



## GUIDANCE FOR BANDING STRIP PRODUCTS

### 1. BANDING STRIP PRODUCTS

Secure banding of steel coil, blanks and sheet is required to maintain item integrity and prevent personal injury during:

- Handling
- Storage
- Internal transportation
- External transportation

In all cases, proprietary banding should be used. Steel banding is the industry norm, though other banding materials such as plastic may be used subject to the issues outlined below.

Table 1 provides guidance on the minimum standards that should be applied to processed material, assuming steel banding at least 16mm wide x 0.5mm gauge. However, it should be noted that individual requirements will vary due to a number of factors:

- Size
- Weight
- Shape (e.g. pressed parts)
- Gauge
- Quality (e.g. yield strength, coating, oiling)
- Customer specification (special pallets?)

As a result, **banding requirements should be established through risk assessment**. For example, 16mm banding will be unsuitable for slit coil of 3mm gauge, particularly if the coil is galvanised. Deviation to a lower standard than that identified in Table 1 must not be undertaken lightly.

Where radial bands are specified in Table 1, one band should be within 100mm of the end of the outer lap of the coil.

Particular attention should be paid to oiled and/or galvanised material where reduced friction can lead to increased risk of banding failure on flat products.

Due to potential sharp edges on processed material, edge protection should be used wherever practicable in the form of specific corner protectors or other packaging.

Site-specific standards should be established, involving all relevant personnel. These standards should be communicated appropriately; approved by the site's Health & Safety Committee and incorporated into induction and job-specific training programmes.

This standard can also be used for Quality purposes, and in the absence of customers' specific instructions, can be quoted during contract review, referred to on works instructions, as well as supplying information to outside processors.

## 2. SECURING LOADS TO THE VEHICLE

Personnel should be instructed to exercise care when working in the vicinity of a vehicle that is being loaded. It is an obligation of **all personnel** involved in the loading/unloading of vehicles to have due regard for each other's safety. This starts with the correct wearing of required PPE.

There must be a full and active awareness by **all personnel** of overhead crane and forklift truck movements in the vicinity of a vehicle loading/offloading operation. Where it is necessary to climb on to a vehicle, maximum care should be taken and wherever possible steps should be provided to aid safe access. It is important that the bed of the vehicle is clean, oil free and free of debris (such as spare battens, straps, pallets and chains).

Whilst there should be specific rules drawn up by either the stockholder (where they operate their own fleet) or the transport contractor regarding the actions of drivers whilst loading/unloading, the following basic rules should be observed when transferring a load to or from a vehicle by crane or forklift truck :

- A driver must never remain in his vehicle cab when loading/offloading is taking place but should stand in a designated safe zone
- If the driver has no alternative than to physically assist the loading/unloading process by being on the bed of the vehicle, he must stay well clear of a moving load and be always visible to the crane or forklift truck operative
- Drivers must be trained appropriately in the safe loading/offloading and securing of loads
- Whilst on a vehicle Drivers must wear hard hats fitted with chin straps in place at all times, together with other mandatory PPE (e.g. hi-viz jacket, long sleeves, gloves and steel toe boots)
- Extra care needs to be taken when sheeting a vehicle using a tarpaulin. Tarpaulins must be in good condition for both being watertight and in respect of their rope ties which can be the cause of accidents if they break

To maximize safety, the stockholder and its transport supplier should liaise closely over safe operating procedures so that there is no risk of "double standards".

### ***Exclusion Zones***

These should be established each side of a vehicle being on/offloaded in order to restrict non-essential traffic or pedestrians. Only a trained and certificated slinger, forklift truck or crane operative should be within the zone. Zones should be clearly defined with floor painted yellow cross-hatch lines. Physical barriers are recommended where practicable.

### ***Tidy Loading***

Consignments should always be loaded onto a vehicle with careful regard to load stability in transit, e.g. for a mixed load, the widest and heaviest items should be at the bottom. Bundles, tubes, sections should be loaded onto vehicles fitted with side support posts to minimise the risk of load movement when either in transit or during the loading/offloading process.

The load carrying part of a vehicle normally flexes significantly when traveling. As a consequence, the load securing method must take into account such movement. A stockholder needs to be aware of the issues of load movement when designing or specifying the packaging or dunnage used in preparing the load for transport.

### ***Restraint of Loads - Packaging Standards***

The recommended and proven procedures for the use of chains, straps, or other methods of fixing require experience in their application. Particular instructions should be given to drivers that they are to chain, strap or to otherwise fully secure their load even when moving a short distance. Attention is drawn to the publication: Department for Transport Code of Practice for Safety of Loads on Vehicles.

Loads, particularly beams and sections, tend to “settle” after a few miles of travelling. Drivers should be instructed to re-adjust securing chains/load binders to accommodate this settling and so make the load secure.

Tarpaulins (sheets), whether oiled or dry, may not be adequate to secure a load safely and every effort should be made to band bundles and strap the load securely to the vehicle prior to sheeting it.

Drivers should not use extension tubes over tensioner arms when tightening chains. Such practice is hazardous and has been the cause of serious accidents.

Packaging and banding of the product needs to be of sufficient quality and specification so as to be capable of safe transport by road, recognizing that the vehicle platform flexes when in motion and may be subject to harsh braking and similar forces en-route to its destination.

Close liaison between the driver and the loader is required to ascertain the ideal positioning of the load to achieve correct axle loading and load security.

### ***Good Housekeeping***

Good housekeeping and stock management are particularly essential in the loading areas so that congestion is avoided. A cluttered receiving or dispatch bay increases the hazards of the loading/unloading process.

### ***Checking of Ancillary Equipment***

There should be a regular and laid-down programme of checking the soundness and suitability of all packing materials, battens, chains, straps and similar items. Remember, the statutory inspection and testing requirements for cranes also apply to any lifting tackle usually kept on the lorry.

### ***Avoidance of Vehicle Overloading***

Adequate steps must be taken to ensure that permitted maximum gross vehicle and axle weights are not exceeded. The responsibility for this is shared between the transporter and the organization whose load is being transported. This may involve the use of a weighbridge, although calculated load weights are normally acceptable providing the weights on the load manifest are accurate. The driver is responsible for assessing where to position the load to meet legal axle weights. It should be noted that in order to achieve the legal maximum weight on all axles it may not be possible to load up to the theoretical maximum payload.

***The above topics are covered more fully in the NASS Load Safety guidance document, produced in consultation with the HSE. In addition to this document, attention is drawn to the need to follow IND(G)313 “Safe Unloading of Steel Stock”. This HSE booklet requires agreement between the supplier and customer of the offload method and a Written Delivery Plan has to be compiled.***

### **3. VEHICLE SUITABILITY**

It is essential that the vehicle planned to transport a load is suitable for the job. This includes the provision of recommended safety equipment such as “retention posts” when transporting coil, or side posts when transporting sections or tubes. It is strongly recommended that steps are taken to ascertain the competency of the party transporting the load, to ensure that appropriate training of the driver has been undertaken in the safe securing of the load and that relevant insurances are in place.

**Table 1**

<b>Minimum Banding Standards</b>						
<b>COIL</b>						
Gauge	Less Than 1.2 mm		1.2 mm - 3.2 mm		Over 3.2 mm	
	Circumference	Radial	Circumference	Radial	Circumference	Radial
Slit Coil up to 300mm	Tape	2	1	3	1	3
	1	2				
Slit Coil over 300mm	Tape	3	1	3	1	3
	1	2				
Wide Coil (Return To Stock)	1	1	2	2	2	2
<b>BLANKS AND SHEET</b>						
	Length	Width	Comments			
Blanks less than 1m x 1m	2	1				
Pallets with Multiple Stacks	One band per row		Subject to individual Risk Assessment			
Sheet up to 2m long	2	3				
Sheet over 2m long	2	1 per metre + 1				