

# Abrasion-resistant Polyurethane Liners



Argonics' Kryptane® polyurethane provides the most complete wear protection for your equipment. Kryptane has become the material of choice in many applications because of its outstanding physical properties, which produce a superior wear-resistant product, and the versatility of applications where it can be used.



## BENEFITS:

- Incredibly high split-tear resistance
- Extreme wear resistance
- Reduced product adhesion due to low coefficient of friction
- High oil and grease resistance
- Not susceptible to thermal expansion
- Flexibility aids in proper fit
- Elastomeric properties reduce breakage of and damage to the conveyed product

## TYPICAL APPLICATIONS:

- Bins
- Hoppers
- Turnheads
- Chutes
- Discharges

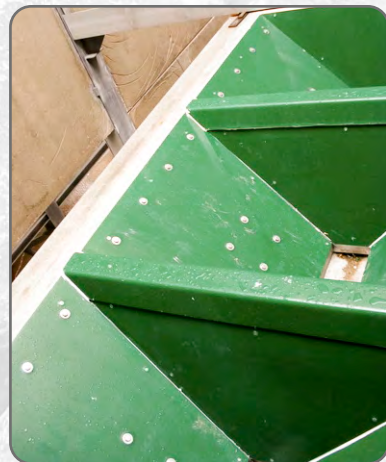




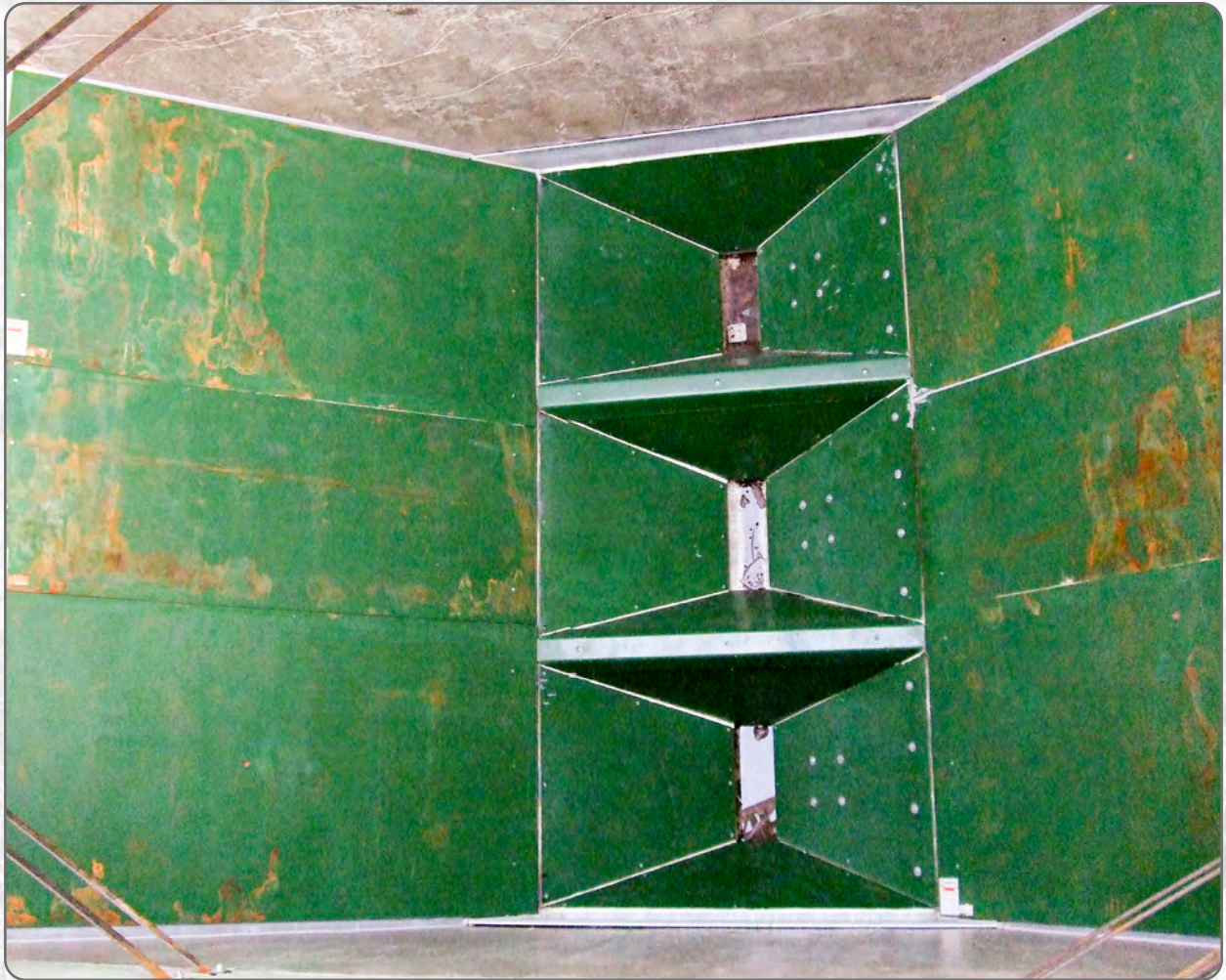
# Abrasion-resistant Polyurethane Liners

## Designed to extend the wear life and reduce maintenance requirements of your equipment

- Argonics' polyurethanes offer unparalleled abrasion and tear resistance. They have proven themselves time and time again over the past two decades and stand up to the harshest abrasive environments.
- Argonics' polyurethanes save your company money by reducing costly downtime in process equipment, reducing your overall production cost.
- Argonics' polyurethanes are lightweight, reduce noise, are easy to install and corrosion-resistant.
- Argonics' polyurethanes are not brittle like plastics, exhibit and elastomeric memory and are not subject to thermal expansion.
- Argonics' polyurethanes have better abrasion and tear resistance than rubber, have a higher load-bearing capability, are ozone and ultraviolet resistant, and can be manufactured in a wider range of durometers (hardness).







## High quality products and value-added service

At Argonics, we pride ourselves on the superior performance of all of our urethane components designed and formulated for aggregate equipment.

We offer a cost-effective warranty on all of our materials. All Argonics parts are warranted against defects in material and workmanship for one year after the date of purchase.

Our goal is to provide top-quality products and great service that will meet or exceed your expectations. Our success is measured by our customers' satisfaction.



# Comprehensive Analysis



## Choosing the best solution for the application

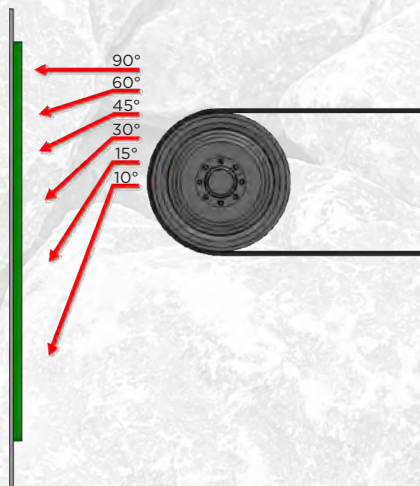
Whether your wear issue is sliding abrasion, impact damage, sticking material or excessive corrosion, Argonics polyurethane liners are engineered to meet the particular demands of your specific application.

A comprehensive analysis addresses the problem at its source and guarantees maximum service life:

- Properties of the processed product
- Speed of the processed product
- Tonnage/loading of the application
- Product's drop height
- Impact angle of the product flow
- Ability to modify the application

The impact angle is an essential part of the analysis. The drawing to the right illustrates what happens when the impact angle is varied from 10 degrees to 90 degrees.

By correctly analyzing the proper application characteristics like the specific product type, the angle of impact and the wear issue to be addressed, Argonics polyurethane liners will provide a genuine improvement as a replacement for polyethylene, rubber, UHMW polyethylene and steel wear liners.





## Ester Urethanes

### KRYPTANE 83A GREEN

High abrasion resistance to harsh sliding, cutting and impact. Ideal for most sand and gravel materials, coal, ores. Impact angle of 30° to 60°.

### KRYPTANE 83A FRAS

Specifically formulated for coal handling. Kryptane FRAS offers flame retardant anti-static properties that surpass the strictest standards. Impact angle of 30° to 60°.

### KRYPTANE 93A BLACK

Strong abrasion resistance to sliding, grooving and impact. 1½" (38mm) washed/finished product. Impact angle of 60° to 90°.

### KRYPTANE 63A YELLOW

Extremely elastic polyurethane with an exceptionally high resistance to impact of crushed rock up to 2" (50mm). Impact angle of 60° to 90°.



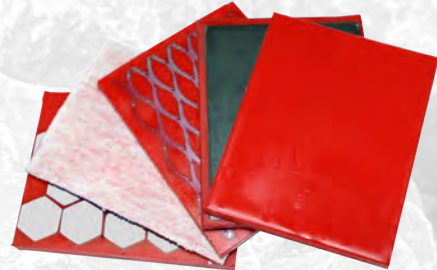
## Ether Urethanes

### KRYPTANE 80A RED

Resists sliding and/or impingement abrasion. Fine particles including sand, grain, ¾" (9.5mm) minus washed materials. Impact angle of flat to 30°.

### KRYPTANE 90A RED

Resists sliding and/or impact abrasion. Very low coefficient of friction. Fine products up to ⅜" (5mm) in size, wet and dry. Impact angles of flat to 30°.



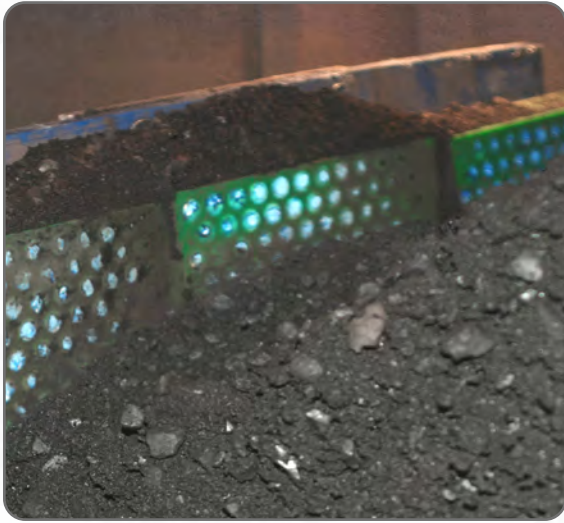
### KRYPTANE ORANGE

MSHA-approved Front Line™ flame-retardant urethane can be any durometer or formulation. Impact angle of 30° to 60°.





# Fully Customizable Panels REDI-LINER & MAGNETIC



**Redi-Liner bolt-in 12"x12" panels** can be arranged into any wear pattern that is needed. Their unique, simple installation method allows you to replace only what's needed instead of replacing the entire liner.

## **BENEFITS:**

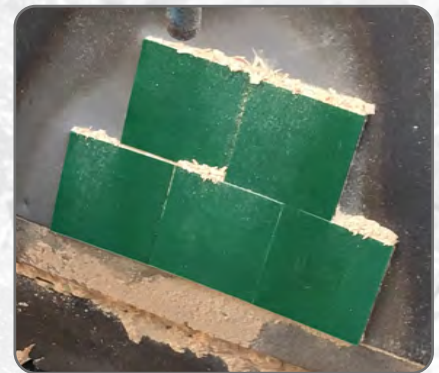
- Easy to install
- Requires no maintenance
- Will outlast most other wear product available
- Provides protection for tough wear spots in loading areas, hoppers and transfer points

Redi-Liner is available in both solid and ceramic-embedded polyurethane. Choose from a variety of durometers and formulas designed for a number of different applications.

**Magnetic modular panels** can be quickly and easily installed into any pattern to help reduce wear in critical areas of your operation.

## **BENEFITS:**

- Rare earth magnets hold panels in place
- Panels can be placed together to address wear areas of any size
- Our 1/2" thick patches are perfect for covering holes in walls or chutes
- Easy to install with no added maintenance



Panel sizes are available in 6"x6", 6"x12", 12"x12", and 12"x24". Thicknesses available are 1/2", 1", 1 1/2", and 2". Custom sizes available upon request.

## **CUSTOM LINERS OFFER A VERSATILE SOLUTION**

Custom liners can be used anywhere our standard sheets don't fit, where weight and size are a concern, or where a long-term solution is needed. Our custom liners save you hours of labor usually spent cutting and fitting sheets in the field.

- Pieces are manufactured to fit precisely together
- Easy to replace one piece at a time
- No wasted material
- No extra labor cutting pieces from standard sheets
- Faster installation
- Extremely fast delivery



# Ceramic Polyurethane Liners



## KRYPTILE CERAMIC POLYURETHANE

Kryptile is the solution for aggressive applications. Kryptile ceramic liners combine the wear resistance of high alumina oxide ceramic with the impact resistance of Kryptane<sup>®</sup> polyurethane. Kryptile liners are all custom designed to the shape of your chute, bin or hopper, eliminating the need to cut or fit the liners in the field and ensuring a perfect fit every time.

### KRYPTILE KT

Kryptile KT is the original ceramic hextile liner. The hextile formation is closely gapped to provide superior sliding abrasion resistance in high fines applications, wet or dry. Kryptile KT is generally not recommended for applications where there is impact; it is for slide abrasion only.



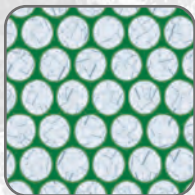
### KRYPTILE KS

Kryptile KS is specifically designed for aggressive applications with high impact and large rock. Kryptile KS is generally recommended for applications with 10" (254mm) minus rock dropping from a maximum of 6 feet (1.83m).



### KRYPTILE KC

Kryptile KC works well in virtually all applications. Kryptile KC is available in liners at least 1 1/4" (32mm) thick. Kryptile KC is generally recommended for applications with 6" (152mm) minus rock dropping a maximum of 4 feet (1.22m).



### KRYPTILE KH

Kryptile KH is our ceramic cube liner. Kryptile KH is available in liners at least 2" (51mm) thick. Kryptile KH is generally recommended for applications with 15" (381mm) minus rock dropping from a maximum of 8-10+ feet (2.44-3.05+ meters).





# Technical Specifications

## OUR MOST COMMON POLYURETHANE FORMULATIONS

	Y63 Duro	R80 Duro	G83 Duro	R90 Duro	B93 Duro
Hardness durometer (shore A +/- 5)	63	80	83	90	93
Tensile strength (PSI)	4865	4501	6600	4605	7500
100% modulus (PSI)	400	645	800	1216	1390
300% modulus (PSI)	708	1234	1264	2386	2250
500% modulus (PSI)	1947	2849	3413	4090	5500
Angle tear strength (die C) (lbf/in)	248	361	450	465	598
Trouser tear strength (lbf/in)	68	180	250	127	460
DIN abrasion loss (ml)	0.059	0.048	0.044	0.048	0.052
Cured density	1.21	1.05	1.21	1.05	1.21
Coefficient of friction	N/A	N/A	0.27	N/A	0.19



**ARGONICS**  
ENGINEERED POLYURETHANE

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