

Ultrawear™ Ceramic Wear Surfaces

Advanced ceramics for papermakers

Kadant AES offers superior ceramic wear surface materials for a wide range of paper machine applications. In addition to Ultrawear AL, a high grade aluminum oxide, Kadant AES offers Ultrawear SN, a silicon nitride ceramic product with exceptional properties.

Ultrawear SN

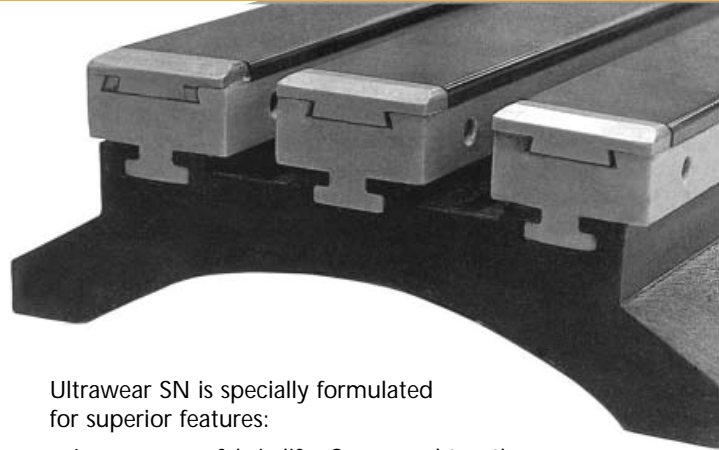
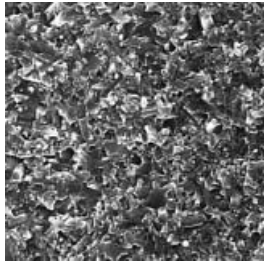
Ultrawear SN meets today's challenging paper machine applications. Selected to provide thermal shock resistance, this, fine grain silicon nitride has the strength and durability your paper machine requires.

Ultrawear SN offers:

- Superior surface finish (4-8 RMS average) resulting in lower drive loads, lower affinity to pitch and optimum life for paper machine clothing
- Superior heat resistance and low thermal expansion to eliminate ceramic failure (cracking) even when exposed to machine washup immediately after shut down.
- Extreme hardness for optimum wear and chemical corrosion resistance, insuring an extremely durable, maintenance-free material lasting for years.
- Outstanding fracture toughness to greatly reduce the likelihood of chipping and physical damage.

Ultrawear SN
Silicon Nitride Strips

Silicon Nitride surface structure magnified 1000 x



Ultrawear SN is specially formulated for superior features:

- Longer press fabric life. Compared to other ceramics, the molecular structure of Ultrawear SN produces a smoother, more dense felt cleaning assembly wear surface. As fiber picking and shedding is virtually non-existent, you gain improved sheet quality and maximum fabric life.
- Ideal for the alkaline process. Ultrawear SN is the ideal wear surface material for the highly abrasive alkaline process. The exceptionally small grain structure prevents calcium carbonate and other foreign materials from becoming embedded in the surface, avoiding fabric abrasion.

Compare Ultrawear SN	Silicon Nitride	Zirconia	Silicon Carbide	Aluminum Oxide
Low porosity	-- Very Good	-- Very Good	-- Very Good	----- Good
Thermal Shock Resistance	-- Very Good	---- Good	----- Good	----- Poor
Wear Life	-- Very Good	---- Poor	---- Very Good	----- Good
Coefficient of Friction	-- Very Good	---- Good	----- Good	----- Good
Chip Resistance	-- Very Good	-- Very Good	---- Poor	----- Fair

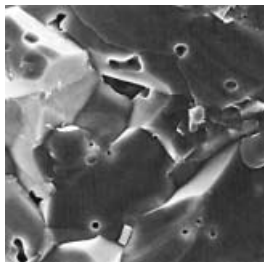
Ultrawear AL

Ultrawear AL is a dense, high purity aluminum oxide that has been an industry standard for many years. This low cost material offers excellent strength, long life and resistance to corrosion.

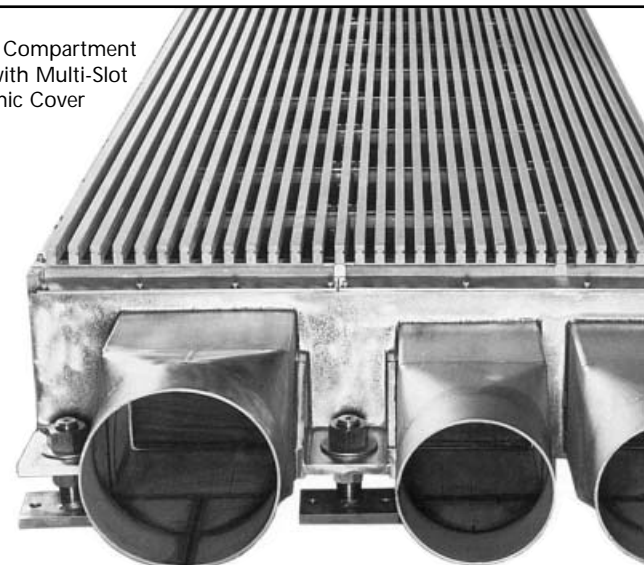
Ultrawear AL offers:

- Proven quality design
- Excellent wear and corrosion resistance
- good mechanical strength
- maintenance-free operation
- low installed cost

Aluminum Oxide surface structure magnified 1000 x









Triple Compartment Box with Multi-Slot Ceramic Cover



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AES

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Ultrawear™ Ceramic Wear Surfaces

Kadant AES offers a large selection of ceramic wear surfaces for a broad range of paper machine applications			
Application	Kadant AES Wear Surface	Description	Ceramic Type
<ul style="list-style-type: none"> Forming Board: Lead Position Deflector 	Solid Ceramic Blade 	Solid ceramic segment for clamping dovetail holder	ULTRAWEAR AL Aluminum Oxide
<ul style="list-style-type: none"> Forming Board: Trail Position Foil Deflector Vac Foil Wet Box UNFOIL 	DURASERT F 	Wire contact ceramic with fiberglass carrier on a poly base for use on any holder	ULTRAWEAR AL Aluminum Oxide
	DURATOP 	Full top ceramic with fiberglass carrier for popular holders	ULTRAWEAR AL Aluminum Oxide ULTRAWEAR SN Silicon Nitride
<ul style="list-style-type: none"> UNFOIL 	DURASERT UNFOIL 	Wire contact ceramic with fiberglass carrier for Kadant AES Wedge Grip holders and patented UNFOIL	ULTRAWEAR AL Aluminum Oxide
<ul style="list-style-type: none"> Flatbox Covers, Single and Multi-Compartment 	MULTI-SLOT Covers 	Ceramic with fiberglass carrier mounted on a 316 stainless steel frame for use on any new or existing structure	ULTRAWEAR AL Aluminum Oxide ULTRAWEAR SN Silicon Nitride
<ul style="list-style-type: none"> Press Fabric Cleaning Assembly Wear Strips 	DURATOP Wear Strips 	Ceramic with heavy duty fiberglass carrier	ULTRAWEAR SN Silicon Nitride
<ul style="list-style-type: none"> Special Applications 	Consult your Kadant AES Sales Engineer	Special tooling charge may apply	ULTRAWEAR AL Aluminum Oxide ULTRAWEAR SN Silicon Nitride ZIRCONIA

Selection, delivery, service

Kadant AES is committed to answering papermakers' needs. For any paper machine application, Kadant AES will provide knowledgeable help in selecting the appropriate wear surface materials, rapid delivery and expert service. Contact a Kadant AES Sales Engineer today.

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