

### 1. This guideline applies to

- The transportation of profiled, shot blasted and cast blooms with a maximum individual product width of 1100 mm by road and sea.

The friction factor for this product on timber dunnage, determined as per EN 12195-1:2010 Annex B.1.2, is  $\mu=0.6$ .

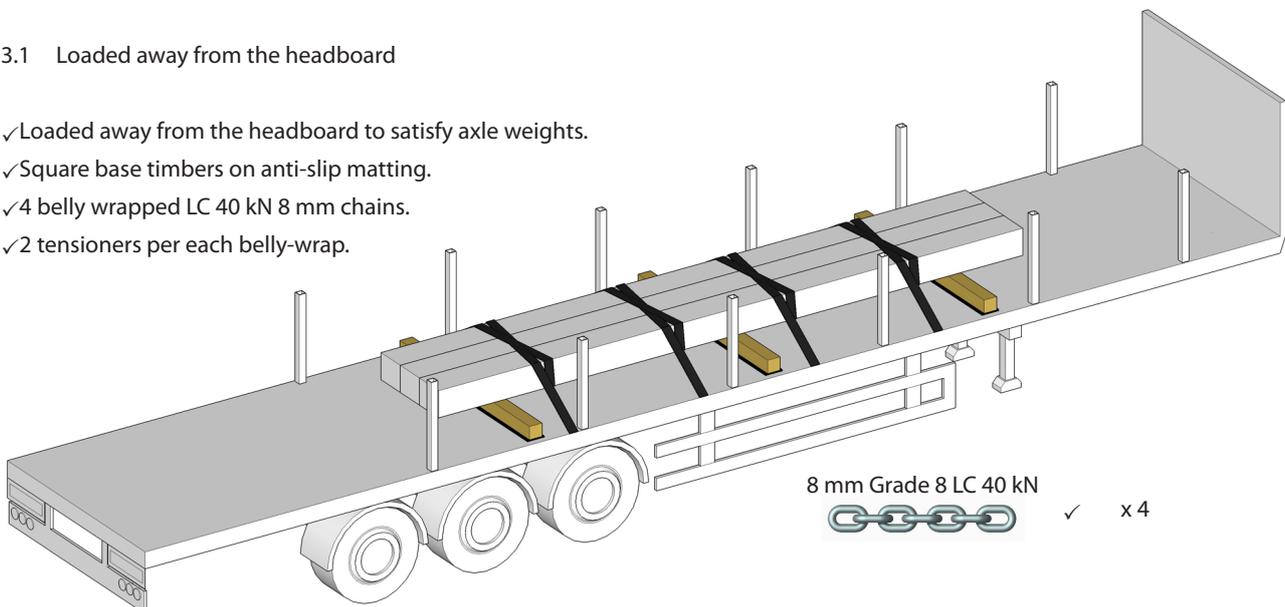
### 2. Essential requirements

- All chain restraints must be minimum 8 mm Grade 8, LC 40 kN chains compliant with EN 12195-3.
- Webbing straps must be a minimum of LC 2000 daN and must be compliant with EN 12195-2.
- Webbing sleeve edge protection **MUST** be fitted to the clamp down legs of the belly-wrap strap restraints.
- Plastic or webbing sleeve edge protection must be applied to all other contact points for webbing restraints.
- Anti-slip matting must be placed between the base timbers and the trailer deck for ALL loads.
- Loads must be placed on a single layer of timber dunnage with a minimum square cross-section of 125 mm x 125 mm.
- Product must be placed centrally across the width of the trailer.

### 3. Restraint system for UK loads

#### 3.1 Loaded away from the headboard

- ✓ Loaded away from the headboard to satisfy axle weights.
- ✓ Square base timbers on anti-slip matting.
- ✓ 4 belly wrapped LC 40 kN 8 mm chains.
- ✓ 2 tensioners per each belly-wrap.



Note: Restraint system for a load up to 24 tonnes.

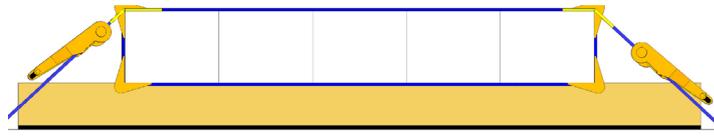
Load	8 mm chains	10 mm chains
Up to 24 tonnes	4	3
Over 24 tonnes	5	4

During severe winter weather + ASM both sides of ALL base timbers advisory periods

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

Belly wrap-application

- When applying a belly-wrap, ensure that the restraint is in a forward 'crossed-over' position (as shown).
- This applies for both webbing straps and chains.
- Edge protection must be used for each corner contact point (as shown).



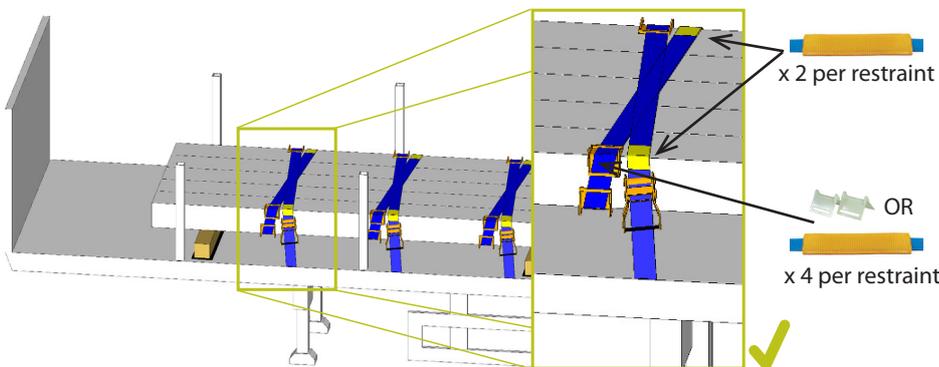
\* 2 tensioners to be fitted to each belly-wrap

✓ 2 tensioners required for each belly-wrap

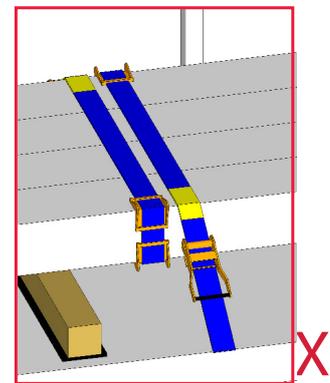
✓ Restraints applied in a forward 'cross-over' position.

✓ Webbing sleeve edge protection for each clamping leg corner contact point.

✓ Plastic edge protection or sleeves may be used for all other edges.



Forward 'cross-over' position

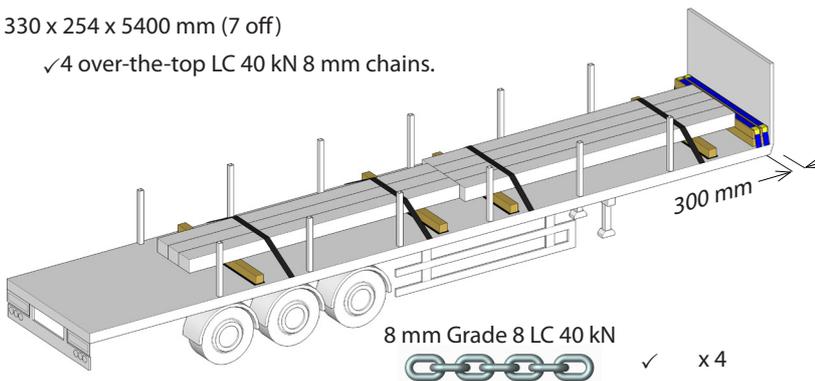


X Incorrect restraint positioning

3.2 Loaded / blocked to the headboard

330 x 254 x 5400 mm (7 off)

✓ 4 over-the-top LC 40 kN 8 mm chains.



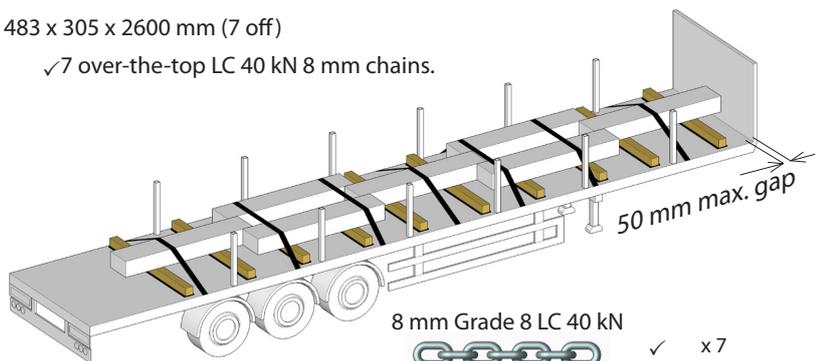
✓ Block 300 mm from the headboard.

✓ Secure blocking timbers with webbing straps.

✓ Square base timbers on anti-slip matting.

483 x 305 x 2600 mm (7 off)

✓ 7 over-the-top LC 40 kN 8 mm chains.



✓ Load up to the headboard.

✓ Square base timbers on anti-slip matting.

✓ Overlap blooms by a minimum of 200mm.



#### 4. Restraint system for export loads

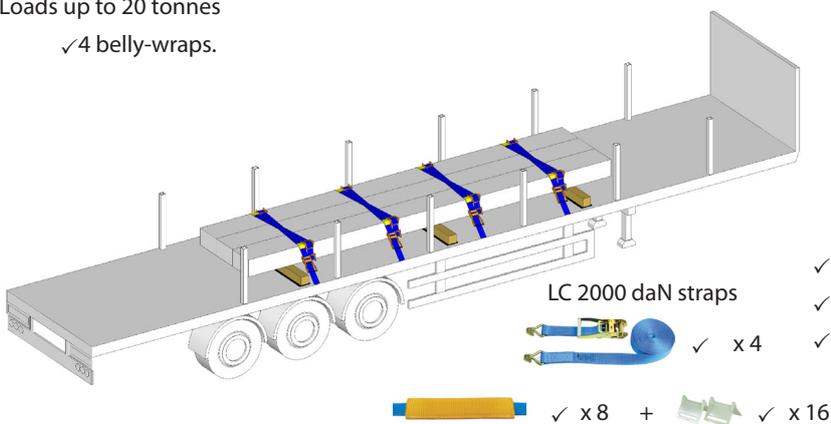
- Unless otherwise stated, product must be loaded away from the headboard to achieve correct axle loadings.
- See Technical Information Sheet TIS-0012 Axle weights and load distribution for more details.

Load	No. of belly-wrapped webbing straps
Up to 20 tonnes	4
Up to 24 tonnes	5
Over 24 tonnes	6

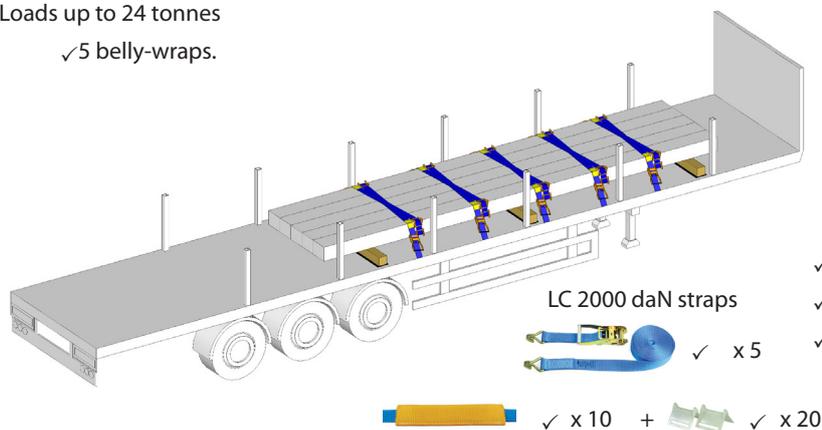
During severe winter weather advisory periods	+ ASM both sides of ALL base timbers
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Loads up to 20 tonnes  
✓4 belly-wraps.



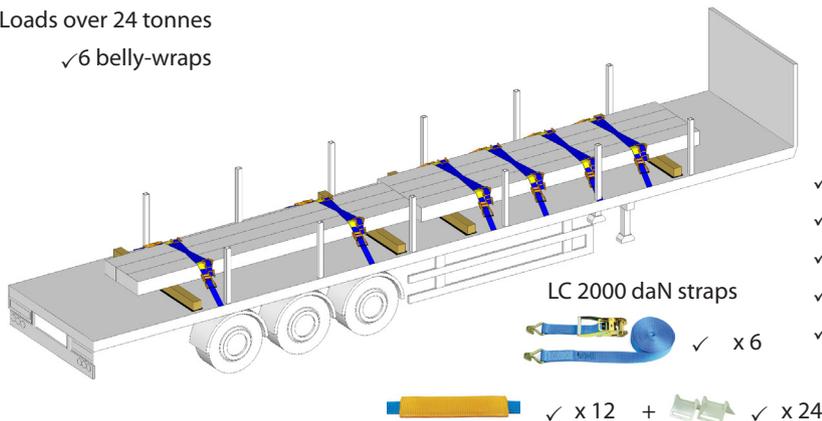
- ✓ Square base timbers on anti-slip matting.
- ✓ Minimum of LC 2000 daN webbing straps.
- ✓ Edge protection as required.

Loads up to 24 tonnes  
✓5 belly-wraps.



- ✓ Square base timbers on anti-slip matting.
- ✓ Minimum of LC 2000 daN webbing straps.
- ✓ Edge protection as required.

Loads over 24 tonnes  
✓6 belly-wraps

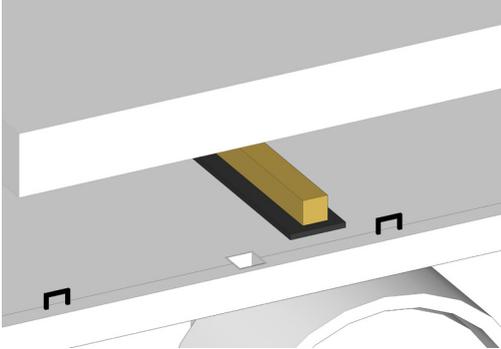


- ✓ Load consists of 7 blooms.
- ✓ Load 1800 mm from the headboard.
- ✓ Square base timbers on anti-slip matting.
- ✓ Minimum of LC 2000 daN webbing straps.
- ✓ Edge protection as required.

## 5. Anti-slip matting

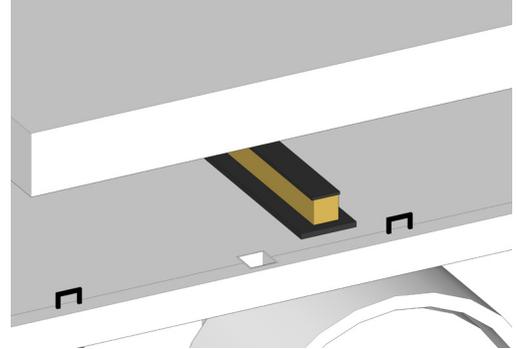
- Recommended thickness: 10 mm is suitable for most applications.
- Anti-slip matting is to be applied in strips to effectively prevent timber on deck, or steel on wood contact where required.

Standard restraint system



✓ Anti-slip matting under base timbers.

Winter restraint system

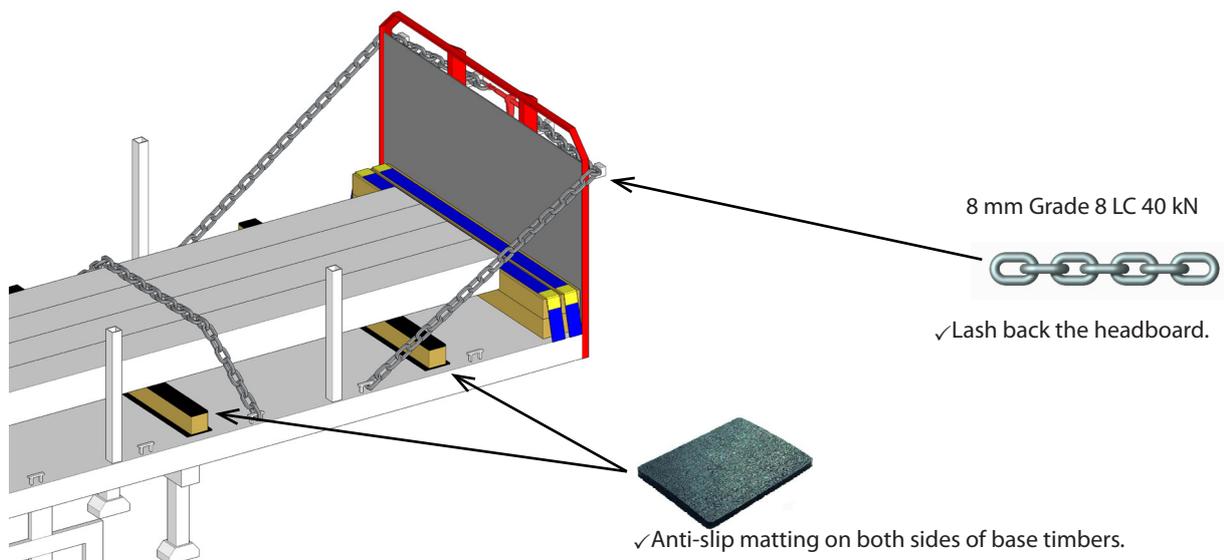
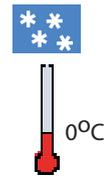


✓ Anti-slip matting on both sides of base timbers.

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

## 6. Severe winter weather advisory periods

- Anti-slip matting to be placed **on both sides** of ALL base timbers for ALL loads.
- Trailers with headboards rated to 7.5 tonnes or above, or approved by British Steel, or trailers with headboards manufactured to EN 12642 Code XL, can be loaded with product blocked to the trailer headboard to provide forward restraint.
- If the headboard strength cannot be verified, the headboard will require lashing back with a minimum 8 mm Grade 8 LC 40 kN chain (as shown)



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