PERSONNEL CONSIDERATIONS

⚠WARNING Sling, rigging hardware and/or sling protection failure may result in INJURY or DEATH. Gravity ALWAYS works and when failure occurs, personnel under, on, near or next to load handling activities are in grave danger from falling objects. This area is sometimes referred to as the "fall zone". Personnel shall never stand or pass under a suspended load.

⚠WARNING Personnel must not stand in line with or next to rigging under tension. Sling users must know and understand the potential danger from the unplanned release of tension and the deadly recoil and/or impact force that may result in INJURY or DEATH. This "danger zone" is sometimes referred to as "working in the bight" or the "strike zone".

⚠WARNING Never use slings and/or rigging for pulling against stuck, snagged or restrained objects IF LOADING CANNOT BE DETERMINED. Load measuring devices and/or methods must be used to ensure that OVERLOADING DOES NOT OCCUR. Overloaded slings, rigging hardware and/or sling protection may fail and the unplanned release of tension and/or deadly recoil and/or impact force of slings, rigging hardware and/or sling protection can become deadly projectiles resulting in INJURY or DEATH.

Once load handling activities begin, sling users must never place any part of the body between the sling and the load and/or between the sling and shackle, hook and/or connection point.

Personnel shall never ride the sling or load.

UHMPE Rope Slings shall never be used as suspended personnel platform bridles.

UHMPE Rope Slings must not be used for any fall prevention purpose. Only approved fall prevention products which are specifically rated and labeled for fall prevention shall be used for fall arrest and/or prevention.

SLING PROTECTION

UHMPE Rope Slings must always be protected from cutting, abrasion and other types of damage by materials of sufficient strength, thickness and construction. This mandatory requirement is stated in OSHA regulations, Cordage Institute and ASME standards, as well as in the Lift-It instructions and warnings.

- Always protect slings from ALL POTENTIALLY DAMAGING SURFACES and EDGES.
- There are two basic types of protection; protection used specifically for cut protection or other devices used for abrasion protection.
- Some abrasion protection materials like Bulked Nylon or Cordura® may be suitable for abrasion protection, but will not prevent damage from cutting.
- **⚠WARNING** ABRASION PROTECTION WILL NOT PREVENT DAMAGE FROM CUTTING.
- If protection against cutting is necessary, only use sling protection that has been designed, tested, rated and labeled by the manufacturer.
- "Cut proof" sling protection does not exist and sling protection MAY NOT prevent cutting or other damage especially if it is not used properly.
- A Qualified Person* must ensure the load is properly rigged and carefully evaluate and select appropriate sling protection for the application and potential type(s) of damage.
- A Qualified Person* must ensure that the sling protection is the correct type, capacity, shape and size to protect slings from damage.
- Sling protection and all components must be compatible with the sling.
- Sling protection must not interfere with slings closing to the full gripping position for secure load handling and control.

- Sling protection should not be makeshift (i.e., cardboard, work gloves or other such items that were not designed to be used as protection).
- As tension is being applied, before lifting, a Qualified Person* must ensure the sling/protection relationship is correct and the protection is properly placed to prevent damage to slings and/or sling protection.
- A Qualified Person* must evaluate protection for suitability. Several trial lifts may be necessary to ensure safe and proper use. Trial lifts must be done at a minimum height and in conditions that WILL NOT RESULT IN INJURY OR DEATH.
- After the trial lift, but before actual lift, a Qualified Person* must inspect slings, rigging hardware and sling protection. If possible, the sling protection should be removed and/or repositioned to independently inspect not only the slings, but the sling protection. The Qualified Person* must evaluate and if necessary take corrective action.
- There are many factors that may affect sling protection sling performance. Factors such as, but not limited to: sling elongation, edge condition, i.e., machined, tempered and/or case hardened edges, etc. need to be evaluated by a Qualified Person*.
- Trial lifts are critically important to ensure proper use and safety.
- Tension increases as the Angle of Loading changes from 90°. You must evaluate and plan for tension.
- Damage may occur as tension and compression combine and cutting forces are increased.
  DO NOT OVERLOAD SLINGS, RIGGING HARDWARE AND/OR PROTECTION!
- Protection ratings DO NOT apply if slings and/or sling protection are used at Angles of Loading other than 90°.
- The overall lifting capacity shall be rated at the lower of either the sling work load limit, rigging hardware rating and/or the sling protection capacity.
- Always refer to the Protection Capacity Tag to determine protection capacity ratings.
- As the Angle of Loading deviates from 90°, the greater the likelihood that slings and sling protection will slide against the load resulting in a hazardous situation. Slings and sling protection should be perpendicular (90°) to the load.
- Do not allow the sling and/or sling protection to slip or slide across the load edges or surfaces.
- Inspect slings, rigging hardware and sling protection before each use and immediately remove damaged items from service.
- Follow inspection procedures and removal-from-service criteria outlined in this bulletin.
- Do not use damaged slings, damaged rigging hardware and/or damaged sling protection for any purpose.

⚠ WARNING DO NOT use slings, rigging hardware, and/or sling protection until you are absolutely sure of what you are doing. Remember, failure to follow proper use, care and inspection criteria and/or the lack of skill, knowledge and care can result in INJURY or DEATH. Slings, rigging hardware and sling protection will fail if damaged, abused, misused, overloaded or improperly maintained resulting in INJURY or DEATH.

Magnetic Corner Protectors	Meshguard®	CornerMax® Sleeve	Cornermax® Pads
			

- Select slings, rigging hardware and/or sling protection having suitable characteristics for the type and shape of the load, configuration of lift (hitch) and environment.
- Load weight must always be determined and/or verified.
- The rated capacity (work load limit) of slings, rigging hardware and/or sling protection shall not be exceeded. Check tags and markings, and verify that slings, rigging and hardware and/or sling protection are adequately rated for the load weight, the desired configuration of lift and the angle of loading.
- Slings must be rigged in a manner providing control of the load.
- Slings must be rigged so that the lift point is directly over the load's center of gravity.
- Sling movement over the lift point may occur if the load's center of gravity is not directly below the lift point. Under tension, sling movement over the lift point and/or connection point(s) can damage slings.
- DO NOT allow slings and/or sling protection to slip or slide across load edges or surfaces.
- A single sling hitch must never be used to handle unbalanced, loose and/or long loads.
- When using multiple slings or slings in any configuration of lift, particularly basket hitches, the load must be rigged and balanced to prevent slings from slipping or sliding along and/or across the load.
- When lifting with a basket hitch, the legs of the sling should contain or support the load from the sides, above the center of gravity, so that the load remains balanced and under control.
- A trial lift should be made by a Qualified Person* in conditions that WILL NOT RESULT IN INJURY or DEATH. The load should be raised slightly and evaluated by a Qualified Person* to ensure that the load is secure and assumes the intended position. Trial lifts must be done at a minimum height and provide the Qualified Person* the opportunity to evaluate and make adjustments. After the trial lift, an inspection of the sling, rigging hardware and/or sling protection must be performed by a Qualified Person*. If possible the sling protection should be removed and/or repositioned to independently inspect not only the slings, but the sling protection.
- Trial lifts are especially important with basket or other "loose" hitches where friction alone provides for load control, not the clutching action of the sling. Several trial lifts, inspections and corrective actions may be necessary to determine the proper combination of ingredients for successful load handling activities.
- If more than one sling is used the slings should be identical. When this is not possible a Qualified Person* must determine that the use of non-identical slings is safe and acceptable. As an example, UHMPE Rope Slings elongate differently than Polyester Rope Slings. Slings from different manufacturers will not be identical and slings made by the same manufacturer at different times may not be identical.
- During load handling activities, with or without load, personnel shall be alert for possible snagging of the load and/or sling.
- Slings shall not be used for pulling against stuck, snagged or restrained objects IF LOADING CANNOT BE DETERMINED. Load measuring devices and/or methods must always be used to ensure that OVERLOADING DOES NOT OCCUR. Overloaded slings, rigging hardware and/or sling protection may fail and the unplanned release of tension and/or deadly recoil and/or impact force from slings, rigging hardware and/or protection can cause INJURY or DEATH.
- Do not shock load rigging. Equipment and load movement should be SLOW and STEADY. Work load limits are based on a moderately dynamic lifting and/or load handling activity. Unplanned, instantaneous changes (rapid acceleration or sudden stops) constitute hazardous shock loading which may overload slings, rigging hardware and/or protection, leading to failure, the unplanned release of tension, deadly recoil and/or impact force and/or loss of load control, resulting in INJURY or DEATH.
- As an example, dynamic loading affects UHMPE Rope Slings with less elongation, to a greater degree, than Polyester Rope Slings with greater elongation properties. Likewise, a shorter rope sling is more profoundly affected by dynamic loading, than a longer rope sling.

⚠ WARNING

Do not use Lift-It UHMPE Rope Slings in Choker Hitches.

- If you are using a Lift-It UHMPE ENDLESS Rope Sling, depending upon the length of the sling, you may have a choice about where to place the splice. The splice is larger in diameter and elongates differently than the other parts of the UHMPE Endless Rope Sling without splices. If possible, place the splice over the lift or connection point(s) to allow for equalized elongation in the two body members of the UHMPE Endless Rope Sling.
- UHMPE Rope Slings can be damaged by mishandling. UHMPE Rope Slings should not be handled or moved by grabbing or handling the splice tucks and tails. If at any time a splice exhibits any form of damage, an inspection by a Qualified Person* must be made to determine continued use.
- When a hand-tucked UHMPE Rope Sling is used, care should be taken to eliminate the rotation of the sling and/or the load to prevent the sling splice from unraveling. Unplanned rotation and collision with other objects must be avoided.
- Sling tags and labels should be kept away from the load and connection point(s).
- Slings shall be shortened, lengthened or adjusted only by methods approved by the sling manufacturer or a Qualified Person*.
- Slings shall not be shortened or lengthened by knotting or twisting and/or be joined by knotting.
- Twisting and kinking shall be avoided. Twists must be removed from slings before applying tension.
- Equipment should not be driven over slings and loads should not be rested on slings.
- Slings should not be pulled from under a load when the load is resting on the sling. When possible, place supports under the load to allow the removal of slings.
- Slings should not be dragged on the floor and/or over abrasive surfaces. Dirt and foreign material can get worked into the rope fibers resulting in damage which may seriously affect sling strength and performance.
- Do not drop slings equipped with metal fittings.
- Slings should not be bunched or pinched between the ears of a shackle or by the load, hook or fitting. Bunching and/or pinching can lead to uneven loading and a reduction in sling strength.
- Slings must be used with compatible fittings, hooks and shackles.
- Prior to use, shackles, hooks and all fittings must be inspected to identify and evaluate potentially damaging threads, edges or surfaces.
- All fitting surfaces must be cleanly finished and damaging surfaces and edges removed to prevent sling damage. Contact the manufacturer of Qualified Person* before modifying and/or refinishing.
- It is recommended that UHMPE Rope Slings be rigged in the bow of the shackle. When this is not possible, protect slings from potential damage.
- The load applied to the hook should be centered in the base (bowl) of the hook to prevent point loading on the hook.

Fittings shall be of a shape and size to ensure that they properly seat in the hook, shackle and/or load handling equipment.

Thimbles used with UHMPE Rope Slings shall have a minimum diameter at the bearing surface of at least two times the rope diameter.

⚠ WARNING **Do not use or expose UHMPE Rope Slings at temperatures above 140°(F)/60°(C) or below -40°(F)/-40°(C).**

At low temperatures, when moisture is present, ice formation may occur. Ice crystals may abrade and cut rope fibers leading to structural damage and loss of sling capacity.

UHMPE Rope Slings exposed to salt water should be thoroughly rinsed with fresh water to prevent mechanical damage from salt crystals. Do not machine, hand or pressure wash slings. Washing significantly reduces sling capacity. Rinsed slings can either be air dried or used immediately.

Depending upon the fiber, rope strength and stretch may be affected when the sling is saturated with water.

Avoid prolonged exposure to sources of ultraviolet light; it reduces the strength and performance of synthetic fibers. UV degradation may be indicated by discoloration and the presence of splinters and/or slivers. UV damage may not always be visually apparent.

When not in use store slings, rigging hardware and sling protection in a clean, dry area, out of direct sunlight and/or any source of ultraviolet light and away from sources of extreme temperatures. The storage location should also be free of environmental and mechanical damage, corrosion, dirt and grit. Do not store UHMPE Rope Slings in areas where they may become impregnated with rust.

Absorbed moisture, impurities and/or other factors will dramatically increase conductivity.

Consider all slings, rigging hardware, components and sling protection as conductive when in use.

Avoid exposing slings, rigging hardware and/or sling protection to damaging chemicals. Chemically active environments can affect the strength of all rigging materials and components in varying degrees ranging from little to total degradation. Prior to use, consider, evaluate and contact the manufacturer to determine the effects of exposure to solvents, vapors or mists of acids and/or caustics. Acids or alkalis which are harmless in liquid form can become sufficiently concentrated by evaporation and may become harmful. Exposure time, temperature and concentration must be considered.

Slings shall be repaired only by the sling manufacturer or a Qualified Person*. Repaired slings shall be marked to identify the entity performing the repair. All repaired UHMPE Rope Slings must be proof tested to two times the rated capacity and certified.

Only slings which can be identified by the information on the sling tag will be considered for repair.

The rope that makes up the sling shall not be re-spliced or knotted to effect repairs.

Temporary repairs of slings, rigging hardware and/or sling protection are not permitted.

*Qualified Person: A person, who by possession of a recognized degree or certificate of professional standing in an applicable field, or who, by extensive knowledge, training and experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter and work.