

1. This guideline applies to:

- Transportation of profiled, shot blasted and as cast slabs by road.
- Minimum product width of 1100 mm.
- Maximum product length of 12 m.
- Maximum product weight of 30 tonnes.

The lowest friction factor, determined as per EN 12195-1:2010 Annex B.1.2, is $\mu=0.6$.

2. Essential requirements

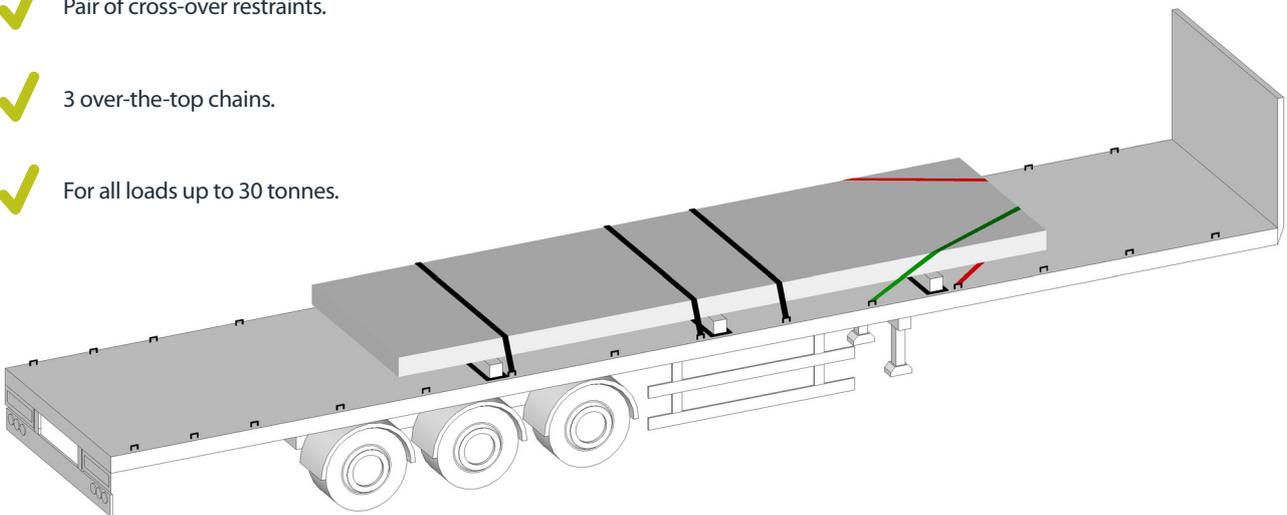
- All restraints must be minimum 8 mm Grade 8, LC 40 kN chains compliant with EN 12195-3.
- Lightweight trailers to be used to cater for heavier loads.
- Minimum lashing point rating of 3 tonnes for cross-over option.
- Anti-slip matting must be placed between base timbers and the trailer deck.
- Loads to be placed on a single layer of timber dunnage with a minimum square cross-section of 125 mm x 125 mm.
- The product must be loaded away from the headboard to achieve correct axle loadings.

See Technical Information Sheet TIS-0012 Axle weights and load distribution for more details.

3. Overview of restraint system

3.1 Cross-over chains with over-the-tops

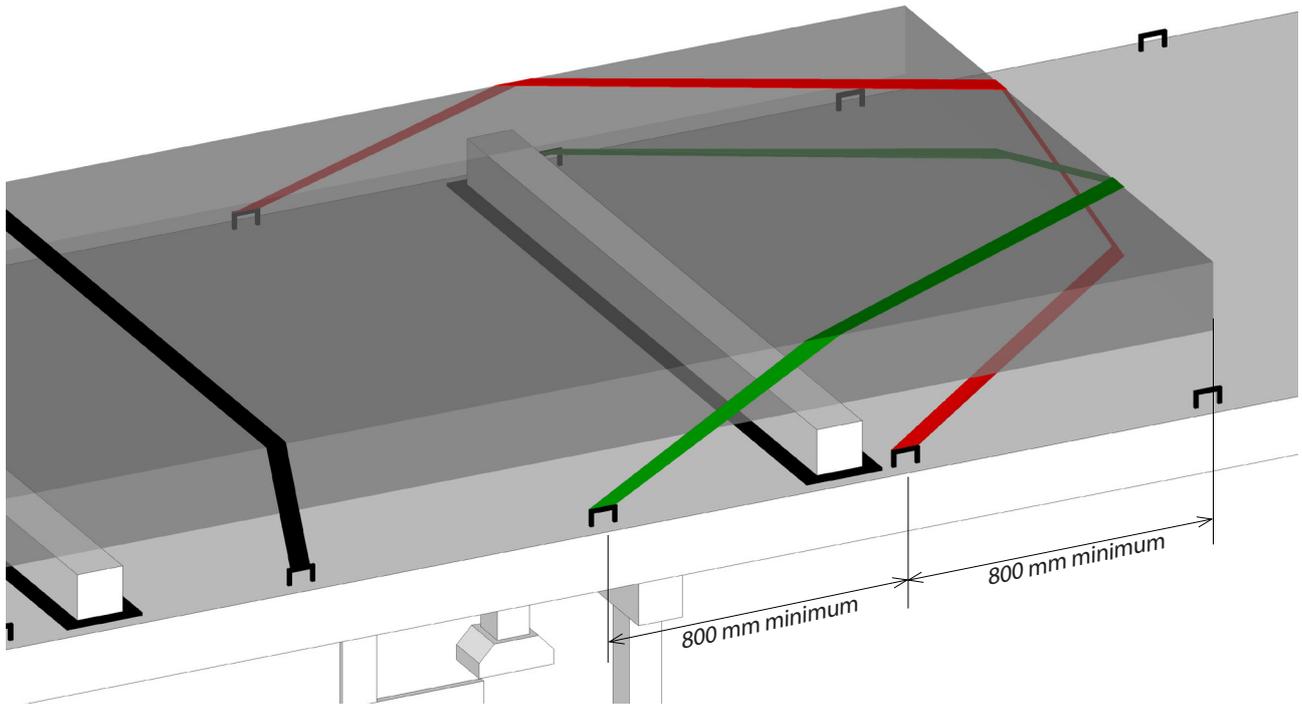
- ✓ Square base timbers on anti-slip matting.
- ✓ Pair of cross-over restraints.
- ✓ 3 over-the-top chains.
- ✓ For all loads up to 30 tonnes.



Restraint system for up to 30 tonnes using LC 40 kN 8 mm chains OR LC 63 kN 10 mm chains.

This Load Restraint Guideline is designed to meet the forces for road transport as stated in EN 12195-1:2010 and VDI 2700.

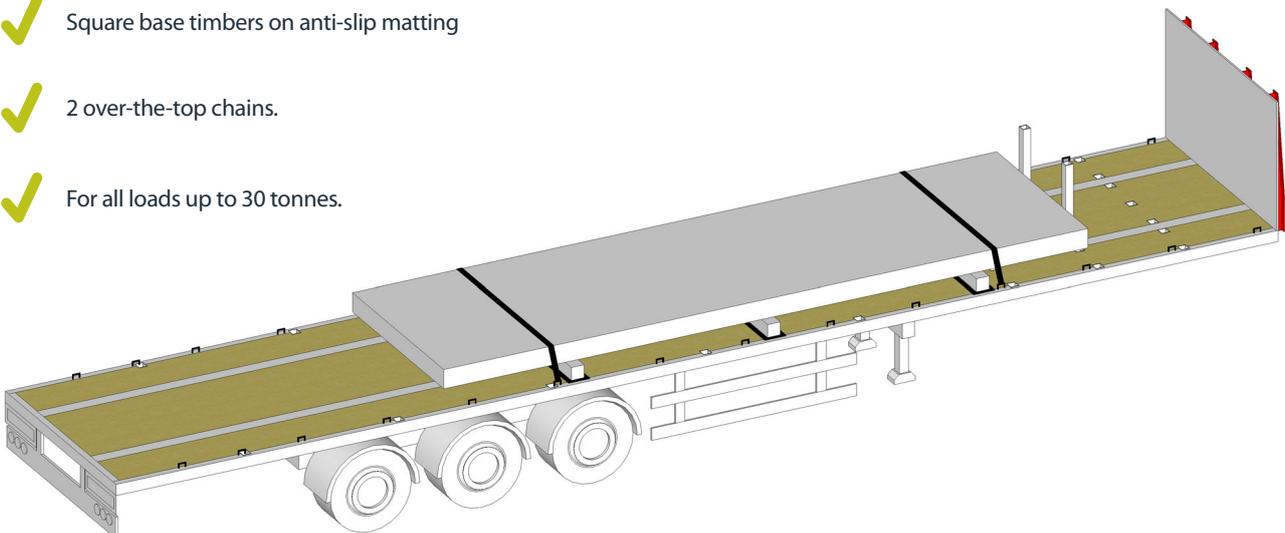
Cross-over layout.



- ✓ Minimum lashing point rating of 3 tonnes.
- ✓ Base timbers must NOT interfere with cross-over chains.
- ✓ Minimum distance from front of product to first lashing point of 800 mm.
- ✓ Minimum LC 40 kN 8 mm chains.
- ✓ Tensioner to be placed on the rear leg of the cross-over chain.

3.2 Stanchions with over-the-tops

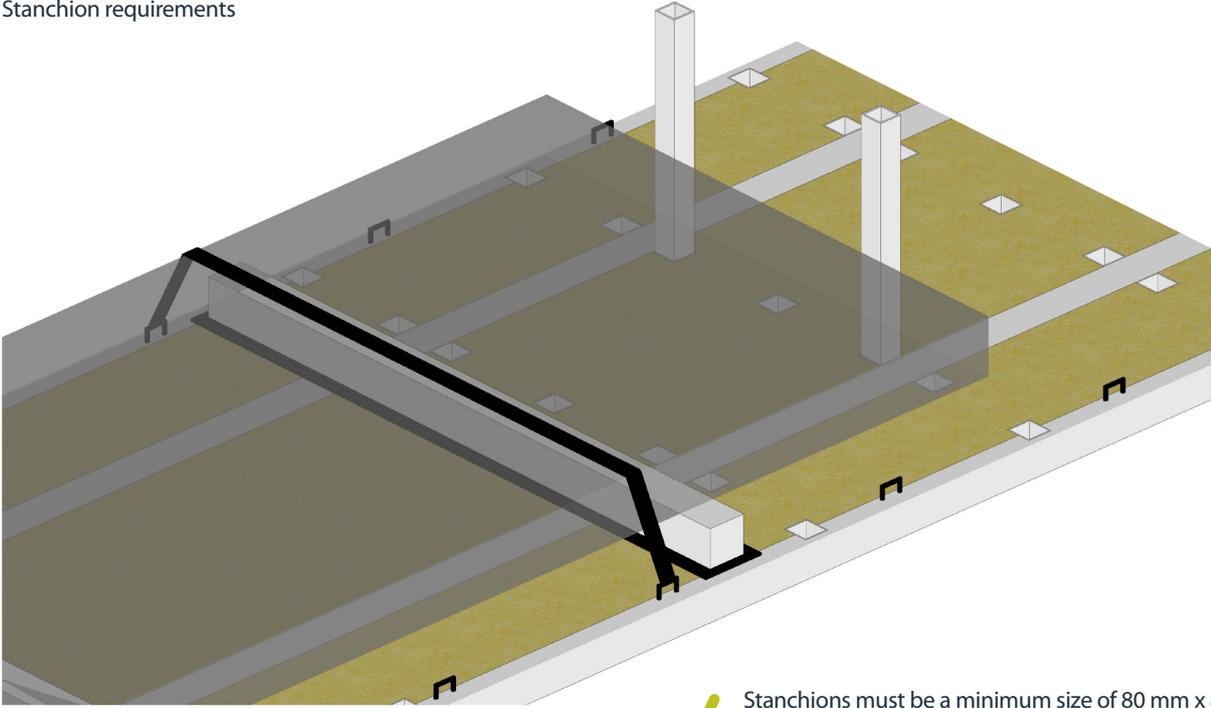
- ✓ 2 stanchions with a minimum size of 80 mm x 80 mm and wall thickness of 5 mm.
- ✓ Square base timbers on anti-slip matting
- ✓ 2 over-the-top chains.
- ✓ For all loads up to 30 tonnes.



Restraint system for up to 30 tonnes using LC 40 kN 8 mm chains OR LC 63 kN 10 mm chains.



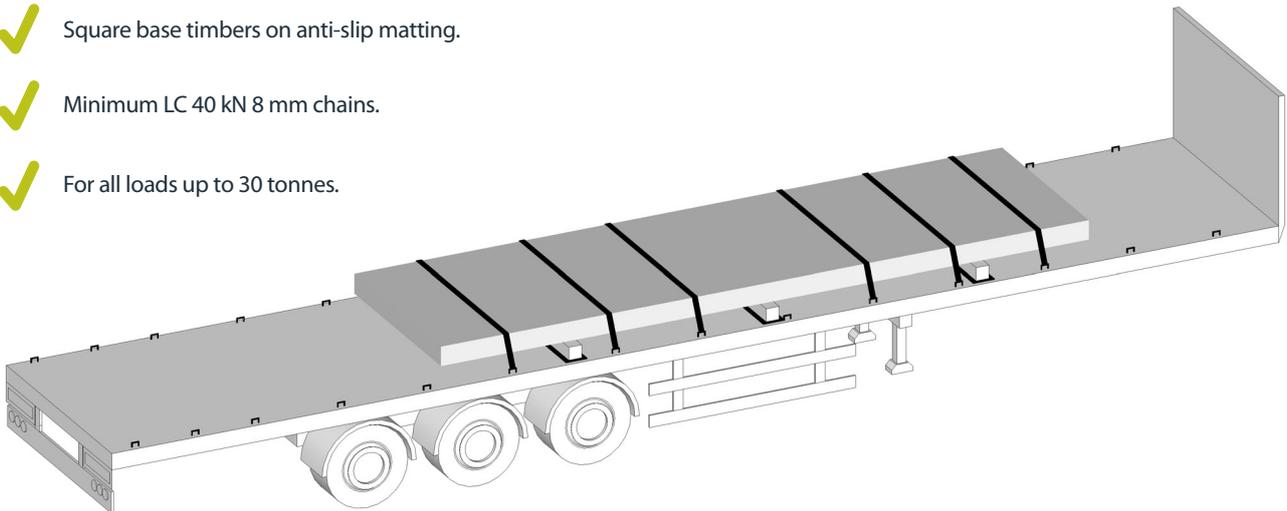
Stanchion requirements



- ✓ Stanchions must be fitted before loading to ensure minimal gaps between product and stanchions.
- ✓ Ensure that the stanchions are evenly spaced across to the load.
- ✓ Stanchions must be a minimum size of 80 mm x 80 mm and wall thickness of 5 mm.
 - See Technical Information Sheet TIS-0011 Side pins and deck stanchions for further details.
- ✓ Ensure stanchions and stanchion pockets are in good condition.
 - Stanchions and pockets are to be inspected regularly for corrosion and damage.

3.3 Over-the-top chains only

- ✓ Square base timbers on anti-slip matting.
- ✓ Minimum LC 40 kN 8 mm chains.
- ✓ For all loads up to 30 tonnes.



Restraint system for a wide load up to 20 tonnes using LC 40 kN 8 mm chains.

- ✓ Narrow loads classed as under 1800 mm wide.
- ✓ Wide loads classed as over 1800 mm wide.

Table 1: Over-the-top chains required

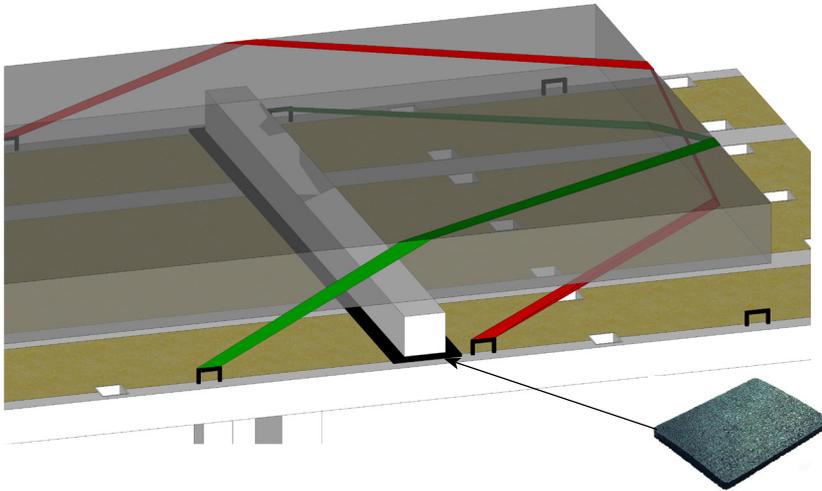
Load	Narrow load		Wide load	
	8 mm	10 mm	8 mm	10 mm
up to 16 t	6	4	5	3
16 t > 20 t	6	4	6	4
20 t > 23 t	7	5	6	4
23 t > 27 t	8	6	7	5
27 t > 30 t	9	6	8	6



4. Anti-slip matting

- Recommended thickness: 10 mm is suitable for most applications.
- Anti-slip matting is to be applied in strips to effectively prevent timber on deck, or steel on wood contact where required.

Standard restraint system



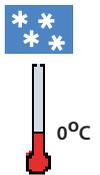
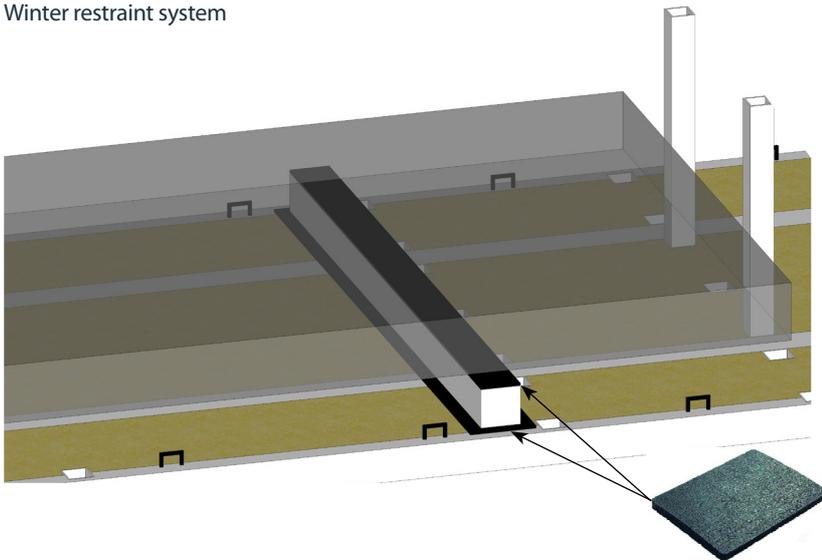
✓ Anti-slip matting under base timbers.

Note: It is important to ensure that the anti-slip matting is visible beneath the product for inspection purposes.

5. Severe winter weather advisory periods

- During severe winter weather advisory periods, additional measures are required.
- Anti-slip matting to be placed on both sides of ALL base timber dunnage.

Winter restraint system



✓ Anti-slip matting on both sides of base timbers.

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