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# **Load Security – simple yet safe!**

## Legal provisions

Who is responsible for securing loads?



### **Driver**

in accordance Road Traffic Act sections 1,2 & 40A

**Owner** 

in accordance with above and Road Vehicles (Construction & Use) 1986 Regs 100(2)

### Dispatcher

in accordance with above and DoT CoP Safety of Loads on Vehicles

# Load distribution and blocking

**Stow correctly and then secure!** 





# Use a suitable vehicle

**Consultation between dispatcher and logistics company** 

**Height Safety** 

**Load Control** 

**Safety Management** 

Lifting

Select the vehicle so that traffic, operational requirements and the load security is guaranteed.



### **Friction is all important**

#### **Keep loading area clean**





In order to optimise load safety, the load should be positioned so that it has as much positive fit as possible with the bulkhead, and then loaded further back along the vehicle with no gaps. Observe axle loads and bulkhead strength!

# Direct transverse and diagonal lashings

The lashing straps must be attached at the optimum angle, where possible at the load's centre of gravity, and then evenly tensioned by hand, in order to prevent the load slipping in any direction. Here the lashing capacity

# **Securing Loads Correctly**

(LC) is the determining factor. You can find the correct lashing straps to secure the load to BSEN12195-1:2010 in the Table of Lashing Capacity on the left. All lashing straps must comply with **BSEN12195-2.** 

### **Use anti-slip mats**

Anti-slip mats increase friction between the load and the loading area and thereby increase safety, whilst significantly reducing the number of lashing straps required

**Frictional lashings** 

Here, the STF (standard tension force) or pre-tension force alone is responsible for pressing the load into the anti-slip mat and the loading area so firmly that it can no longer slide around. The STF pre-tension force can be found

on the label of the lashing strap or can be read from the TFI. Generally, 50% of this force is transferred to the opposite side. The Table of Lashing Capacity below shows how many

## **Lashing Capacity Table**

### **Direct transverse/diagonal lashing**

Coefficient of eliding friction of			
0,2	3790 kg	21.640 kg	15,160 kg
0.6	22.252 ka	44.504 ka	43.290 ka
Coefficient of sliding friction $\boldsymbol{\mu}$	in direction of travel <b>0.8 G</b>		
	4 lashing straps with LC of	4 lashing straps	4 lashing straps
	2500 daN can secure the	with LC of 5000 daN can	with LC of 10,000 daN can
	following load weight	secure the following load weight	secure the following load weight

#### Coefficient of sliding friction $\mu$ at right angles to direction of travel **0.5 G**

	0,2	6900 kg	13,800 kg	27,600 kg
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Coefficient of sliding friction  $\mu$  **0.2** = e.g. metal/wood Coefficient of sliding friction  $\mu$  **0.6** = with anti-slip mat

The correct procedure for securing the stated maximum load weight using 4 lashing straps from the selected category is as follows:

- Evenly tension lashing straps by hand.
- Lashing angle  $\propto 0^\circ$ -60° and ß 20°-45° must be observed.
- Secure top-heavy goods by means of blocking in the base area.
- The loaded item must be stable.



#### straps you will need to secure the load to BSEN12195-1:2010. All lashing straps must comply with **BSEN12195-2.**

# Lashing Capacity Table Frictional lashings

90°- 83

83°- 45°





We recommend: Using a lashing capacity calculator!



Manufacturers of Load Security Systems, Lifting and Height Safety equipment **Commercial Vehicle Fall Protection and Fall Prevention Systems** Modular training programme provider

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Download the Lashing Controller APP App Stor

than 10 lashing straps!

Always use at least 2 lashing straps with any loaded item! Convert load weights missing from the table by pro rata!



Dan

#### Load Control to European Standards BSEN 12195



All the lashings manufactured by SpanSet for load restraint purposes are designed to fully comply with and in many cases exceed the requirements of the European standard for load restraint BSEN 12195-2:2001.

- Higher quality webbing with a minimum factor of safety of 3 times the Lashing Capacity
- All the metal components are tested and stamped with a load rating
- All assemblies are type tested and batch tested
- Additional Cyclic Load testing within SpanSet's own test laboratories simulates movement of the vehicle
- Detailed labels applied to each part of the lashing assembly
- Lashing assembly and components all fully traceable
- Comprehensive care and use instructions are supplied

#### Correct number of lashings should be calculated according to BSEN 12195-1:2010

SpanSet Lash Controller App - download for FREE

LC 1000daN

**ELONGATION <7%** 

PES

LG 1M

NOT FOR LIFTING!

MIDDLEWICH

CHESHIRE U.K

TEL:01606 737494 FAX:01606 737502

157323

MFG 03/14

EN12195-2

LC 1000 daN

SPANSET

EN12195

Seam

App Store

#### What is on the label?

- Lashing Capacity LC in daN is the assembly's strength rating and equal to half the break strength.

1 daN = 1 Kg

The DecaNewton is numerically equivalent to a kg

- Standard Tension Force STF is the pre-tension in the webbing achieved with a ratchet handle force of 50daN for frictional lashing.
- A blue label and the letters PES indicate a polyester webbing material.
- Ratchet lashing assemblies are not rated for lifting operations.
- All SpanSet lashings carry a serial number which enables us to trace back the components of the manufacture of the lashing.
- All SpanSet Lashing labels have a sewn-in section inside the seam. This secures all the critical identification information in case of an incident.

### **Guide to Lashing Safety and Training**

The webbing has been cut across its width by a

The webbing has been cut through and pulled by



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