

PRODUCT INFORMATION

USER INFORMATION

Lashing belts in service

Usage guidelines

Lashing belts in service

Lashing belts may only be used for securing loads, never for lifting them, 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 application, working environment and type of load, based on established regulations for calculation. For reasons of stability at least two belts are required for lashing down, four for diagonal lashing. The number and size of lashing belts to be used, and the tilt angle, depend on the vehicle (type and size of loading area, number and strength of available lashing points or rails). Stability of the vehicle body, driving speed, acceleration and braking, road curves on route, as well as composition of load items (size, weight, centre of gravity, surface condition of the loading area) form a combination of influencing factors, therefore represent forces to be considered when lashing (mass weight, centrifugal, inertia and friction). Transportation of heavy, large volume loads requires precise calculation of physical forces, and the lashing capacity to cope (securement force, possibly pretensioning force), in association with the necessary lashing method (interlocking diagonal, inclined, horizontal lashing or vertical tiedown lashing). For assistance here refer to existing standards and recommendations published by official safety institutions and the use of further items to support load stability such as boards, scantling and wedges, nets and coverings, slip-proof mats and padding.

Components

Any end fittings used must be adequate for the lashing belt used. Flat hooks must lie flat with the entire hook base width. Pointed hooks must not sit on the tip.

Marking

Lashing belts must be permanently marked with the manufacturer's sign, measurements, material, lashing capacity, year of manufacture, certification number 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.

Inspection

Before first and every subsequent use lashing belts should be carefully inspected for visual signs of damage and conformity between marked specifications and properties required. Any damage or deformation to belt material and/or fittings must lead to their removal from service. Lashing belts should be examined by a competent person at intervals in line with their frequency of usage.

Precautions

- Keep lashing belts away from intense sunlight, excessive heat, dirt, moisture and chemical influences when storing.
- Do not overload lashing belts. Observe lashing and pretensioning forces. Rule of thumb: pretensioning force = 50% of permissible lashing capacity for lashing down; ratchet hand tight for diagonal lashing.
- Do not use knotted lashing belts.
- Do not twist lashing belts.
- Connect end fittings correctly (exert no strain on hook tips, hang hooks without safety latch from outside to inside, contact area of flat hooks across total hook width).
- Do not use different lashing materials (e.g. chains with belts) with the same load due to likely differences in stretch behaviour.

- Lashing belts must be protected when used over edges and rough surfaces (use edge protectors and abrasion protection).
- Tensioning devices and end fittings must not rest over edges when under load.
- Lashing belts should only be released when certain that the load is standing securely and there is no danger from the load falling or rolling over. If required, apply lifting gear before releasing lashings.
- Avoid contact with heat
Pay attention to sensitivity of lashing belt materials:
 - PA (polyamide) and mineral acids
 - PES (polyester) and alkalis
 - PP (polypropylene) and organic solvents, acids and alkalis, light (if not UV stabilised)
 - in particular PP (polypropylene) and chaffing.
- Chafe marks on belt surface (caution: bald patches indicate melted yarn).
- Caution! Lashing capacity reduction through
 - non-symmetrical (uneven) load
 - outside working temperature -40° to +80° (PP), 40° to +100° (PA), -40° to +120° (PES).
- Remove soiled belts immediately from service, rinse with cold water, dry in fresh air at normal temperature.
- Lashing belts must only be repaired by manufacturer and only if markings still visible.

Removal from service

Discard in the event of:

- Missing or incomplete marking
- Identification of tears, cuts, notches and breakages in load-bearing fibres and seams of the belt material
- Deformation caused by heat (frictional and radiant heat)
- Deformation, cracks, strong indication of wear and corrosion in the end fittings and tensioning devices
- Sustained damage after soiled condition in spite of cleaning

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 belt material and components, their suitability for the envisaged tasks or safety requirements, consult manufacturer or supplier.