

WIRE MESH SLING SAFETY BULLETIN 024



Upon receipt of each new sling, make certain that it meets the requirements of your Purchase Order and that it has not been damaged in shipment.

ALWAYS INSPECT SLINGS BEFORE EACH USE

INSPECTION

Remove Wire Mesh Slings from service if damage such as the following is visible:

- A. The stamped rated capacity information is illegible or missing.
- B. Any evidence of heat or chemical damage, including melting or charring.
- C. A broken weld or a broken brazed joint along the sling edge.
- D. A broken wire in any part of the mesh.
- E. Reduction in wire diameter of 25% due to abrasion or 15% due to corrosion.
- F. Lack of flexibility or distortion of the mesh.
- G. A 15% reduction of the original cross-sectional area of metal at any point around the hook opening of end fitting.
- H. Metal end fittings that are cracked, pitted, corroded, excessively worn, visibly deformed or distorted out of its plane.
- I. Any other visible damage which causes doubt as to the sling strength.

OPERATING PRACTICES

- A. Slings shall not be loaded in excess of the rated capacity. Consideration shall be given to the effect of angles. (See Effect of Angle Chart shown on opposite side.)
- B. Select slings having suitable characteristics for the type of load, hitch,s and environment.
- C. Slings shall not be shortened by twisting, knotting or other unapproved methods.
- D. Slings shall not be lengthened by knotting, choking, or basketing slings together, or by any other unapproved method. Suitable fittings must be used to interconnect slings.
- E. The sling shall be hitched in a manner providing control of the load.
- F. Keep all portions of the human body from between the sling and the load, and from between the sling and the lifting hook.
- G. Personnel should stand clear of the suspended load.
- H. Personnel shall not ride the sling or a load suspended by a sling.
 - I. Shock loading should be avoided.
- J. Twisting and kinking slings shall be avoided. Do not edge load. The full width of the mesh must contact the load during use.
- K. Slings should not be pulled from under a load when the load is resting on the sling. Where practicable, use blocking to allow for easy sling removal.

- L. Sharp corners in contact with the sling should be padded with material of sufficient strength to minimize damage to the sling.
- M. Before lifting, make certain that the sling, attachments, and the load will not snag. Personnel shall be continuously alert to avoid snagging or bumping.
- N. When lifting points are below the center of gravity, loads tend to be unstable. Proper rigging must restrict load rotation to avoid tipping and loss of load control.
- O. In a basket hitch, proper slings must be selected to balance the load and restrict slippage in order to prevent the load from falling out of the sling.
- P. In a choker hitch, slings shall be long enough so that the choker fitting chokes onto the sling body and never onto any fittings.
- Q. In a choker hitch, the load should be balanced to prevent edge overload.
- R. For lifts of non-symmetrical loads using multiple sling legs, an analysis should be performed by a qualified person to prevent the overloading of any leg.
- S. Never hammer a sling to straighten a spiral or cross rod or to force a spiral into position.
- T. Slings should not be used at angles of less than 30 degrees from horizontal.
- U. Slings should not be dragged on the floor or over an abrasive surface.
- V. Slings should be stored in an area where they will not be subjected to mechanical damage, corrosive action, moisture, extreme heat or kinking.
- W. Do not expose slings to chemicals that are not compatible with all of the sling materials.

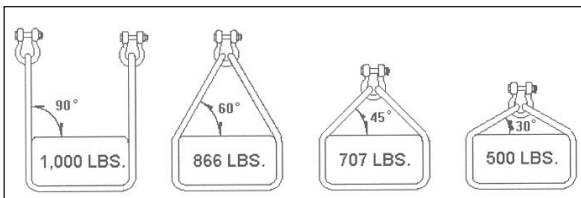
Refer to other regulations, codes and standards for additional information and safe operating practices. See *OSHA CFR 1910.184* regulations and *ANSI/ASME B30.9* regulations.

EFFECT OF ANGLE

When slings are used at an angle, sling capacity is reduced. Multiply the sling's capacity by the Factor below (for the angle used) to determine the reduced rating.

ANGLE	FACTOR	ANGLE	FACTOR	ANGLE	FACTOR
90°	1.00	65°	.906	40°	.643
85°	.996	60°	.866	35°	.574
80°	.985	55°	.819	30°	.500
75°	.966	50°	.766		
70°	.940	45°	.707		

SLING CAPACITY DECREASES AS THE ANGLE DECREASES



A sling capable of lifting 1,000 lbs. in a 90° vertical basket hitch can only lift 866 lbs. at a 60° angle; 707 lbs. at a 45° angle; and 500 lbs. at a 30° angle.