

I-BOND® wood resins

Solutions that breathe quality



Building a better future

Performance. Productivity. Sustainability. Why compromise? I-BOND® resins are non-added formaldehyde and fast-curing resins, enabling you to produce high quality and durable composite wood products.

Why I-BOND® MDI resins?



High performance

Deliver wood-based panels with very good mechanical strength, durability and swell properties.



Efficient

Increase your production output and optimise costs with our innovative resins and industry expertise.



Cleaner

Support safer production environments and enable achievement of stringent formaldehyde emission standards.

Versatile solutions for construction and furniture

I-BOND® resins can be used to produce a wide range of products including oriented strand board (OSB), medium density fibreboard (MDF), particleboard (PB) and wood fibre insulation (WFI).

With our broad portfolio and dedicated technical support, we can help you select the system best suited to your requirements – and together make your ideas a reality.

Typical end-use applications:

- Structural applications such as walls, roofs, floors and cladding
- Exhibition, trade fair and shop fittings
- Shutters, fences and hoardings
- Timber frame construction
- Sound and thermal insulation panels
- Vehicle and truck interiors
- Boardings and barriers
- Packaging
- Furniture
- DIY



I-BOND® resins at a glance



ORIENTED STRAND BOARD (OSB)

I-BOND® resins provide very good mechanical strength and durability, moisture resistance and dimensional stability for OSB, while providing production benefits including increased output, reduced blender maintenance costs and lower dryer energy.

I-BOND® OSB PM 4300	Standard polymeric MDI resin
I-BOND® OSB FC 4310	Fast cure MDI resin (FC1)
I-BOND® OSB FC 4312	Fast cure MDI resin (FC2)
I-BOND® OSB EFC 4362	Enhanced fast cure MDI resin (EFC1)
I-BOND® OSB EFC 4364	Enhanced fast cure MDI resin (EFC2)

PARTICLEBOARD (PB)

Available for full MDI or hybrid systems, I-BOND® resins can improve board properties and increase production output by up to 15%. Emulsion preparation can be done at the panel manufacturing plant, with no need for special equipment.

I-BOND® PB PM 4350	Standard polymeric MDI resin
I-BOND® PB EM 4352	Emulsifiable MDI resin
I-BOND® PB EM 4356	Emulsifiable MDI resin
I-BOND® PB FC 4320	Fast cure MDI resin
I-BOND® PB EFC 4322	Enhanced fast cure MDI resin
I-BOND® PB EMFC 4324	Emulsifiable fast cure MDI resin
I-RELEASE® PB 9156	Internal release agent for multi-daylight and continuous lines (synthetic wax) with 40% solid content



Huntsman has been a pioneer in polyurethane-based resins for composite wood products since the 1980s – and our commitment to innovating for this exciting, fast-growing market continues to this day. Panel manufacturers work with us so they can achieve sustainable solutions that enable production efficiency and product performance.



MEDIUM DENSITY FIBREBOARD (MDF)

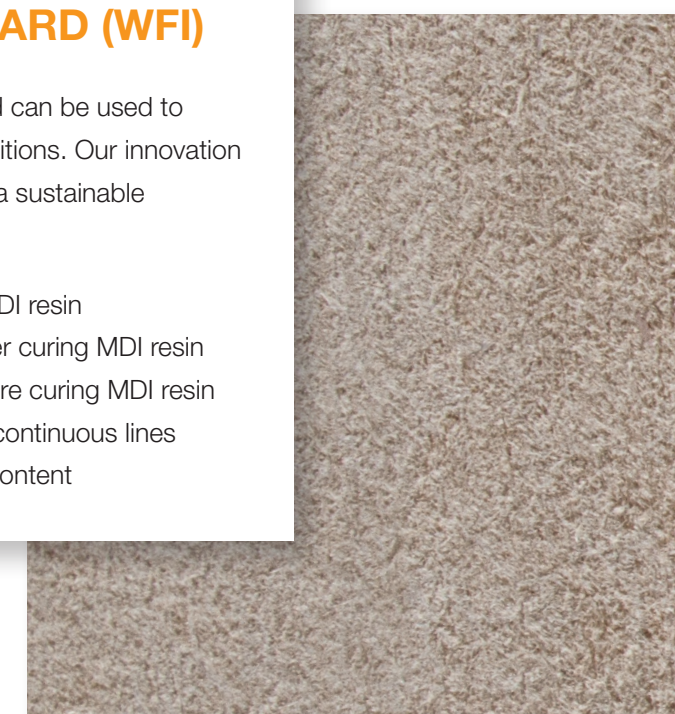
I-BOND® resins can be used as the only resin in the production of standard quality MDF, or in the production of special quality MDF. Our emulsifiable resins provide a stable emulsion for up to 2 hours and can reduce your risk of blow line blockage.

I-BOND® MDF PM 4390	Standard polymeric MDI resin
I-BOND® MDF PM 4394	Polymeric fast cure MDI resin (dry blending)
I-BOND® MDF EM 4330	Emulsifiable MDI resin
I-BOND® MDF EMFC 4332	Emulsifiable fast cure MDI resin
I-BOND® MDF FC 4392	Fast cure MDI resin

WOOD FIBRE INSULATION BOARD (WFI)

I-BOND® resins deliver very good board properties and can be used to maintain stable production output under extreme conditions. Our innovation has enabled WFI boards up to 240 mm thick, offering a sustainable alternative for sound and thermal insulation.

I-BOND® WFI 4370	Low temperature curing MDI resin
I-BOND® WFI 4372	Low temperature and faster curing MDI resin
I-BOND® WFI 4376	Emulsifiable low temperature curing MDI resin
I-RELEASE® WFI 9162	External release agent for continuous lines (wax free) with 20% solid content



Safer, stronger, cleaner

When MDI is applied to the surface of wood particles or fibres, it wets the wood, penetrates and creates a deep bond with the cell wall. This allows you to achieve very good mechanical strength, durability and water resistance – while reducing the amount of resin.

Consumers are concerned about air quality in their homes and the levels of Volatile Organic Compounds (VOCs) emitted by the buildings and furniture around them.

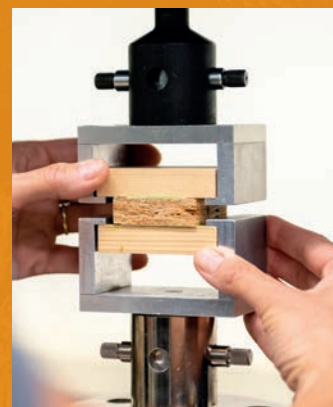
Our non-added formaldehyde formulations can help ensure your products meet stringent global board formaldehyde emissions standards.

Why MDI?

- Meets stringent formaldehyde emission standards
- Improves moisture resistance
- Increases strength and durability
- Reduces production costs

Design success into your products

From creating formulations to suit your requirements to optimising the throughput of established manufacturing plants, our dedicated composite wood product experts provide front-line technical support – whenever and wherever you need it. We have our own team of industrial hygiene specialists, who can provide training and advice on the safe handling of MDI. We regularly carry out bulk audits and engage our customers in the industry program “Walk the Talk”.



How can we help?

- Improve product performance and profitability with our application specialists and tailor-made solutions
- Minimise the risk of downtime through our robust global supply chain
- Maintain safe production environments with EHS support and training

For more information: www.ibondwood.com
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Towards sustainability

As society moves towards carbon neutrality and a circular economy, industries are searching for solutions that can reduce the consumption of natural resources and help to reduce the effect of greenhouse gases. At Huntsman, we are dedicated to the development of sustainable solutions that can support the construction and furniture industries' environmental ambitions and improve the quality of life for people everywhere.

As a signatory to the United Nations Global Compact (UNGC) – the world's largest voluntary corporate citizenship initiative – our work is guided by the UN's 17 Sustainable Development Goals. All 17 UN Sustainable Development Goals are important to our business – with three of particular relevance to our I-BOND® resins.



Safeguard indoor air quality and enable thermal comfort



Deliver durable mechanical performance and improved productivity



Enable low-energy building design and sustainable forest management



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Huntsman Polyurethanes warrants only that its products meet the specifications agreed with the buyer. Typical properties, where stated, are to be considered as representative of current production and should not be treated as specifications.

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Products may be toxic and require special precautions in handling. The user should obtain Safety Data Sheets from Huntsman Polyurethanes and Huntsman Performance Products containing detailed information on toxicity, together with proper shipping, handling and storage procedures, and should comply with all applicable safety and environmental standards.

Hazards, toxicity and behavior of the products may differ when used with other materials and are dependent on the manufacturing circumstances or other processes. Such hazards, toxicity and behavior should be determined by the user and made known to handlers, processors and end users.

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