

PRODUCT INFORMATION

USER INFORMATION

Lifting belts and round slings in service

Usage guidelines

Service

Lifting slings (lifting belts, round slings) may only be used to lift loads, and only under supervision of a competent person in accordance with established safety regulations and in consideration of prevailing operating conditions. Selection should be made with respect to the intended service application, working environment and type of load.

Working load limit

The working load limit is the maximum weight the lifting sling is safe to lift. It is derived from the minimum breaking load of the sling divided by the design factor (safety factor, normally 7), multiplied by the mode factor, this being dependent, amongst others, on the tilt angle (maximum 60°) for multileg or endless slings. Where the load symmetry (even load distribution, central point of gravity) is not guaranteed for multileg lifting procedures, two legs maximum must be assumed as load bearing, based on the widest tilt angle, and this applied to all legs.

Dimensioning

The length of a lifting sling is the distance between the suspension points including end fittings. The aperture angle of loops must not exceed 20°. Minimum eye length no less than 3.5 times the highest thickness of the hook to be attached.

Marking

Lifting slings must be permanently marked with manufacturer's sign, measurements, material, working load limit, date of manufacture and tracking code, to the extent that local regulations require no further details. Material colour codes are as follows: green for polyamide, blue for polyester, brown for polypropylene and white for all natural fibres.

Storage and maintenance

Before and during storage

- Examine for damage; damaged lifting slings should not be placed in storage.
- Clean soiled lifting slings with water; use chemical detergents only if recommended by manufacturer or supplier.
- Keep lifting slings in storage away from dirt (e.g. by storing on shelves), extreme heat, moisture, chemicals, corrosive surfaces, UV rays and poorly ventilated areas.

Repairs must only be performed by a competent person.

Inspection

Before first and every subsequent use lifting slings should be carefully inspected for visible signs of damage and conformity between marked specifications and properties required. Lifting slings must be examined by a competent person at least once a year. In case of any damage or deformation to sling material or fittings they must be removed from service.

Precautions

- Do not use lifting slings with illegible or absent markings.
- The load to be lifted must be free to move; avoid swinging, tilting or dropping load through choice of suitable fastening, trial lift or repositioning of lifting points, use of guide ropes, spreaders or beams, avoid sudden or jerky movements.

- Do not pull unprotected lifting over sharp edges or rough surfaces.
- If necessary use edge or abrasion protectors.
- Use flat belts in choke mode only with reinforced end loops.
- Avoid bending flat belt along or across seams.
- Avoid sudden and jerky movements.
- Avoid heat contact.
- Working load limit reduction through
 - non-symmetrical (uneven) load distribution
 - use in choke mode
 - outside working temperature -40° to +80° (polypropylene) or -40° to +100° (other materials).
- Pay attention to sensitivities dependent on materials:
 - polyamide and mineral acids
 - polyester and alkalis
 - polypropylene and some organic solvents, acids and alkalis, light (if not UV stabilised)
 - in particular polypropylene and chafing.
- Repair of lifting slings by manufacturer only.

Removal from service

Discard in the event of:

- Chafe marks on the sling surface (caution: bald patches indicate melted yarn).
- Lateral or longitudinal cuts if more than 10% of the flat sling cross section affected.
- Cuts or chafe marks on the web edges, meshes or loops.
- Damaged or deformed fittings.
- Damage caused by chemicals.
- Damaged sheathing on round slings.
- Doubts about the sound condition of the core in round slings.
- Damaged load bearing seams in flat belts.
- After service period of approx. five years as precautionary measure.

General

These usage guidelines are based on existing European recommendations and standards. Further to these, consideration should also be taken of applicable local, national and international legislation, standards, directives and regulations from official societies (professional organisations, classification bodies, etc.) with regard to equipment safety (personal protection, industrial safety, accident prevention), as well as recommendations and operating instructions from manufacturers and/or operators of the equipment being used (lifting gear, conveyor systems, etc.).

In case of doubt about the technical properties of slings and components, their suitability for the envisaged tasks or safety requirements, consult manufacturer or supplier