

APPLYING AND TYPICAL PRODUCTS OF THE KARELINE® COMPOSITES

Technical components and parts in industry and house holds; filter frames, wearing parts, disposables

- Currently used materials: Aluminium, PS, PP+GF, PA+GF
- **Suitable Kareline composites - Kareline ABMS, PPMS, PEMS, PLMS, POMS:**
 - ☑ Ease of disposing and recycling, environmental friendliness
 - ☑ Mechanical properties, stiffness

Substitution of glass reinforced materials; furniture, components of different machines and appliances, covers and cases

- Currently used materials: PP+GF, PA+GF, POM+GF and class reinforced thermosets
- **Suitable Kareline composites - Kareline ABMS, PPMS, POMS:**
 - ☑ Positive image, environmental friendliness
 - ☑ Surface quality, technical quality of parts
 - ☑ Uniform shrinkages for all directions, no internal stresses
 - ☑ Ease of disposing and recycling, environmental friendliness
 - ☑ Light materials, strength/weight ratio
 - ☑ Injection moulding capability, minimal wearing of screws and moulds in injection moulding

Different cases and covers; cellular phone, computer cases, loudspeakers, switch boxes, antennas

- Currently used materials: ABS/PC, PP+GF, PA+GF and class reinforced thermosets
- **Suitable Kareline composites - Kareline ABMS, PPMS, PSMS:**
 - ☑ Stiffness and solidity of covers and cases
 - ☑ Positive image
 - ☑ Integration of different materials; metal or wood inserts
 - ☑ Small thermal expansion, small shrinkages in moulding
 - ☑ Visual aspects
 - ☑ Acoustic properties can be adjusted
 - ☑ Ease of disposing and recycling, environmental friendliness



Furniture components; seats, frames, joint components, decorative components

- Currently used materials: PP+GF, PP+GB, wood based materials, aluminium
- **Suitable Kareline composites - Kareline PPMS, ABMS:**
 - ☑ Positive image
 - ☑ Non sweating (breathable) material when compared to plastics
 - ☑ Integration of different materials; metal or wood inserts
 - ☑ Visual aspects
 - ☑ Ability to injection mould also difficult parts and thick walls



Interior design and house building; window and door frames, doors, sills, components, joints, decorative parts, products in humid conditions, electrical housings

- Currently used materials: PP, PP+GF, PVC, steel, massive wood
- **Suitable Kareline composites - Kareline PPMS, ABMS, PSMS:**
 - ☑ Technical and mechanical properties
 - ☑ Resistance to humidity and other environmental conditions
 - ☑ Visual aspects



Decorative parts, trims, form panels in car industry, boat industry, machines

- Currently used materials: massive wood, PC, Acryl, PP+ GF, aluminium
- **Suitable Kareline composites - Kareline PPMS, ABMS, PSMS:**
 - ☑ visual properties; tailor made appearance, surface quality
 - ☑ Ease of disposing and recycling, environmental friendliness
 - ☑ Positive image
 - ☑ Efficiency of injection moulding production
 - ☑ Accuracy of measures, small thermal expansion



Handles, grips, lures, sports equipment, other special uses

- Currently used materials: massive wood, PP, ABS
- **Suitable Kareline composites - Kareline ABMS, PPMS, PEMS:**
 - ☑ Tailor-made materials
 - ☑ Technical properties
 - ☑ Convenient touch and warm surface feeling
 - ☑ Surface treatment capability

Biodegradable materials: e.g. compostable products, products used in cemeteries, disposables, packaging, disposables

- **Suitable Kareline composites - Kareline PLMS:**
 - ☑ Very easy disposing and recycling
 - ☑ Environmental friendliness; 100 % naturally regenerating raw materials
 - ☑ Technical properties compared to pure bio-plastics; temperature range in use, mechanical properties
 - ☑ Injection moulding capability; short cycle time in injection moulding



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