



 Management System  
ISO 9001:2008  
www.tuv.com  
ID 9105011406

**Industrie-Reibbeläge**  
**M.I.C.K.E. Brühmann GmbH**



*stop the slip - get the grip*

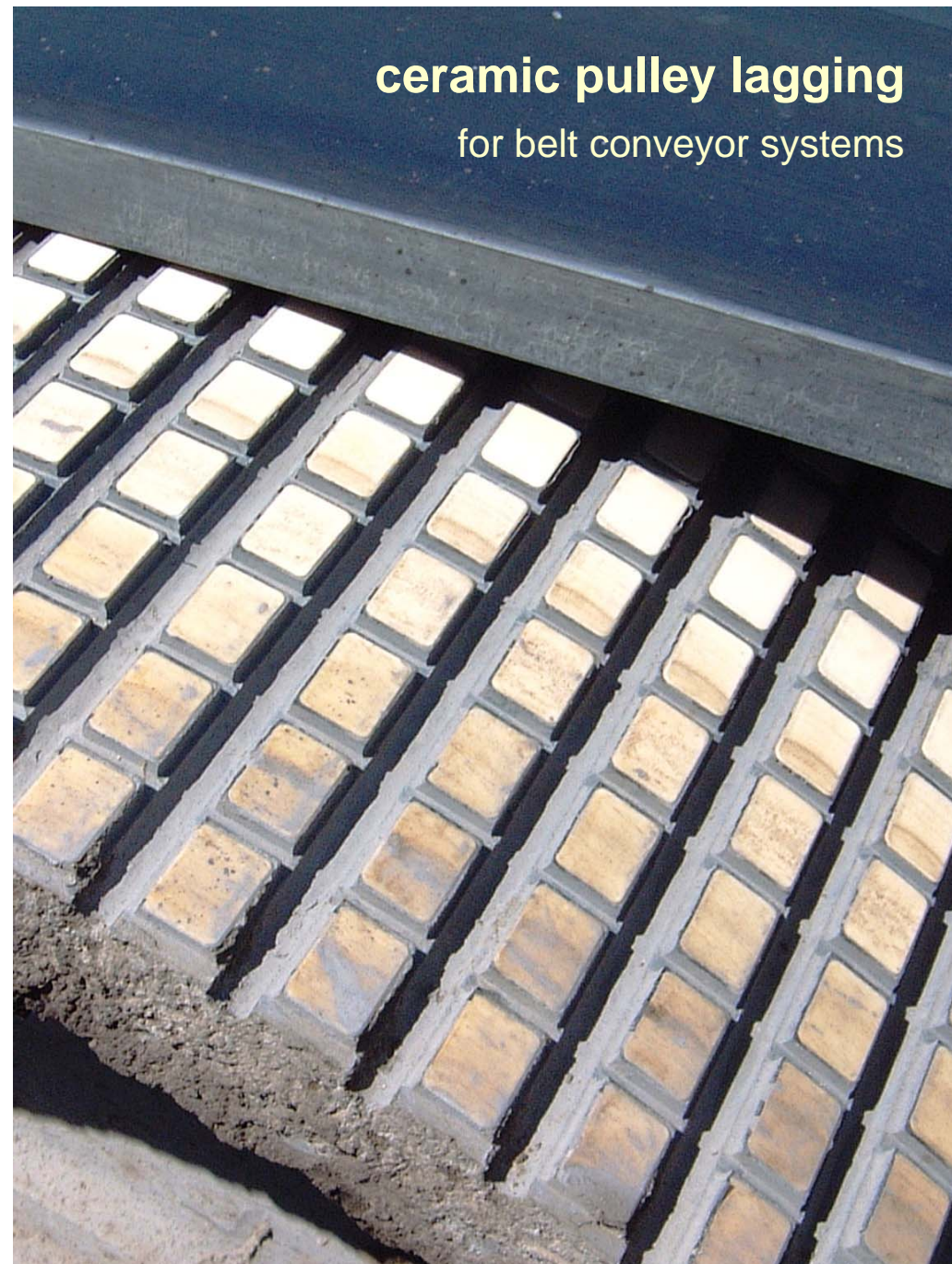


*..trusted since 1950*

In 1950 we invented the worldwide first porous ceramic pulley friction lagging **COMBI** which led to the development of our **CERA** brand range today.

**CERA** laggings are the ultimate-performance and most economic choice for all types of driven and non-driven conveyor pulleys of any size, capacity and load data.

made in Germany.  
M.I.C.K.E. Brühmann GmbH





# ceramic pulley lagging for belt conveyor systems



Ceramic friction lagging guarantees slip-free operation at all times and under any working conditions for maximum lifetime of the belt.

**• Wear protection**

Greatly enhanced lifetime of the lagging is achieved by the extreme hardness and high level of abrasion resistance of the ceramics.

**• Saving maintenance costs**

Without need of frequent lagging replacement/repair downtime of the conveyor and the associated loss of production is minimized very much.

**• Rubber-ceramic and full ceramic lagging**

We manufacture rubber-ceramic lagging strips with the ceramic blocks hot moulded into a rubber backing including a bond-friendly CN-layer.

All-ceramic lagging is directly bonded onto metal by our CERABOND glue systems.



**• Porous and dense ceramics**

We offer a broad portfolio of porous and dense sintered SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub> and SiC ceramics for any type of application.

The choice of lagging type is based on specific requirements regarding friction value, belt tension, drive power, and working conditions.

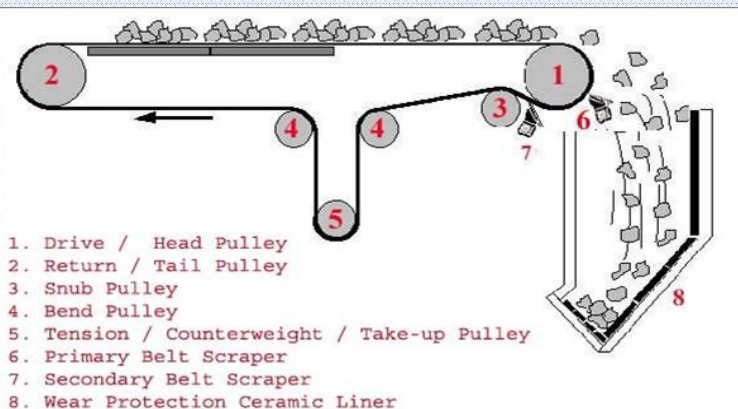


MICKE patented porous ceramics



MICKE Al<sub>2</sub>O<sub>3</sub> ceramics with tooth profile surface

### Applications for ceramic pulley lagging and wear protection liners within belt conveyor systems







# ceramic pulley lagging for belt conveyor systems

## Rubber-ceramic qualities

CERALITE  
CERAGRIP  
SILCARFLEX

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CERADRIIVE  
CERASINT

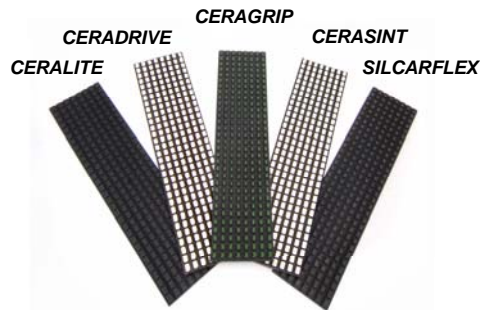
← porous →

← dense →

## All-ceramic qualities

COMBI  
CERASHELL

CERADRIIVE NORUB  
CERASINT NORUB



- Standard size: strips 280 x 15 x 1125 mm (may be cut and joined together to suit any pulley dimension; different lagging thicknesses available on request)

- Rubber backings with bond-friendly CN-layer; available on request in oil/grease resistant or fire resistant FRAS execution

- Advanced „Tread Bar Technology“-Design (TBT): perfect water drainage system to prevent aquaplaning and belt slippage

- Easy installation, using standard cold bonding systems

## SHELL-LAG System

- Friction lagging bonded onto precisely made steel shells for any pulley dimension

- Shells are mounted onto pulley by bolting or welding

- No need to remove pulley from installation; shells may be fixed on site

- „Plug & Play“ system for quick installation



The **CERA lagging** range offers different types of friction materials for belt conveyor pulleys.

The low-friction lagging **CERASINT** features Al<sub>2</sub>O<sub>3</sub> blocks with smooth surface finish for ultimate wear-protection of all non-driven pulleys.



low-friction **CERASINT** lagging on tail pulley

Drive-pulleys require high friction lagging types to ensure slip-free belt operation and maximum belt-lifetime by eliminating differential speeds.

The porous ceramic laggings **CERALITE**, **CERAGRIP** & **SILCARFLEX** and the Al<sub>2</sub>O<sub>3</sub>-quality **CERADRIIVE** with tooth profile surface guarantee 100% form-closure and maximum interlocking with the belt for best adhesion values.



Drive pulley with high - friction **CERADRIIVE NORUB** lagging

The all-ceramic laggings **COMBI**, **CERASHELL** and the **NORUB** are made for flawless and safe operation in all environments – from arctic cold to all-wet tropical conditions and challenge any possible load data.

The **SHELL-LAG** system provides a reliable and quick installation procedure whenever a change of lagging without removal of the pulley from the conveyor system is required.

**We are manufacturer, technical consultant and worldwide service provider.**

**We focus on best quality and reliable products.**

**Try and trust our expertise.**



# ceramic wear protection liners

**Ceramic wear liners** protect sensitive and costly machine parts/surfaces against wear and tear caused by hard or abrasive bulk material during impact, glide or friction wear contact.

Our **CERATEC** products made from high-grade 92% aluminum oxide are impact and pressure resistant featuring a low coefficient of friction ( $\mu = 0,20$ ) and very low wear (see „Blast Wear Comparison“ chart below).

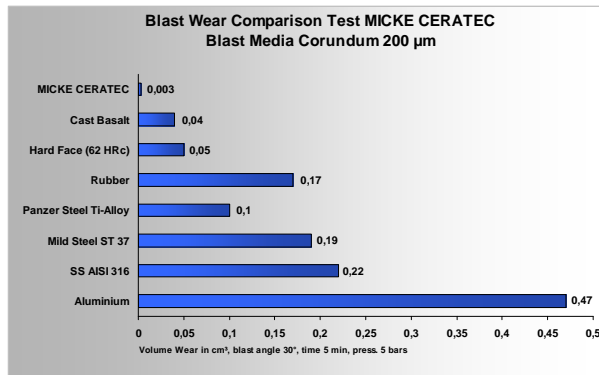
**CERATEC ceramics** provide the ultimate solution in wear protection lining for all installations and machine parts like chutes, discharge points, bunkers, pipes, etc..



Depending on application and workload different thicknesses of the ceramic liner are advisable. Our **CERATEC** products range from 1- 75 mm in thickness and are variable in size and shape.

The **NORUB** type ceramics are directly bonded onto metal surfaces by our **CERABOND** glue system.

The impact resistance of the ceramics can be substantially enhanced through vulcanization with a shock-absorbing and resilient **rubber backing** in different executions.



A blast wear comparison test with competition materials for wear protection shows the superior wear resistance of **CERATEC** ceramics.

By using the advantages of ceramics and rubber-ceramic composites of wear and tear protection linings the lifetime of machinery exposed to wear can be greatly extended.

## CERATEC mosaic sheets

type NORUB	sheet size (w x th x l)	mosaic size (w x th x l)
	500 x 1,5 x 500 mm	10 x 1,5 x 10 mm
	500 x 3 x 500 mm	20 x 3 x 20 mm (or 10 x 3 x 10 mm)
	500 x 4 x 500 mm	20 x 4 x 20 mm (or 10 x 4 x 10 mm)
	500 x 6 x 500 mm	20 x 6 x 20 mm
	500 x 8 x 500 mm	20 x 8 x 20 mm
	500 x 10 x 500 mm	20 x 10 x 20 mm
	500 x 12 x 500 mm	20 x 12 x 20 mm
+ rubber back	sheet size (w x th x l)	thickness ceramic / rubber
	500 x 1,5 + 4 x 500 mm	1,5 mm / 4 mm
	500 x 4 + 4 x 500 mm	4 mm / 4 mm (or 10 mm)
	500 x 6 + 4 x 500 mm	6 mm / 4 mm
	500 x 10 + 4 x 500 mm	10 mm / 4 mm



Mosaic ceramic tiles are attached to an adhesive backing.

Ceramic with rubber backing are hot moulded and come with a bond friendly CN-layer for direct application using standard cold bonding systems.



## ceramic wear protection liners

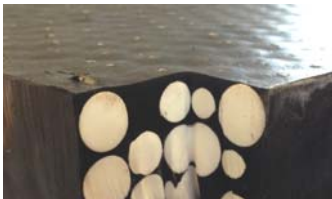
**CERASHOCK impact panels** are made to shield surfaces which are extremely affected by shock and wear caused of bulk material impact.

**CERASHOCK** sheets consist of polygonal ceramic columns that are available in different thicknesses and spanner sizes which are hot moulded into rubber. The ceramics are fully surrounded by elastomer to guarantee a maximum of shock-absorbing performance.



**CERASPHERE panels** feature spherical shaped ceramics fully embedded into a hot moulded rubber matrix. Highest shock absorbing resistance is achieved by dispensing the impact forces into the material.

**CERASHOCK** and **CERASPHERE** impact panels are available in thicknesses 20 - 50 mm in sheets 500 x 500 mm with bond friendly CN-layer.



### Precise fitting

According to our customers requirements we manufacture **customized impact panels** finished with metal backings and stud-welded bolts ready for installation.



### Protect your „gold“

Machine parts and surfaces can be thoroughly protected and shielded by our **CERASHOCK** and **CERASPHERE** products against wear from highest impact forces.

The appropriate wear lining solution for your machinery is capable of enhancing lifetime and saving maintenance costs of the system.

***For more information on our products please visit our website or contact us directly by eMail or phone. We are looking forward to meeting you.***

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