

Kareline® Natural Composites – Touch and Feel!

Plasthill Oy

www.kareline.fi

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Kareline
touch and feel

Kareline® Natural Composites

Kareline® natural composites combine the excellent properties of natural fibers and thermoplastics in a new and innovative way.

Offer a whole new possibility to manufacture **green products** that comply with environmental and recycling requirements.

Are based on PP, ABS, PS, POM and PLA plastics matrix.

The reinforcing fibres (from 10 to 55 weight%) used are wood-based cellulose fibres manufactured in the most ecologically advanced mills in the world from environmentally certified wood.

Primarily for easy injection moulding - Secondarily for extrusion moulding.

The Kareline® composite granulates can be moulded in all standard thermoplastic injection moulding machines and tools.

Kareline[®] Natural Composites

Green
composites

Future Touch
and Feel

Technical
Superiority

Kareline[®] Natural Composites

Green Composites

- Renewable resources in significant role – **fossil raw material resources replaced**
- Reduction of GHG-emissions, very favourable CO2 balance and ecological footprint
- Easily recycled
- Energy saving in processing
- No competition with human food production resources

Sales driver → Positive image - Environmentally friendly materials - Minimal ecological impact and footprint

Kareline® Natural Composites

Future Touch and Feel



- New design possibilities
- Silky, smooth and dry touch – not plastic-like
- **Beautiful and living surface**
- Natural effects, close to wood, stone etc., but not an imitation or surface treatment or skin!
- Genuine and solid – thoroughly - ageing beautifully

Sales driver → Future Touch and Feel, ageing with dignity

Kareline® Natural Composites

Technical Superiority

- **No sink marks, accuracy of dimensions and form**
- **Effective injection moulding**
- Adjustable acoustic properties
- Mechanical properties
- No abrasive fillers - minimal wearing of tools and machines
- New possibilities for plastic surface treatment – oil, wax...
- Efficient integration of other materials – plastics, metals, wood, components? ...

Sales driver → New surface possibilities, material integration

Kareline[®] materials

Kareline[®] PPMS	→	fibres reinforced PP
Kareline[®] ABMS	→	fibres reinforced ABS
Kareline[®] PSMS	→	fibres reinforced PS
Kareline[®] POMS	→	fibres reinforced POM
Kareline[®] PLMS	→	fibres reinforced PLA

Kareline® Natural Composites

Kareline® PLMS

- Kareline® PLMS composites are injection mouldable natural fibre reinforced thermoplastic composites, which are truly **biologically degradable**, when subjected to the right conditions.
- The matrix plastic is biodegradable polylactic acid (PLA) + wood fibres.
- **100 % based on naturally regenerating resources.**
- Kareline® PLMS composites are suitable for e.g. compostable products, disposables and packaging.
- No sink marks in moulded parts, even in very thick walls.
- Cycle time in injection moulding significantly shorter than PLA has
- Easy injection moulding

Kaarna® Service Tray



*Kaarna® Service Tray are made of **durable and ecological Kareline® composite material. Natural surface effects, silky, smooth and dry, close to wood. Unlike wooden boards, the Kaarna® Service Tray is machine washable and hygienic.***

- www.plasthill.fi/fi/kaarna

Kupilka Natural Fibre-composite vessel

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touch and feel



*The Kupilka products are made of environmentally friendly Kareline® Natural Fibre Composite. Kareline® material of Kupilka makes its structure solid, humidity resistant and hygienic. And its **natural and living surface**. – www.kupilka.fi*

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Aurelia® Loudspeakers



*The ECW waveguide is made of Kareline® Natural Fibre Composite which differs significantly from ordinarily used materials. Kareline® composite **creates stylish, humming appearance and rigid construction.** In addition the material can be **recycled.** – www.aurelia.fi*

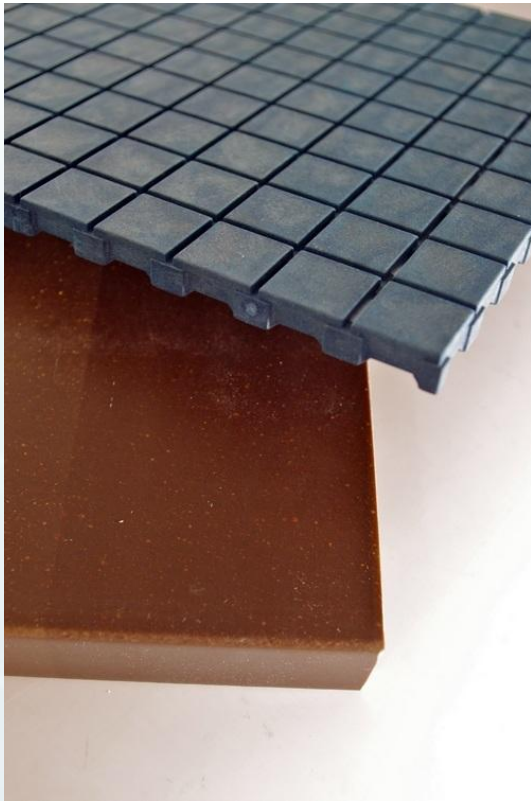
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EKO

THE COMPANY USES ECOENERGY
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FOR NATURE CONSERVATION



**TEHTY SUOMESSA
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