Providing the World Bulk Material Handling Industry with Productive, Safe and Reliable “Complete Conveyor Solutions.”

Wear Solutions
ABOUT US

Providing solutions for your conveyer issues is at our core. From engineers to designers, from technicians to product specialists. It’s what drives everyone at ASGCO®, and the job is never done until our customer is satisfied... IT’S OUR GUARANTEE!

PRODUCTS AND SERVICE THAT LEAD TO SOLUTIONS

At ASGCO®, our core motivation is to solve problems. We love a challenge, and thrive under pressure. We don’t just provide the highest quality products and service; we deliver solutions.

A HERITAGE OF INNOVATION

Since our founding in 1971, by Alfred S. Gibb and his son Todd, ASGCO® has pioneered some of the most effective products in use for improving bulk material handling. We believe in taking care of the customer with great quality products and exceptional service. This has been a successful and standard policy at ASGCO® for many years and will continue in the future.

FOCUSED ON SOLUTIONS

At ASGCO®, we continue to strive to make the handling of bulk materials cleaner, safer, and more productive. No matter what the basic assignment, we always seek out ways to increase production and to reduce operating costs. ASGCO® uses innovative products and engineered solutions to solve problems happening now and to prevent problems from happening in the future.

JUST ASK ASGCO!

What may seem like a problem to our customers is just a chance for us to put every resource we have in motion. And no matter what the basic assignment, we always seek cut ways to increase production and to reduce operating costs. Our team is always ready, All you need to do is ask ASGCO!

OUR PROMISE...

Applies to every contact, every time. Always there and work to bring solutions that are best for the customer in the long term. Develop and sell products that satisfy the practical working needs of our customers.
URETHANE Screen Feeder Box & Side Wear Liners

Urethane Screen Feed Box Liners and Side Wear Liners

ASGCO® has expanded the use of their Cast Urethane products to include screen wear parts. Rubber compounds that are compounded to 90 or 95A durometer have compromised physical properties. All of our urethane wear products are cast from our exclusive ASGCO® urethane compound with a durometer of 80 or 85 along with steel backing plates for extra added support.

Abrasion Resistant – Cast urethane screen wear products are molded using our high-grade polyurethane compounds that last longer and offer superior abrasion, cut, and tear resistance when compared to rubber.

Higher Load-Bearing Capacity – Better compression set, and superior tolerance to greases, oils, oxygen, and ozone.

Biodegradable - man-made urethans can be easily formulated to outlast rubber and stand up to sunlight and harsh outdoor environments.

Multiple Steel Options – Fully backed with steel, or only a steel back allows for full custom options. Can be stud or plug welded.

Screen Feed Box Liners
Screen Feed Box Liners are patterned for a direct replacement of the current liner configuration being used, or depending on the wear characteristics change the layout for maximum wear life. Liners have the ability to have various sized and shaped ceramics inserted to increase the longevity of the liner.

Screen Side Wear Liners
Screen Side Wear Liners are boxed in with mild steel or hard plate to prevent premature edge wear or damage. Bolt patterns, sizes, and thicknesses are fully customizable to increase the wear life for your operation. In house engineered to allow for an ease in duplication.

Urethane Classifier Shoes
Urethane Classifier Shoes feature our special wear-resistant urethane material at the outer edge of the shoe (the area that sees the most abrasion) to extend the wear life of the shoe. Longer shoe life means you experience less maintenance downtime and lower operating costs, resulting in higher productivity and profits.

Abrasion Resistant – Classifier Shoes are molded using our high-grade urethane compound that last longer and are resistant to abrasive wear.

Ceramic Beads – can also be added to the edges as an extra option against wear.

Interchangeable – between right and left hard screws, reducing inventories.

Can Be Used as Replacement Wear Parts – on classifiers and screw conveyors in OEM equipment.

Can be made for custom applications.
WEAR LINERS  Longest Lasting, Abrasion Resistant

ASGCO® Conveyor Wear Liners products are the longest lasting, most cost effective in the industry!

Bulk handling conveyor belts have many applications in today's mining and quarry industries. Because of their reliability, versatility, and range of capacities, bulk conveyors are the most common type of bulk handling conveyor belt system. Wear Liners are designed to be an integral part of any bulk handling conveyor system.

ASGCO® manufactures a variety of conveyor wear liners with many options and sizes to choose from. Designed to handle any tough hard rock mining application. Abrasion resistant, modular ‘high-wear’ material to line belts, chutes, and bin impact areas, ASGCO® wear liner products are the longest lasting, most cost effective in the industry.

Armorite® (White Iron)

Armorite® is an extremely hard, laminated bi-metallic, impact and wear resistant composite, which has a nominal hardness of 700 Brinell (63Rc) produced by combining a highly alloyed chromium-molybdenum white iron (to AS 2027 152 CrMo) and metallurgically bonding it to a mild thick steel backing plate. The resultant bond possesses high shear strength of over 250 Mpa and will not separate.

X-Wear® (Ceramic)

ASGCO® X-Wear® will substantially reduce your operating costs when compared to any other lining material. The smooth laminar surface of X-Wear® provides the optimum sliding surface for bulk material handling. Forget UHMW and other plastics that distort, buckle and wear out. The low coefficient of friction and dimensionally stable surface of X-Wear® will provide years of maintenance-free service.

X-Wear® MDX

ASGCO® X-Wear® MDX Extra Duty Ceramic Wear Liners are made of extremely hard ceramics that provide unsurpassed resistance to abrasive wear while the rubber effectively dampens the impact forces that can crack the ceramic rods. The resilient rubber matrix that surrounds the ceramic rods is hot vulcanized for superior adhesion.

Nitrinic SX

Nitrinic SX® Stainless Steel is a nitrogen-strengthened stainless steel developed for applications requiring good wear resistance and durability. The high wear-hardening rate Nitrinic SX® stainless steel results in a high-strength material with superior abrasion resistance and elongation superior to Type 304L.

Chromium Carbide Overlay (CCO) Wear Plate

ASGCO® Chromium Carbide Overlay (CCO) Wear Plate is an extra hard clad plate with additives that gives even higher abrasion resistance in high stress applications with moderate to low impact conditions. It is produced using a mild steel base plate and hardened faced / overlaid with our proprietary high chromium white ASGCO® Chromium Carbide Overlay (CCO) Wear Plate can be formed and rolled.

URETHANE Canoe Liners, X-Wear® Urethane Magnetic Liners & Patches

Urethane Canoe Liners

ASGCO® Urethane Canoe Liners are engineered to absorb impact and abrasion in all types of material transfer operations. Made from our exclusive urethane compound with a durometer of 60-85, along with steel backing plate for extra added support. These type of liners are very effective, especially where material is being bulk loaded to help control leakage in and around load zone areas. ASGCO® Urethane Canoe liners are a key solution in decreasing downtime and increasing production due to spillage, while maintaining a safe working environment.

- Standard sizes available in 1”, 2”, and 3” thickness
- 9” wide and 48” long
- Available in beveled edge or square edge
- Skid resistant on 12” centers for ease of adjustment in the tightest applications
- Liners can be adjusted easily up or down to achieve the best fit
- Custom sizes available on request.

X-Wear® Urethane Magnetic Liners and Patches

X-Wear® Urethane Magnetic Liners and Patches provide a temporary yet reliable patch system that can be installed quickly and safely without the use of welders or bolt fastening systems. This allows for minimal downtime, in repairing a leak or wears spot on chutes or load points to name a few. When time allows, the ASGCO® X-Wear Urethane Magnetic Patch™ can easily be removed, so that a more permanent repair can be performed.

- Constructed with ASGCO-hardened Polyurethane
- Introduction High strength rare earth magnets allow for installation using magnetic force alone.
- No Bolting: No Welding: No Cutting to the applied area
- Eliminates the need for hot work permits in most areas
- Stay securely in place on vibrating screens and chutes
- Can be repositioned easily and safely, when time permits, for the repair to be done permanently
- Can be field trimmed to fit unusual surfaces or conditions, due to the polyurethane material

Urethane Magnetic Liner or Patch

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Size</th>
<th>Price</th>
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Urethane Magnetic Patch with 6” Ceramic

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Urethane Magnetic Internal Liner w/ 12” Ceramic

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<tr>
<td>ASG-36/36</td>
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ASGCO® Urethane Products are the Highest Urethane Compound on the Market!

ASGCO® Urethane has been manufacturing urethane injection molding parts for several industries. Injection molded urethane products have been produced for various industrial sectors including mining, transportation, building and construction, machinery and foundry, textiles, fiberglass, steel and aluminum and seals. We mold all of our standard and custom formulas as well as our entire range of durometers, 20A to 80D.

The diverse properties of castable polyurethane make it the leading choice of engineers looking for long lasting materials for their high load, high-stress environments. Polyurethane routinely outperforms plastic, rubber and steel in its overall ability to resist harsh environmental factors such as abrasion, heat, solvents, oil and acid. In addition, polyurethane’s noise abatement ability makes it the preferred material in chain-drive designs, conveyor belt systems and assembly line environments. In today’s manufacturing environments where the cost of downtime is measured in thousands of dollars per hour, polyurethane’s incredible durability actually increases your company’s profitability.

Compression molding responds to a wide range of product sizes, shapes and performance requirements. Our molded polyurethane products reduce the time and expense of machining parts from solid stock plastic.

If you are seeking a world-class polyurethane manufacturer and a leader in molded polyurethane products and technology, then ASGCO® is here to help. We offer a vast array of polyurethane compounds for your polyurethane molded parts.

Polyurethane molding produces a wide variety of products for most industries. ASGCO® Urethane has been the polyurethane specialist that companies around the world have depended on to gain all of the advantages of polyurethane for a wide range of parts.

ASGCO® Urethane Varieties

Non-Reinforced - sheets have no backing. They are the most lightweight and economical of all Diamondback™ sheet types and can be hand-armed.

Expanded Metal-backed - sheets are backed with 15-gauge steel that makes them more rigid and flat. The metal backing also provides a structurally sound “stopping point” for bolt heads.

Perforated Metal Plate - Urethane sheets are backed with perforated metal. The small openings accommodate self-tapping metal screws.

Weldable or Stud-Welded Studded Metal Plate - Metal plates (1/4”) welded to the back of these urethane sheets allow them to be welded or bolted onto metal surfaces.

Armorite® Protection for Extreme Conditions

ASGCO® Armorite® is guaranteed to last 5-6 times longer than Ar500!

Armorite® is an extremely hard, laminated bimetallic, wear resistant composite, which has a nominal hardness of 700 Brinell (BSR) produced by combining a highly alloyed chromium-molybdenum white iron (to AS 2027 163 C45) and metallurgically bonding it to a mild steel backing plate. The resultant bond possesses high shear strength of over 250 Mpa and will not separate.

Armorite® provides maximum impact and abrasion protection in high wear areas, with the mild steel backing cushioning the white iron enabling it to withstand impact. Armorite® is easily weldable to areas of the conveyor system with minimal preparation providing unsurpassed resistance to abrasive bulk material wear.

Armorite® Typical Bond Zone

- White iron: Modified AS2027 150 Cr Mo
- Vaccum brazed and liquid nitrogen cooled to achieve a high strength joint
- Mild steel backing offers strength, machinability, and impact resistance
- Can be welded in place, through-bolted, stud bolted, drilled, tapped, keyed
- Ease of fitment, very versatile

Armorite® Benefits

- Lower operating costs
- Longer service life when compared to conventional materials
- Increased production
- Improved product efficiency
- Increased equipment availability

Armorite® Applications

- Chute Linings
- Rock Box Edges
- Grizzly Cape/Screen
- Transfer Points
- Impact Plates
- Distributor Plates
- Arm Hub Liners
- Bin Liners
- Hooper Wear Plates
- Divided/Spliter Bars
- General Wear Protection

- Liner Panels
- Wear Plates
- Wear Bars
- Shaped Wear Bars
- Skid Bars
- Grizzly Bars
- Chokey Bars
- Wear Buttons
- Wear Duratec
- Shredder Tips
- Knife Edges
ARMORITE Smooth Conveyor Wear Plate

Armortite Smooth Conveyor Wear Plates contain a very cost-effective method of extending wear life in chutes, hoppers, bins, impact walls and screw plates.

- Extreme abrasion resistance across a range of applications
- Custom design to meet customer requirements
- Optimal Norton steel for reduced costs

- Liner size allows for localized replacement in high wear areas
- Reduced downtime and reduced maintenance costs
- 5-6 times the life of AH500

ARMORITE Skirtboard Conveyor Wear Liners

Armortite Skirtboard Conveyor Wear Liners protect your skirtboard and provide a significantly longer wear life than currently used skirtliners. The skirt liner is produced from 5/16" thick Armortite that is enhanced with a 25% thick Armortite steel producing a product that is 700 BHN with a high impact resistance. It can be used for all conveyors and transfer points where the abrasion of spills or centralization of load is required.

- Reduces downtime and maintenance costs
- Designed to be bolted to 108" for longer wear life
- Custom sizes available
- For all conveyors and transfer points

ARMORITE Grizzly Screen Cap Conveyor Wear Bars

Armortite Grizzly Screen Cap Conveyor Wear Bars are available in a range of thicknesses and lengths. Used in grizzly screens, chutes, hoppers, bins, rock box edges and other high wear applications.

- Superior wear life when compared to conventional alloys used such as manganese steel, clad overlay and other alloys
- Cost effective method for protecting your equipment
- Variety of sizes, ragged sizes and shapes available
- Ideal for aggregate and coal mining applications
- Reduces conveyor downtime and maintenance

ARMORITE Cheeky Conveyor Wear Bar

Armortite Cheeky Bars offer protection on contoured surfaces such as chute linings, buckets, loaders, excavators and dragline machines.

- Easy formation to convex or concave surfaces
- No pre-heating or post-heating required when welding bars in place
- Cost effective method for protecting your equipment
- No storage problems or excessive cutting

CHROMIUM CARBIDE Moderate Abrasion Resistant Wear Plate

Chromium Carbide Overlay (CCO) Wear Plate

ASGCO Chrom Carbide Overlay (CCO) Wear Plate is an extra hard clad plate with additives that gives even higher abrasion resistance in high stress applications with moderate to low impact conditions. It is produced using a mild steel base plate and hard-faced / overlayed with our proprietary high chromium wire. ASGCO Chrom Carbide Overlay (CCO) Wear Plate can be formed and rolled.

- Cost effective solution when compared to traditional abrasion resistant steels
- Recommended for resistance to wear by abrasion, flexing, cavitation, and particle erosion in high temperature applications (up to 1100°F).
- Ideal for mild to moderate impact abrasion resistance.
- Low maintenance cost and easy installation.

- The overlay surface of CCO plate will consist of a series of beads with numerous hardline cracks in them. These properly spaced cracks are a natural phenomenon and are beneficial to the material. The cracks propagate through the overlay and end at the fusion line.

APPLICATION SPECIFICATIONS:

- Cutting - Plasma cutting, air arc, abrasive saw or water jet.
- Welding - Our CCO plate can be joined by welding the substrate to substrate using 309 weld wire/rod.
- Bonding - Using a press brake, forming should be perpendicular to the weld pass direction. Plate rolling should be performed in the directions of the overlay beads.

TECHNICAL SPECIFICATIONS & CHEMICAL COMPOSITION:

- Hardness ranges from 58-62 HRC based on weld thickness
- Superior wear resistance
- optimum solution for most industrial applications

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NITRONIC Nitrogen-Strengthened Stainless Steel

Nitronic SX® Stainless Steel Wear Plate

Nitronic SX® Stainless Steel Wear Plate is a nitrogen-strengthened stainless steel developed for applications requiring high level corrosion resistance and durability. The high work-hardening rate Nitronic SX® stainless steel results in a high-strength material with superior abrasion resistance and elongation superior to Type 304L.

- Excellent Wet and Dry Abrasion Resistance
- Work Hardened Properties
- Good Resistance to Corrosion.

Wear Resistance

The following data demonstrate the outstanding wear resistance of AK Steel Nitronic SX® Stainless Steel under various sliding conditions. The stainless steels as a class are much more abrasion resistant than abrasion resistant (AR) steels under wet but not abrasive conditions. AK Steel Nitronic SX® Stainless Steel is more cost effective than Types 409 and 304 that are sometimes used in wet abrasive applications.

| Material | Hardness Rockwell | Wear, mg/1000 cycles* | CTE | Weight
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<td>1.0</td>
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Corrosive Wear in a Coal Mine Efficient

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<tr>
<th>Material</th>
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<td>865</td>
<td>1.8</td>
<td>0.6</td>
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Barge Loading Chute Liner Tons, Sized Clean Coal

- Nitronic SX® Stainless Steel has proven to be the most economical solution for barge loading chute liners.
- It can carry up to 14,000,000 tons of coal per year, which is significantly higher than the wear rate of ordinary steels.

Nitronic SX® Stainless Steel has a very high resistance to corrosive wear and can be used in a variety of applications such as in mining and coal processing facilities.

Armortec® Protection for Extreme Conditions

Armortec® Conveyor Wear Button

Armortec® Wear Buttons are a circular dome shape wear part that provides maximum protection while minimizing the efforts of installation. The round shape virtually eliminates any chance of a wide cracking.

- Ideal for small impact and wear areas
- Easy to use and install with no pre or post heating
- Great alternative to labor intensive hard facing
- Available in diameters from 60mm up to 150mm

Armortec® Wear Knife Edges & Shredder Tips

Armortec® Wear Knife Edges and Hammer/Shredder Tips is a 708HS welt on or bolt on, specifically designed for the Sugar and Recycling industries.

- Cone knife edges and tips are easy to install and maintain
- Increased production and shredding efficiency
- Maintain sharp edges from the start of use and retain their edge sharpness and cutting efficiency longer than hard facing

Internal Skirtboard Liners

Internal Skirtboard Liners protect your skirtboard and extend the life and effectiveness of your coal processing system. Use the straight design when belts are fully loaded and full chute widths need to be maintained. The angled deflector wear liner will force larger material to the center of the belt. Any small fines that work their way under the deflector have a path to exit the skirt area without being forced against the sealing compound.

- Lowest Cost Per Ton
- Material Flow with smooth laminar surface
- Reduces downtime
- Corrosion resistant
- Retrofit to worn out chutes and hoppers

Internal skirts are available at customer request.

Internal skirts are designed to protect your skirtboard and extend the effectiveness of your coal processing system. Use the straight design when belts are fully loaded and full chute widths need to be maintained. The angled deflector wear liner will force larger material to the center of the belt. Any small fines that work their way under the deflector have a path to exit the skirt area without being forced against the sealing compound.

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- Lowest Cost Per Ton
- Material Flow with smooth laminar surface
- Reduces downtime
- Corrosion resistant
- Retrofit to worn out chutes and hoppers

Custom skirts are available at customer request.
X-WEAR® Ceramic Wear Liners

The Wear and Impact Resistant Alternative That Makes Steel and Chromium Carbide Wear Plate Obsolete!

ASGCO® has developed a unique impact and wear resistant liner which features the excellent wear resistant properties of ceramics combined with the superior energy sorption characteristics of rubber, X-Wear® sets new standards of performance in the toughest industrial applications. Operating cost reductions of 25-90% are typical when X-Wear® is used to replace steel, chrome carbide overlays, rubber, and urethane. ASGCO® X-Wear® will substantially reduce your operating cost when compared to any other lining material.

X-Wear® Ceramic Liners have proven to be cost effective compared to all types of lining materials including manganese, Ni-hard and high Brinell carbon steel plate in applications ranging from primary crushed ore to abrasive slurry or fine sand. These liners also provide significant reductions in noise pollution compared to steel liners and are extremely versatile and are suitable for many types of installations.

X-Wear® Typical Installations

- Transfer points in conveyor systems
- Screw chutes
- Delectors Feeders
- Crusher Main Frame Liners
- Screener Feed Box Liners
- Discharge Lip Liners
- Launder Liners
- Chute Liners
- Belt Lip Liners

Benefits of Using X-Wear®

- No Welding
- Easy Installation
- Light Weight
- Reduces Noise
- Corrosion Resistant
- Impact Resistant
- Smooth Surface
- Longest Wear Life Available
- No Waste, Reduces Inventory

X-Wear® Ceramic Wear Liners

ASGCO® X-Wear® Ceramic Wear Liners are a resilient wear resistant panel made up of high density abrasion resistant ceramic bonded to a mild steel backing plate with impact resistant urethane compound. It easily outperforms steel, chrome carbide overlays and conventional ceramics. ASGCO® X-Wear® Ceramic Wear Liners will substantially reduce your operating costs when compared to any other lining material. The ceramic is bonded to a 3/4" steel plate using impact resistant urethane epoxy.

- X-Wear® is lightweight and easy to install
- The smooth laminar surface provides the optimum sliding surface and material flow for material handling,
- The remarkable structural integrity of X-Wear® makes it ideal for direct retrofitting without expensive repairs
- Lowest cost per ton

X-Wear® Mine Duty Ceramic Wear Liners

ASGCO® X-Wear® Mine Duty Ceramic Conveyor Wear Liners are made of extremely hard ceramics that provide unsurpassed resistance to abrasive wear while the rubber effectively dampens the impact forces that can crack the ceramic rods. The resilient rubber matrix that surrounds the ceramic rods is not vulcanized for superior adhesion.

ASGCO® X-Wear® Mine Duty Ceramic Conveyor Wear Liners are manufactured to fit into existing applications and can be easily installed by stud welded to the backing plate, counter bored holes molded into the liner, or by welding.

- Advanced hard ceramic wear plate
- 3/4" steel backing suitable for stud welded mounting studs
- Excellent wear protection for tough mining conditions
- Unsurpassed abrasion resistance
- Unique zigzag pattern prevents wear channeling
- Plates are available with factory welded studs
- Longest wear life available

X-Wear® Ceramic Canoe Skirt Liners

ASGCO® X-Wear® Ceramic Canoe Skirt Liners are highly effective for sealing inside the skirtboard, controls the material until it becomes stable and protects the skirt wall from wear. The liner is a 3/4" mild steel backing plate that is vulcanized to an abrasion / impact resistant 60 diameter rubber (or urethane) with a ceramic cylinder (or square) matrix.

- Optimum sealing inside the skirtboard
- Easy to handle and install
- Single or double beveled edge for reversible wear life
- Impact and abrasion resistant
- Modular section design for easy replacement

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**For more information, visit www.asgco.com**
X-Wear Ceramic Wear Liners

AGGCO® X-Wear® Ceramic Wear Liners are a resilient wear resistant panel made up of high density abrasion resistant ceramic bonded to a mild steel backing plate with impact resistant urethane compound. It easily outperforms steel, cemented carbide overlays and conventional ceramics.

AGGCO® X-Wear® Ceramic Wear Liners will substantially reduce your operating costs when compared to any other lining material. The ceramic is bonded to a 3/4" steel plate using impact resistant urethane epoxy.

- X-Wear® is lightweight and easy to install
- The smooth laminar surface provides the optimum sliding surface and material flow for material handling.
- The remarkable structural integrity of X-Wear® makes it ideal for direct retrofitting without expensive repairs.
- Lowest cost per ton

Lowest Cost Per Ton Guaranteed!

Use the following formula to compare X-Wear® to your current system:

\[
\text{CPT}_{\text{X-Wear}} = \text{CPT}_{\text{Current}} - \left( \frac{\text{Cost}_{\text{Usage}}}{\text{Weight}_{\text{Current}}} - \frac{\text{Cost}_{\text{Usage}}}{\text{Weight}_{\text{X-Wear}}} \right)
\]

X-Wear™ Typical Installations

- Transfer points in conveyor systems
- Screen chutes
- Deflectors Feeders
- Crusher Main Frame Liners
- Screen Feet Box Liners
- Discharge Lip Liners
- Launder Liners
- Chute Liners
- Dead End Lip Liners

Benefits of Using X-Wear®

- No Welding
- Easy Installation
- Light Weight
- Reduces Noise
- Corrosion Resistant
- Impact Resistant
- Smooth Surface
- Longest Wear Life Available
- No Waste, Reduces Inventory

X-Wear Ceramic Canoe Skirt Liners

AGGCO® X-Wear® Ceramic Canoe Skirt Liners are highly effective for sealing inside the skirtboard, controls the material until it becomes stable and protects the skirt wall from wearing. The liner is 3/4" mild steel backing plate that is vulcanized to an abrasion / impact resistant 60 diameter rubber (or urethane) with a ceramic cylinder (or square) matrix.

- Excellent sealing inside the skirtboard
- Easy to handle and install
- Single or double beveled edge for reversible wear life
- Impact and abrasion resistant
- Modular section design for easy replacement

X-Wear Mine Duty Ceramic Wear Liners

AGGCO® X-Wear® Mine Duty Ceramic Conveyor Wear Liners are made of extremely hard ceramics that provide unsurpassed resistance to abrasive wear while the rubber effectively dampens the impact forces that can crack the ceramic rods. The resilient rubber matrix that surrounds the ceramic rods is not vulcanized for superior adhesion.

AGGCO® X-Wear® Mine Duty Ceramic Conveyor Wear Liners are manufactured to fit into existing applications and can be easily installed by studs welded to the backing plate, counter bored holes molded into the liner, or by welding.

- Advanced hard ceramic wear plate
- 3/4" Steel backing suitable for stud welded mounting studs
- Excellent wear protection for tough mining conditions
- Unsurpassed abrasion resistance
- Unique zigzag pattern prevents wear channeling
- Plates are available with factory welded studs
- Longest wear life available

<table>
<thead>
<tr>
<th>Part Number</th>
<th>A Width</th>
<th>B Length</th>
<th>C Ceramic Thickness</th>
<th>D Steel Thickness</th>
<th>E Total</th>
<th>WL Lbs</th>
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<tbody>
<tr>
<td>AGS-12X12X4</td>
<td>12&quot;</td>
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<td>1/2&quot;</td>
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<td>25</td>
</tr>
</tbody>
</table>

Custom sizes available at customer request.
NITRONIC Nitrogen-Strengthened Stainless Steel

Nitronic SX™ Stainless Steel Wear Plate
Nitronic SX™ Stainless Steel Wear Plate is a nitrogen-strengthened stainless steel developed for applications requiring high level corrosion resistance and durability.

- Excellent Wet and Dry Abrasion Resistance
- Work Hardened Properties
- Good Resistance to Corrosion

Wear Resistance
The following data demonstrate the outstanding wear resistance to AK Steel Nitronic SX™ Stainless Steel under various sliding conditions. The stainless steels as a class are much more resistant than abrasion resistant (AR) steels under even mildly corrosive conditions. AK Steel Nitronic SX™ Stainless Steel is more cost effective than Types 409 and 304 that are sometimes used in wet abrasive applications.

<table>
<thead>
<tr>
<th>Alloy</th>
<th>Hardness Rockwell</th>
<th>Wear, mg/1000cycles</th>
<th>20 RPM</th>
<th>100 RPM</th>
<th>400 RPM</th>
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<tbody>
<tr>
<td>Nitronic SX</td>
<td>850</td>
<td>1.7</td>
<td>3.3</td>
<td>7.2</td>
<td></td>
</tr>
<tr>
<td>304</td>
<td>850</td>
<td>1.7</td>
<td>3.3</td>
<td>7.2</td>
<td></td>
</tr>
</tbody>
</table>

Corrosive Wear in a Coal Mine Efficient

<table>
<thead>
<tr>
<th>Alloy</th>
<th>Hardness Rockwell</th>
<th>Cumulative Volume Loss, mm^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitronic SX</td>
<td>850</td>
<td>1.2</td>
</tr>
<tr>
<td>304</td>
<td>850</td>
<td>1.2</td>
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</table>

Barge Loading Chute Liner Tons, Slidet Clean Coal

<table>
<thead>
<tr>
<th>Type</th>
<th>Material</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>14,000,000</td>
<td>Nitronic SX</td>
<td>Projected</td>
</tr>
<tr>
<td>12,000,000</td>
<td>Nitronic SX</td>
<td>Projected</td>
</tr>
<tr>
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<td>Projected</td>
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<tr>
<td>8,000,000</td>
<td>Nitronic SX</td>
<td>Projected</td>
</tr>
<tr>
<td>6,000,000</td>
<td>Nitronic SX</td>
<td>Projected</td>
</tr>
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<td>4,000,000</td>
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<td>2,000,000</td>
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</table>

NITRONIC Nitrogen-Strengthened Stainless Steel

ARMORITE® Protection for Extreme Conditions

Armorite® Conveyor Wear Button
Armorite® Wear Buttons are a circular dome shaped wear part that provides maximum protection while minimizing the effects of impact. The round shape virtually eliminates any chance of a web cracking.
- Ideal for small impact and wear areas
- Easy to use and install with no pre or post heating
- Great alternative to labor intensive hard facing
- Available in diameters from 60mm up to 150mm

Armorite® Wear Knife Edges & Shredder Tips
Armorite® Wear Knife Edges and Hammer/Shredder Tips is a 700BHBN "weld on or bolt on", specifically designed for the Sugar and Recycling industries,
- Cone knife edges and tips are easy to install and maintain
- Increased production and shredding efficiency
- Maintain sharp edges from the start of use and retain their edge sharpness and cutting efficiency longer than hard facing

Internal Skirtboard Liners
Internal Skirtboard Liners protect your skirtboard and extend the life and effectiveness of your skating compound. Use the straight design where bolts are fully loaded and full chute width needs to be maintained. The angled deflector wear liner will force larger material to the center of the belt. Any small lines that work their way under the deflector have a path to exit the skirting area without being forced against the skating compound.
- Lowered Cost Per Ton
- Material Flow with smooth laminar surface
- Reduces downtime
- Corrosion resistant
- Retrofit to work out chutes and hoppers

NITRONIC Nitrogen-Strengthened Stainless Steel Proven with Skills and bending capabilties as standard 304 stainless steel.

NITRONIC Nitrogen-Strengthened Stainless Steel

ARMORITE® Protection for Extreme Conditions
**ARMORITE** Protection for Extreme Conditions

**ARMORITE Smooth Conveyor Wear Plate**
- Smooth Conveyor Wear Plate present a very cost-effective method of extending wear life in chutes, hoppers, bins, impact walls and screen plates.
- Extreme abrasion resistance across a range of applications.
- Custom designs to meet customer requirements.
- Optional Notch study accepted as works.
- Liner size allows for localized replacement in high wear areas.
- Reduced downtime & reduced maintenance costs.
- 5-4 times the life of A1050.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>A</th>
<th>B</th>
<th>C Thick</th>
<th>D Thick</th>
<th>E Total</th>
<th>W</th>
<th>Lbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASG-AMR66X5X5X1</td>
<td>Wear Plate</td>
<td>10”</td>
<td>5”</td>
<td>1/8”</td>
<td>1/8”</td>
<td>1”</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>ASG-AMR66X5X2X1</td>
<td>Wear Plate</td>
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<td>5”</td>
<td>1/8”</td>
<td>1/8”</td>
<td>1”</td>
<td>19</td>
<td></td>
</tr>
</tbody>
</table>

Custom sizes available at customer request.

**ARMORITE Skirtboard Conveyor Wear Liners**
- Skirtboard Conveyor Wear Liners protect your skirtboard and provide a significantly larger wear life than currently used skirt liners. The skirt bar is produced from 5/8” thick Armorite that is enhanced with a 1/4” thick metallic steel producing a product that is 700 BHN with a high impact resistance. It can be used for all conveyors and transfer points where the eradication of spillage or centralization of load is required.
- Reduces downtime and maintenance costs.
- Designed to be rotated 180° for longer wear life.
- Custom sizes available.
- For all conveyors and transfer points.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>A</th>
<th>B</th>
<th>C Thick</th>
<th>D Thick</th>
<th>E Total</th>
<th>W</th>
<th>Lbs</th>
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</thead>
<tbody>
<tr>
<td>ASG-AMR35KX12X22X1</td>
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<td>1/4”</td>
<td>1/2”</td>
<td>1/2”</td>
<td>84</td>
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</tbody>
</table>

Custom sizes available at customer request.

**ARMORITE Grizzly Screen Cap Conveyor Wear Bars**
- Grizzly Screen Cap Conveyor Wear are available in a range of thicknesses and lengths. Used in grizzly screens, chutes, hoppers, bins, rock box edges and other high wear applications.
- Superior wear life when compared to conventional alloys used such as manganese steel, clad overlay and other alloys.
- Cost-effective method for protecting your equipment.
- Variety of simple, ragged sizes and shapes available.
- Ideal for aggregate and coal mining applications.
- Reduces conveyor downtime and maintenance.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>A</th>
<th>B</th>
<th>C Thick</th>
<th>D Thick</th>
<th>E Total</th>
<th>W</th>
<th>Lbs</th>
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<tbody>
<tr>
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<td>Wear Bar</td>
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<td>Wear Bar</td>
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<td>3”</td>
<td>1/8”</td>
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<td>3”</td>
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<tr>
<td>ASG-AMR66X5X5X3</td>
<td>Wear Bar</td>
<td>9”</td>
<td>3”</td>
<td>1/8”</td>
<td>1/8”</td>
<td>3”</td>
<td>19</td>
<td></td>
</tr>
</tbody>
</table>

**ARMORITE Checky Conveyor Wear Bar**
- Checky Bars offer protection on contoured surfaces such as chute linings, buckets, loaders, excavators and dragline machines.
- Easy formation to convex or concave surfaces.
- No pre-heating or post-welding required when welding bars in place.
- Cost-effective method for protecting your equipment.
- No storage problems or excessive cutting.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>A</th>
<th>B</th>
<th>C Thick</th>
<th>D Thick</th>
<th>E Total</th>
<th>W</th>
<th>Lbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASG-AMR66X5X5X3</td>
<td>Wear Bar</td>
<td>9”</td>
<td>3”</td>
<td>1/8”</td>
<td>1/8”</td>
<td>3”</td>
<td>11.7</td>
<td></td>
</tr>
</tbody>
</table>

Custom sizes available at customer request.

**CHROMIUM CARBIDE** Moderate Abrasion Resistant Wear Plate

**Chromium Carbide Overlay (CCO) Wear Plate**
- ASCO® Chromium Carbide Overlay (CCO) Wear Plate is an extra hard clad plate with additives that gives even higher abrasion resistance in high-stress applications with moderate to low impact conditions. It is produced using a mild steel base plate and hard-faced / overlayed with our proprietary high chromium wire. ASCO® Chromium Carbide Overlay (CCO) Wear Plates can be formed and rolled.
- Cost-effective solution when compared to traditional abrasion-resistant steels.
- Recommended for resistance to wear by abrasion, fretting, cavitation, and particle erosion in high temperature applications (up to 1100°F).
- Ideal for mild to moderate impact abrasion resistance.
- Low maintenance cost and easy installation.
- The overlay surface of CCO plate will consist of a series of beads with numerous hardline cracks in them. These properly spaced crosscheck cracks are a natural phenomenon and are beneficial to the material. The cracks propagate through the overlay and end at the fusion line.

**APPLICATION SPECIFICATIONS**
- Cutting: Plasma burning, air arc, abrasive saw or water jet.
- Welding: Our CCO plate can be joined by welding the substrate to substrate using 309 weld wire.
- Bonding: Using a press brake, forming should be perpendicular to the weld pass direction. Plate routing should be performed in the directions of the overlay beads.

**TECHNICAL SPECIFICATIONS & CHEMICAL COMPOSITION:**
- Hardness ranges from 58-62 HRC based on weld thickness.
- Superior wear resistance.
- Optimum solution for most industrial applications.

<table>
<thead>
<tr>
<th>Chemical Composition AG-1050</th>
<th>C%</th>
<th>Mn%</th>
<th>Si%</th>
<th>P%</th>
<th>S%</th>
<th>Hardness HRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5-5.5</td>
<td>2.0-3.6</td>
<td>27.0-30.0</td>
<td>0.7-1.0</td>
<td>0.2-0.4</td>
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<td></td>
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</table>

<table>
<thead>
<tr>
<th>Dimension: Plate</th>
<th>Width</th>
<th>Length</th>
</tr>
</thead>
<tbody>
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<td>1200</td>
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<table>
<thead>
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<th>Dimension: Overlay</th>
<th>Width</th>
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<tr>
<td>1400</td>
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<thead>
<tr>
<th>Specification</th>
<th>Base</th>
<th>Cheq</th>
<th># of Single Pass</th>
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<tbody>
<tr>
<td>1/8”</td>
<td>1/4”</td>
<td>1</td>
<td></td>
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<tr>
<td>3/8”</td>
<td>5/8”</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>1/2”</td>
<td>1/2”</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

- Specifications available at customer request.
**URETHANE** Molded Polyurethane Products

ASGCO® Urethane Products are the Highest Urethane Compound on the Market! ASGCO® Urethane has been manufacturing polyurethane injection molding parts for several industries. Injection molded polyurethane products have been produced for various industrial sectors including mining, transportation, building and construction, machinery and foundry, textiles, fiberglass, steel and aluminum and seals. We mold all of our standard and custom formulas as well as our entire range of durability, 20A to 80D.

The diverse properties of castable polyurethane make it the leading choice of engineers looking for long lasting materials for their high load, high stress environments. Polyurethane routinely outperforms plastic, rubber and steel in its overall ability to resist harsh environmental factors such as abrasion, heat, seawater, oil and acid, and in addition, polyurethane’s noise abatement ability makes it the preferred material in chain-drive designs, conveyor belting systems and assembly line environments. In today’s manufacturing environments where the cost of downtime is measured in thousands of dollars per hour, polyurethane’s incredible durability actually increases your company’s profitability.

Compression molding responds to a wide range of product sizes, shapes and performance requirements. Our molded polyurethane parts reduce the time and expense of machining parts from solid stock plastic.

If you are seeking a world-class polyurethane manufacturer and a leader in molded polyurethane products and technology, then ASGCO® is here to help. We offer a vast array of polyurethane compounds for your polyurethane molded parts.

Polyurethane molding produces a wide variety of products for most industries. ASGCO® Urethane has been the polyurethane specialist that companies around the world have depended on to gain all of the advantages of polyurethane for a wide range of parts.

**ASGCO® Urethane Varieties**

Non-Reinforced sheets have no backing. They are the most lightweight and versatile of all Diamondback® sheet types and can be hand-armed.

Expanded Metal-backed sheets are backed with 15-gauge steel that makes them more rigid and flat. The metal backing also provides a structurally sound “splitting point” for bolt heads.

Perforated Metal Plate - Urethane sheets are backed with perforated metal. The small openings accommodate self-tapping metal screws.

Weldable or Stud-Welded Studaged Metal Plate - Metal plates (1/2") welded to the back of these urethane sheets allow them to be welded or bolted onto metal surfaces.

**ARMORITE** Protection for Extreme Conditions

ASGCO® Armorite® is guaranteed to last 5-6 times longer than Ar500!

Armorite® is an extremely hard, laminated bi-metallic, wear resistant composite, which has a nominal hardness of 700 Bhn (650 Brinell) and metallurgically bonding it to a mild steel backing plate. The resultant bond possesses high shear strength of over 250 Mpsi and will not separate.

Armorite® provides maximum impact and abrasion protection in high wear areas, with the mild steel backing cushioning the white iron enabling it to withstand impact. Armorite® is easily weldable to areas of the conveyor system with minimal preparation providing unsurpassed resistance to abrasive bulk material wear.

**Armorite® Typical Bond Zone**

- White Iron: Modified A5027 150 Or Mo
- Vacuum brazed and liquid nitrogen cooled to achieve a high strength joint
- Mild steel backing offers strength, machinability and impact resistance
- Can be welded in place, through-bolted, stud bolted, drilled, tapped, keyed
- Ease of fitment, very versatile

**Armorite® Benefits**

- Lower operating costs
- Longer Service life when compared to conventional materials
- Increased production
- Improved product efficiency
- Increased equipment availability

**Armorite® Applications**

- Chute Linings
- Rock Box Edges
- Grizzly Cap/Screen
- Transfer Points
- Impact Plates
- Distributor Plates
- Arm/Hub Liners
- Bin Liners
- Hopper Wear Plates
- Divided/Splitter Bars
- General Wear Protection

- Liner Panels
- Wear Plates
- Wear Bars
- Shaped Wear Bars
- Skid Bars
- Grizzly Bars
- Chokey Bars
- Wear Buttons
- Wear Donuts
- Shredder Tips
- Knife Edges
ASGCO® Conveyor Wear Liners products are the longest lasting, most cost effective in the industry! Bulk handling conveyor belts have many applications in today’s mining and quarry industries. Because of their reliability, versatility, and range of capacities, belt conveyors are the most common type of bulk handling conveyor belt system. Wear Liners are designed to be an integral part of any bulk handling conveyor system.

ASGCO® manufactures a variety of conveyor wear liners with many options and sizes to choose from. Designed to handle any tough hard rock mining application, Abrasion resistant, modular, high-wear material to line belts, chutes, and bin impact areas; ASGCO® wear liner products are the longest lasting, most cost effective in the industry.

Armorite™ (White Iron)
Armorite™ is an extremely hard, laminated bi-metallic, impact and wear resistant composite, which has a nominal hardness of 700 Brinell (63Rc) produced by combining a highly alloyed chromium-molybdenum white iron (to AS 2027 15Cr/Mo) and metallurgically bonding it to a mild thick steel backing plate. The resultant bond possesses high shear strength of over 250 Mpa and will not separate.

X-Wear™ (Ceramic)
ASGCO X-Wear™ will substantially reduce your operating costs when compared to any other lining material. The smooth laminar surface of X-Wear™ provides the optimum sliding surface for bulk material handling. Forget UHMW and other plastics that distort, buckle and wear out. The low coefficient of friction and dimensionally stable surface of X-Wear™ will provide years of maintenance-free service.

Nitronic SX™ Stainless Steel
Nitronic SX™ Stainless Steel is a nitrogen-strengthened stainless steel developed for applications requiring good level corrosion resistance and ductility. The high work-hardening rate Nitronic SX™ stainless steel results in a high-strength material with superior abrasion resistance and elongation superior to Type 304L.

Chromium Carbide Overlay (CCO) Wear Plate
ASGCO® Chromium Carbide Overlay (CCO) Wear Plate is an extra hard clad plate with additives that give even higher abrasion resistance in high stress applications with moderate to low impact conditions. It is produced using a mild steel base plate and hard-faced/overlayed with our proprietary high chromium wire. ASGCO® Chromium Carbide Overlay (CCO) Wear Plate can be formed and rolled.

Urethane Canoe Liners, X-Wear™ Urethane Magnetic Liners & Patches

Urethane Canoe Liners
ASGCO® Urethane Canoe Liners are engineered to absorb impact and abrasion in all types of material transfer operations. Made to allow for more efficient maintenance due to spillage, while maintaining a safe working environment.

• Standard sizes available in 1”, 2” and 3” thickness
• 9” wide and 48” long
• Available in beveled edge or square edge
• Slotted holes on 12” centers for ease of adjustment in the tightest applications
• Liners can be adjusted easily up or down to achieve the best fit.
• Custom sizes available on request.

X-Wear™ Urethane Magnetic Liners and Patches
X-Wear™ Urethane Magnetic Liners and Patches provide a temporary yet reliable patch system that can be installed quickly and safely without the use of welders or bolt fastening systems. This allows for minimal downtime, in repairing a leak or tears spot on chutes or load points to name a few. When time allows, the ASGCO® X-Wear Urethane Magnetic Patch can easily be removed, so that a more permanent repair can be performed.

• Constructed with ASGCO-thane® Polyurethane
• Imbedded High strength rare earth magnets allow for installation using magnetic force alone
• No Bolting - No Welding - No Cutting to the applied area
• Eliminates the need for Hot Work permits in most areas
• Stay secure in place on vibrating screens and chutes
• Can be repositioned easily and safely, when time permits, for the repair to be done permanently
• Can be field trimmed to fit unusual surfaces or conditions, due to the polyurethane material

AVAILABLE SIZES
• 12”x12”x1”
• 6”x6”x1”
• Custom sizes available upon request.

Available as an Internal Liner or External Patch

Urethane Magnetic Liner or Patch

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1”x6”x9” Ceramic</td>
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<tr>
<td>M-ASG-U-CL-48X9X2-S-1</td>
<td>1”x9”x9” Ceramic</td>
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<td>M-ASG-U-CL-48X9X3-S-1</td>
<td>1”x12”x9” Ceramic</td>
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Magnetic Back

CERAMIC LINER ALSO AVAILABLE
• 12”x12”x1” with 6” of ceramic in the middle

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Size</th>
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</thead>
<tbody>
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<td>1”x6”x9” Ceramic</td>
</tr>
<tr>
<td>M-ASG-UCL-48X9X2C-1</td>
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<tr>
<td>M-ASG-UCL-48X9X3C-1</td>
<td>1”x12”x9” Ceramic</td>
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</tbody>
</table>
**URETHANE** Screen Feeder Box & Side Wear Liners

**Urethane Screen Feed Box Liners and Side Wear Liners**

ASGCO® has expanded the use of their Cast Urethane products to include screen wear parts. Rubber compounds that are compounded to 90 or 95A durometer have compromised physical properties. All of our urethane wear products are cast from our exclusive ASGCO®-thane™ polyurethane compound with a durometer of 80/85, along with steel backing plates for extra added support.

**Abrasion Resistant** – Cast urethane screen wear products are molded using our high-grade polyurethane compounds that last longer and offer superior abrasion, cut, and tear resistance when compared to rubber.

**Higher Load-Bearing Capacity** – better compression set, and superior tolerances to greases, oils, oxygen, and ozone.

**Biodegradable** - man-made urathane can be easily formulated to outlast rubber and stand up to sun and harsh outdoor environments.

**Multiple Steel Options** – fully boxed with steel, or only a steel back allows for full custom options. Can be stud or plug welded.

---

**Screen Feed Box Liners**

Screen Feed Box Liners are patterned for a direct replacement of the current liner configuration being used, or depending on the wear characteristics change the layout for maximum wear life. Liners have the ability to have various sized and shaped ceramics inserted to increase the longevity of the liner.

---

**Screen Side Wear Liners**

Screen Side Wear Liners are boxed in with mild steel or hard plate to prevent premature edge wear or damage. Bolt patterns, size, and thicknesses are fully customizable to increase the wear life for your operation. In house engineered to allow for an ease of duplication.

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**Urethane Classifier Shoes**

Urethane Classifier Shoes feature our special wear-resistant urethane material at the outer edge of the shoe (the area that sees the most abrasion) to extend the wear life of the shoe. Longer shoe life means you experience less maintenance downtime and lower operating costs, resulting in higher productivity and profits.

**Abrasion Resistant** – Classifier Shoes are molded using our high-grade urethane compounds that last longer and are resistant to abrasive wear.

**Ceramic Beads** – can also be added to the edges as an extra option against wear.

**Interchangeable** – between right and left hand screws, reducing inventories.

**Can Be Used as Replacement Wear Parts** – on classifiers and screw conveyors in OEM equipment.

**Can be made for custom applications.**

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PRODUCTS AND SERVICE THAT LEAD TO SOLUTIONS

At ASGCO®, our core motivation is to solve problems. We love a challenge, and thrive under pressure. We don’t just provide the highest quality products and services, we deliver solutions.

A HERITAGE OF INNOVATION

Since our founding in 1971, by Alfred S. Gibb and his son Todd, ASGCO® has pioneered some of the most effective products in use for improving bulk material handling. We believe in taking care of the customer with great quality products and exceptional service. This has been a successful and standard policy at ASGCO® for many years and will continue in the future.

FOCUSED ON SOLUTIONS

At ASGCO®, we continue to strive to make the handling of bulk materials cleaner, safer, and more productive. No matter what the basic assignment, we always seek out ways to increase production and to reduce operating costs. ASGCO® uses innovative products and engineered solutions to solve problems happening now and to prevent problems from happening in the future.

JUST ASK ASGCO!

What may seem like a problem to our customers is just a chance for us to put every resource we have in motion. And no matter what the basic assignment, we always seek cut ways to increase production and to reduce operating costs. Our team is always ready, *All you need to do is ask ASGCO!*

OUR PROMISE...

Applies to every deal, every time.
Always there and work in terms of solutions that are best for the customer in the long term.
Develop and sell products that satisfy the practical working needs of our customers.

“Today, ASGCO® “Complete Conveyor Solutions” is recognized as the worldwide leader in bulk conveyor material handling systems.”
Providing the World Bulk Material Handling Industry with Productive, Safe and Reliable “Complete Conveyor Solutions.”