

**TIN 026**

**Lifting Loads Using Fabric Bags**

Large capacity bags made from fabric, Flexible Intermediate Bulk Containers (FIBCs), are increasingly being used for the delivery of bulk materials to construction sites. These bags should meet the requirements of BS EN ISO 21898:2005 *Packaging. Flexible intermediate bulk containers (FIBCs) for non-dangerous goods*.

FIBCs are designed for the transportation of bulk materials on vehicles and to be lifted on and off the vehicle. The following precautions must always be taken to ensure that the bags and the material they contain are lifted safely:

1. Standard bags should only be used for bulk materials, such as sand, soil or aggregate, which will not cause damage to the bag.
2. On delivery to site the bags should be checked, prior to lifting, to ensure that they have not been damaged during transit to site.
3. The bags should only be lifted by their lifting loops from the delivery vehicle to the ground and personnel should be excluded from the area under the bag. If they need to be lifted to another position on site they should first be placed on to a pallet or into a stillage, or the contents transferred to a certified lifting skip (See **Figures 1 & 2**). If a pallet is used it must be lifted with forks – either a telehandler or crane lifting forks, and will require a net to ensure that loose contents do not fall during lifting.



**Figure 1**



**Figure 2**

4. The handling instructions on the bag must always be followed.
5. Single bags must always be lifted using all the lifting loops provided and a suitable set of slings with hooks fitted with safety latches to prevent disengagement from the lifting loops.
6. Multiple lifting of bags must only be carried out using spreader beams.

**NOTE:** *Spreader beams must be designed and thoroughly examined as lifting accessories.*

7. All parts of lifting accessories in contact with the bag's lifting points must have smooth edges to avoid damaging the fabric.
8. All bags should be treated as single use (lifting off a vehicle after delivery), after which they should be destroyed / disposed of, as their integrity cannot be further guaranteed.

**Tower Crane Technical Information Note**

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9. In the case where special bags (See **Figure 3**), having particular features such as spreader rings and with strict conditions of use, are to be used for non bulk materials such as the rebar links as shown in **Figure 4**, an exclusion zone should be established around the delivery vehicle to be unloaded. The bags should then be lifted directly from the delivery vehicle and placed in stillages on the ground before any further site movement takes place.



**Figure 3**

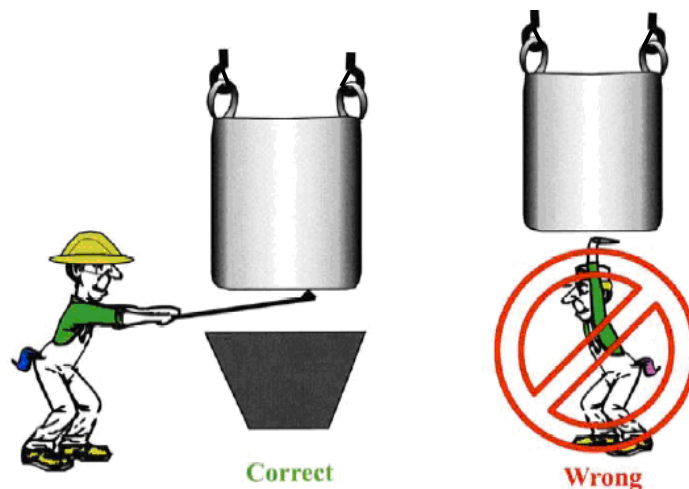


**Do Not Lift In This Condition!**

**Figure 4**

10. When emptying bags the following points should always be observed:-

- FIBCs with a plain/solid bottom can be emptied by cutting the base of the bag (See **Figure 5**).
- This must be done slowly with great care to avoid any shock loading to the crane.
- Persons must never stand under an FIBC during discharge and must keep hands well clear to avoid being struck by the bag contents or any solid base.
- Persons must never stand or place their arm beneath a suspended FIBC.



**Figure 5**

Illustration by courtesy of FIBCA

**Note:** Additional information on the use of FIBCs is available from the Flexible Bulk Intermediate Container Association (FBICA) at [http://www.fibca.com/index\\_Publications.html](http://www.fibca.com/index_Publications.html)