



## ABRASION-RESISTANT POLYURETHANE LINERS

Kryptane® yellow 59° shore A  
Kryptane® red 80° shore A  
Kryptane® red 90° shore A  
Kryptane® green 83° shore A  
Blue-Ox® blue 85° shore A  
Kryptane® black 93° shore A  
Kryptile® ceramic liners  
Fixing materials



## SOLID PARTNERS FOR POWDER & BULK HANDLING COMPONENTS

Your service and knowledge  
supplier of reliable components  
for the bulk handling and  
process industry

## HIGH-QUALITY ABRASION-RESISTANT POLYURETHANE LINERS FOR THE AGRICULTURAL AND INDUSTRIAL SECTORS



Muller Beltex is the specialist in abrasion-resistant polyurethane liners for the agricultural and industrial bulk handling and process industry. The patented polyurethanes Muller Beltex uses, guarantee a stronger, tougher and more elastic polyurethane. This allows you to extend the service life of your steel parts of your installation.

Muller Beltex works according to the Total Cost of Ownership (TCO) concept. This unburdens the customer. Not only do we provide the best solution for the problem, we also take responsibility for the solution we offer, a solution that can be measured in terms of quality, service life and cost. This means you can be sure that the solution you choose does exactly what it promises: it ensures a longer service life and a reduction in maintenance cost.

Our full product range comprises various Kryptane® polyurethanes and fixing materials. Kryptane® is manufactured based on a patented chemical formula, which creates extra cross links between the molecules of the plastic, making Kryptane® extremely abrasion-resistant. We use our extensive knowledge and experience to provide the right solution for every industry.

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## COMPREHENSIVE ANALYSIS FOR THE BEST SOLUTION

Reducing wear minimises material replacement and maintenance cost. Maximum reduction is achieved by monitoring the wear as much as possible. This can only be achieved by means of a thorough analysis. A choice of material made only on cost considerations is unlikely to lead to the longest service life, with wear and premature replacement as a result. A comprehensive analysis addresses the problem at its source and guarantees maximum service life.

MAXIMUM COST REDUCTION THROUGH COMPREHENSIVE ANALYSIS



### What is analysed?

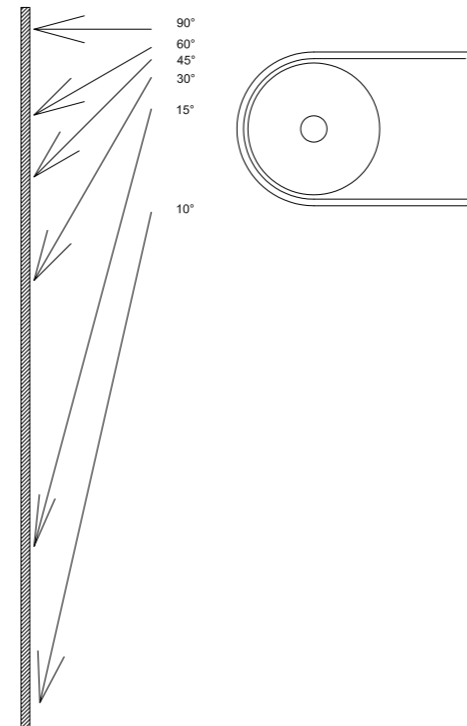
- The properties of the processed product
- The speed of the processed product
- The tonnage/loading of the installation
- The product's drop height
- The impact angle of the product flow
- The opportunities to modify the installation

## EVERY KIND OF WEAR IS DIFFERENT

In the processing and/or transport of bulk material, wear is effectively unavoidable. Dumping, sliding, flowing and dropping: wear occurs wherever bulk goods are in motion, with the degree of wear depending on the amount and the abrasiveness of the product. As a result, wear frequently occurs to the steel parts of installations in the heavy bulk industry.

Bunkers for receiving raw materials, free-fall mixers, weighing bunkers, chutes and pipework systems are all applications that are confronted with moving bulk material and therefore are subject to wear. This wear is most serious at product overshoot area's causing direct impact. The product flow always strikes the material at the same place and at the same impact angle.

Sliding wear occurs in chutes and pipework systems, for example. The extent of this kind of wear depends on the sharpness and hardness of the product. Products such as dry maize and sunflower seeds cause severe wear in these cases. To solve the problem of wear, we usually need to look for a combination of means. Our many years of experience in the lining of steel parts has taught us that polyurethane is almost always the right solution for these wear problems.



The impact angle is an essential part of the analysis. The drawing opposite illustrates what happens when the impact angle is varied from 10° – 90°. Reducing the fall speed of the product flow and moving the impact point can also achieve wear reduction.

Muller Beltex uses the analysis to assess all the installation's modification opportunities. Modifications to the impact angle, the fall speed and the impact point can make a great difference, having first checked whether product-on-product is a possibility. Using the analysis results, Muller Beltex can advise you on your wear problem – we will find the best solution for you.

The Total Cost of Ownership (TCO) principle unburdens the customer. We not only provide the best solution for the problem, we also take responsibility for the solution we offer, guaranteeing longer service life through the high quality and the reduction in wear and maintenance cost.

## POLYURETHANE IS ABRASION-RESISTANT AND ELASTIC

Wear to the steel parts in an installation can only be reduced effectively by a liner that is both elastic and abrasion-resistant. An elastic product absorbs the impact energy well, while an abrasion-resistant product extends the service life and reduces the maintenance cost. These two properties are therefore essential to reducing impact and sliding wear.

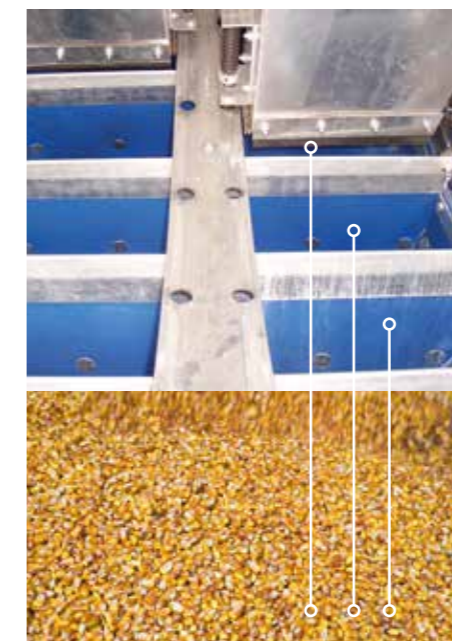


Lined pipework – Kryptane® green

ABRASION-RESISTANCE AND ELASTICITY OF POLYURETHANE IS ESSENTIAL TO GIVE AN INSTALLATION'S STEEL PARTS A LONG SERVICE LIFE



Lined baseplate for chain conveyor – Kryptane® black



Lined product distribution flop gate in grain-processing industry – Blue-Ox®

Due to their inelasticity, steel, ceramics and polyethylene are less suitable for direct impact (60° – 90°). An unfavourable impact angle generally causes more wear, as a product choice with the right hardness/elasticity is essential here. Analysing the impact angle ensures that we can adapt the right hardness level of the polyurethane.

As polyurethane is both abrasion-resistant and elastic, it provides a good solution for many wear problems. Kryptane® polyurethane goes a step further and is the patented brand for the agricultural and industrial bulk handling and process industry. These polyurethane liners are manufactured based on a patented chemical formula, which creates extra cross links between the molecules of the polyurethane. This makes Kryptane® stronger, more elastic and abrasion-resistant than other polyurethanes and therefore extremely suitable for handling products such as minerals, building materials, grain and raw materials for animal feed.

# KRYPTANE® UNSURPASSED AND WIDELY APPLICABLE

Experience shows that Kryptane® provides the most complete wear protection. The product was developed in 1980 and to date is unsurpassed for its extremely high elasticity and abrasion resistance. Kryptane® is a top-quality product and is widely applicable. It is also noise-attenuating, a great advantage for both personnel and the environment.

This exceptional polyurethane is available in different hardnesses, allowing it to provide the best solution for both impact and sliding wear. Kryptane® is also available in grades with a very low coefficient of friction. This reduces product adhesion and promotes through flow. This low coefficient of friction also makes these grades very suitable for application in the baseplates of chain conveyors.



## KRYPTANE® APPLICATIONS ABRASION-RESISTANT LINERS

1. Elevator head
2. Elevator foot
3. Conveyor belt scraper blades
4. Tip-over and drop points
5. Skirting and spillage control
6. Pipework systems
7. Silo outlet
8. Chain conveyor baseplate

UNSURPASSED  
IN ELASTICITY AND  
ABRASION RESISTANCE,  
AVAILABLE IN  
DIFFERENT  
HARDNESSES



## KRYPTANE® IS UNIQUE AND VERSATILE

The product variants are flexible in their application and can be used for a wide range of wear problems. We are pleased to detail the possible applications and unique properties for you.

MULLER BELTEX  
PROVIDES A UNIQUE  
PRODUCT RANGE FOR  
ALL APPLICATIONS BY  
NEVER MAKING  
ANY CONCESSIONS  
TO QUALITY



## KRYPTANE® A HOUSEHOLD NAME SINCE 1980

Since 1980, Muller Beltex has been supplying Kryptane® worldwide as a replacement for rubber, polyethylene, steel and ceramics. Kryptane®'s constant high quality and versatility is what makes it so successful. Muller Beltex offers a unique range of product variants and never makes any concessions to quality.

### Properties of Kryptane® polyurethane

- Highest possible split-tear resistance
- Extreme abrasion resistance
- Reduced product adhesion due to very low coefficient of friction
- Excellent product through flow due to very low coefficient of friction
- High oil and grease resistance
- No moisture absorption
- No thermal expansion
- Highly noise-attenuating
- The light and flexible material ensures straightforward fitting
- The elasticity reduces breakage of and damage to the processed product, resulting in a higher quality end product
- Food quality, conforming to European standards

### Applications of Kryptane® polyurethane

- Hoppers
- Bunkers
- Elevator heads and in- and outlets
- Dispensing and weighing belt systems
- Tip-over and drop points
- Distribution flaps
- Chutes and vibration chutes
- Conveyor belt scrapers and rollers
- Skirting for belt conveyors
- Chain conveyor baseplates
- Pipework systems
- Mixers

Do you have a different application you would like to use Kryptane® for? Then please contact us. With our many years of specialised know-how and experience, we are dedicated to help you further.



## SUPPORT AND WORLDWIDE DELIVERY FROM STOCK

The unique and extensive range of Kryptane® product variants include various hardnesses together with the corresponding fixing materials. Our stockholding strategy allows us to supply quickly anywhere in the world, while our broad experience in the field of logistics ensures that export, including documentation and handling, is always properly organised.



THE HIGHEST  
POSSIBLE QUALITY  
SUPPLIED IN THE  
SHORTEST  
POSSIBLE TIME

### KRYPTANE® YELLOW 59° SHORE A

Exceptionally elastic polyurethane with an unusually high resistance against impact and shock of broken products up to 50 mm.

### KRYPTANE® RED 80° AND 90° SHORE A

Resistant to sliding and/or impact wear with fine product up to 5 mm lump size, in both wet and dry conditions. With its very low coefficient of friction, the product does not adhere and flows through well.

### KRYPTANE® GREEN 83° SHORE A

High-resistance polyurethane against strong sliding, cutting and impact wear with rough product up to 50 mm lump size.

### BLUE-OX® BLUE 85° SHORE A

High-quality polyurethane that is most suitable for agricultural applications with light to medium wear.

### KRYPTANE® BLACK 93° SHORE A

Polyurethane resistant against high sliding, grooving and impact wear suitable for very rough and sharp products.

### KRYPTILE® CERAMIC POLYURETHANE

Kryptile® combines the properties of ceramics with the huge impact resistance of Kryptane®. This protects the fragile ceramic and is ideal for impact situations with large quantities of sharp and coarse product.

### FIXING MATERIALS

Kryptane® is easy to process and install as it is relatively light and flexible. Mounting is possible using adhesive or various types of bolts, and it is available with a fabric layer for adhesive fixing. For fixing with bolts, stretched metal or a solid steel base is available. A Muller Beltex specialist will be glad to advise you on fixing and finishing.

DOWNLOAD THE TECHNICAL DATASHEETS FOR THESE  
COMPONENTS ON [WWW.MULLERBELTEX.COM](http://WWW.MULLERBELTEX.COM)

## MULLER BELTEX OFFERS MORE

Muller Beltex's complete product and knowledge portfolio includes a comprehensive package of high-quality components for the bulk and process industry. Ranging from engineering to supervision, the high-grade abrasion-resistant polyurethane liners can be supplemented to provide a total solution for your bulk handling and processing equipment running optimally. Complementary products from Muller Beltex:

- process monitoring systems
- components for elevators
- conveyor belts and components
- parts for sifters and screens
- engineering, advice and supervision



SUPPLIER OF  
QUALITY,  
KNOW-HOW  
AND EXPERTISE

### ADVICE AND SUPERVISION

In addition to a comprehensive package of top-quality components for the bulk and process industry, our complete product and knowledge portfolio also includes advice and supervision. By involving Muller Beltex at an early stage, we can provide the right solution for your wear issue, based on our extensive experience and know-how. Muller Beltex can support you in the entire process and provide on-site supervision where necessary.

FOR TECHNICAL DATASHEETS,  
PLEASE VISIT [MULLERBELTEX.COM](http://MULLERBELTEX.COM)





MULLER BELTEX  
VISION,  
EXPERTISE  
& QUALITY



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