DuraSense™
by Stora Enso

The green, cost-efficient and versatile material for storage and logistics.
 Demand more. Demand renewable.
Imagine storage and logistics changed for good.

Stora Enso has led innovation in the wood industry for hundreds of years. That expertise allowed us to develop a new material with the potential to transform the plastics industry. Introducing DuraSense™.

DuraSense™ is a blend of wood fibres and plastic material, offering a light and flexible solution with the mouldability of plastic, yet the sustainable benefits of wood.

Strength and Versatility

DuraSense™ offers limitless options within storage and logistics due to its flexibility and strength. It is now possible to produce sustainable solutions from large industrial and commercial products to smaller domestic applications. Biocomposites are suitable for a wide range of products, like transportation boxes, dollies, containers, pallets, beverage crates, shopping baskets and for domestic uses like storage boxes and clothes hangers.

Cut emissions

Biocomposites offer the benefit of using less fossil based material in storage and logistics products. It’s in fact possible to achieve products made out of 88% renewable material, reducing the fossil carbon footprint by up to 80%.

Pure manufacturing process

The production of wood fibres for DuraSense™ is based on thermo-mechanical moulding of the wood or different fractions of milled wood. These are pure processes, with low impact on our environment.

Smooth process

With little or no change to existing production techniques, our material is developed to match conventional plastics and therefore fit existing moulds. Imagine you could transform your products to something new, something renewable with higher performance and lower carbon footprint. Our material is consistently high in quality, from batch to batch, according to Good Manufacturing Practices (GMP).

Technical support

We’re happy to be with you every step of the way, from initial trials to commercialized product.

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<tbody>
<tr>
<td>DuraSense™ Plus</td>
<td>Suitable for products with high property demands.</td>
<td>No</td>
<td>30 – 50</td>
<td>Fossil or bio-based</td>
<td>35 – 60</td>
<td>2 500 – 5 000</td>
<td>3.0 – 6.0</td>
<td>50 – 85</td>
<td>1 800 – 4 500</td>
<td>25 – 30</td>
<td>PE, ABS, PP, PA, HDPE, PET, PA6, PA66, HIPS, PLA</td>
<td>Polystyrene, Transportation protection, Rigid Boxes, Crates, Dollies</td>
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<td>DuraSense™ Visual</td>
<td>Suitable for products where renewability or green value are to be communicated.</td>
<td>Yes</td>
<td>30 – 60</td>
<td>Fossil or bio-based</td>
<td>35 – 60</td>
<td>3 000 – 6 000</td>
<td>1.5 – 4.5</td>
<td>50 – 65</td>
<td>2 000 – 4 500</td>
<td>10 – 25</td>
<td>PS, PP, HDPE, PP, PA, PA6, PA66, HIPS</td>
<td>Transportation Boxes, Transportation protection, Crates, Dollies</td>
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<tr>
<td>DuraSense™ Frost</td>
<td>Suitable for products which are in contact with food.</td>
<td>Yes/No</td>
<td>30 – 50</td>
<td>Fossil or bio-based</td>
<td>15 – 55</td>
<td>1 000 – 5 000</td>
<td>3.0 – 10.0</td>
<td>20 – 75</td>
<td>800 – 4 000</td>
<td>20 – 40</td>
<td>PP, HDPE, PS, HIPS, PA6, PLA</td>
<td>Food Containers &amp; Boxes, Shopping Baskets, Fish Boxes</td>
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<td>DuraSense™ Flex</td>
<td>Suitable for products with high impact strength demand and/or demand for flexible/bendable properties.</td>
<td>Yes</td>
<td>30 – 40</td>
<td>Fossil or bio-based</td>
<td>35 – 35</td>
<td>1 300 – 2 100</td>
<td>7.0 – 16.0</td>
<td>20 – 50</td>
<td>800 – 1 600</td>
<td>30 – 65</td>
<td>PPC, PR, PE, PVC, Soft materials</td>
<td>Transportation protection, Transportation Boxes, Link &amp; Covers</td>
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<td>DuraSense™ Eco-100</td>
<td>Suitable for products with high sustainability agenda and/or demand for usage of bio-based material.</td>
<td>No</td>
<td>30 – 50</td>
<td>Bio-based</td>
<td>30 – 40</td>
<td>1 000 – 3 200</td>
<td>2.5 – 10.0</td>
<td>20 – 45</td>
<td>900 – 2 500</td>
<td>15 – 30</td>
<td>PR, PE, PS, HIPS, PLA</td>
<td>Fully renewable products, Project Driven and for specific applications</td>
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<tr>
<td>DuraSense™ Recycled</td>
<td>Suitable for products with high sustainability agenda and/or demand for usage of recycled material.</td>
<td>Yes/No</td>
<td>30 – 50</td>
<td>Biopolymer based</td>
<td>35 – 45</td>
<td>3 200 – 5 000</td>
<td>2.0 – 5.0</td>
<td>45 – 65</td>
<td>2 500 – 3 300</td>
<td>15 – 25</td>
<td>PS, ABS, PP, PP, HDPE</td>
<td>Wood fibres combined with Recycled Plastic, Project Driven and for specific applications</td>
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Everything made from fossil based materials today can be made from a tree tomorrow

Renewable raw material
Our Nordic forests are twice the size they were 100 years ago – we grow more than we use. This gives us vast access to spruce and pine, the best suited wood fibre for our bicomposites, providing strength and beauty.

Locally produced
The Nordic spruce and pine used for DuraSense™ are well suited for the durable products made from our material.

Raw material traceability
We source wood from sustainable sources and always know where our wood comes from. All our wood sources are covered by a third-party certified Chain of Custody system.

Want to learn more?
Have a cup of coffee with us.

Come visit our Biocomposites Competence Centre. We’ll show you around the plant, discuss products and potential business.

Let’s change the plastics industry, together.

Demand more. Demand renewable.
www.storaenso.com/biocomposites

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THE RENEWABLE MATERIALS COMPANY