

## FIBC user guide (operating instructions) TU U 25.2 – 35105748 – 002:2007

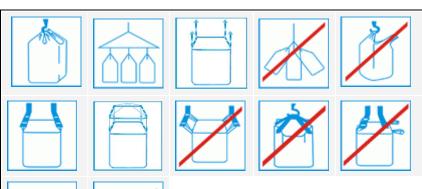


# **FIBC** operating instructions

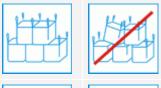
All the advantages of flexible intermediate bulk containers can be used with proper selection of the container to the type of goods and compliance with the rules of usage. The use of flexible containers can reduce overall labor costs, but subject to availability at the enterprise:

- devices for loading (discharge) of containers;
- freight mechanisms for delivery of containers for loading (discharge) and intrafactory transportation;
- platforms and warehouses of temporary storage of filled containers.
   Basic rules of usage listed below.

#### General requirements.



Safety factor of 5:1 ensures the integrity of the container even in case of jerks, shortterm overloads, but you must follow the rules of slinging, if their failure to comply, the load on any nodes of the container may exceed the critical and lead to precipice.



If you'd like to stockpile containers you must siting them evenly, firmly set, vertically.



Transportation by loader at a minimum height of lift.



Must never be used (loading / discharging / lifting / moving) the container when the product temperature (ambient) below -20° and above +60° degrees Celsius.



When using any containers are not permitted people standing/location in the zone of possible falling container.



Protect from direct sunlight and rainfall.



When hanging the two loops container does not breed loops wide. The maximum allowable distance between it's loops of 0.4 m.



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Containers should be subjected to rigorous pre-inspected visually to exclude cases of damaged containers, being inside of container moisture, the granular product residue or other foreign objects, improper installation liner, discharge valve (if available) and other deviations from required standards.

Do not allow contact of the container with objects that have sharp edges and with aggressive chemicals.

If the filler temperature is above 60°C, then use of container is permitted only by special permission of the manufacturer.

Before loading you must insert the liner into the container, inflate it with the air, hang the container on the loading device in such a way that the bottom of container touched floor (loading platform), to fix the liner at manhole. When hanging the container is necessary to observe the angles of dilutions (angle of slope), lifting the container elements (slings).

In order to make full use of container and it volume to create a more stable unit load during the boot process is recommended to vibrate it. Sample characteristics of the standard vibro machine: the amplitude of 1.2-2.0 mm, 10-50Hz frequency, time of vibration - 1.5-2.0 min.

Forbidden abruptly fill the container, overload the container more than its load capacity.

After loading and removing container liner should be sealed. This is done as follows: curl up top of the liner, and then a cord tied (sticky tape), so liner is sealed and fixed inside the container.

Accompanying documents are placed inside the pocket for documents.

#### The stability of the filled container.

The container should be filled so the ratio height of the filling to the size of the bottom was not more than 1.5 / 1.

Within the meaning of the size of the bottom means:

- diameter for container with a circular cross-section;
- length of the smallest side container with rectangular cross-section.

### Moving and temporary storage of containers.

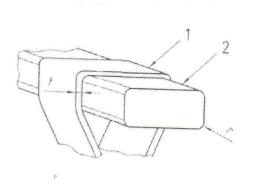
Before loading or discharging of containers you must make sure in serviceability of container lifting elements and good condition lifting and hoisting devices.

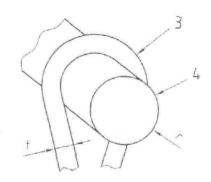
Containers should be correct sling. When lifting you should make sure that the hooks, the bar or carrying rod designed to lift containers have rounded edges (min radius 5 mm) with a large radius and thickness than the lifting elements (slings) of the container. In addition they must be wrapped with a cloth to prevent fraying of lifting parts of the container.



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- t thickness of the container lifting elements (slings);
- r radius of curvature min. 5 mm, **importantly**: always  $\mathbf{r} > \mathbf{t}$ ;
- 1 lifting element of the container (loop or webbing, slings);
- 2 lifting device (such as lifting rod);
- 3 lifting element of the container (loop or webbing, slings);
- 4 The devices are designed for lifting (for example a hook or lifting rod).

When hanging the container is necessary to observe the angles of dilutions (angle of slope), lifting the container elements (slings).

Containers with two lifting loops can be hanging:

- both lifting elements of the container on one hook or lifting rod:
- each lifting elements of the container on hook or on a separate lifting rod, in these case prohibited breeding of lifting elements of the container (loops) more then 0.4m from each other.

Containers that have four hoisting devices allowed hanging only:

- four hooks, lifting each separate element (slings/loop) on a hook, and the distance between the hooks **must not be** greater than the width of the loaded container;
- two hoisting devices of the container on one lifting rod (beam) and the distance between the rods (beams) **must not be** greater than the width of the loaded container.

Forbidden hanging containers that have four hoisting devices:

- so that on one hook was geared more than one lifting element (loops/sling) of the container;
- so that on one on one lifting rod (beam) was geared more than two lifting element (loops/sling) of the container (three and/or all four).

Transportation by loader at a minimum height of lift.

Raising and lowering the container must be carried out at a speed not exceeding 0.2 m/sec. without jerks and sudden stops to avoid the strong swing and fall.

Strictly prohibited to move containers portage.

For short-term storage of loaded containers can be placed in covered warehouse as well as outdoors. Open areas shall be paved with runoff water and be capable for work of freight mechanisms for loading (discharging) of containers, loading in road, rail or other transport.



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When storing containers on an open area you must to consider the fact that the envelope of the container is not resistant to prolonged exposure to ultraviolet and visible light, although in the manufacture of the fabric of UV stabilizers are introduced to slow down this process.

So if you can not organize the storage under the roof, **you must** cover the containers by tarp or black plastic film.

During storage of loaded containers on open areas the bottom row **should be** standing on pallets or wooden decks.

Installation of containers in the stack should be made with strictly vertically tight rows, ensuring sustainability. From the second tier of containers, including, installing with scarp of half their diameter around the perimeter of the stack. The height of stacking of loaded containers depending on their type (volume): containers up to 1 cubic meter can be stacked in four tiers, up to 1.5 cubic meters. - up to 3 tiers; volume 2.0-3.0 cubic meters. - in one layer. Stacks of loaded containers should be placed apart at a distance that is necessary for the passage of intrafactory transportation. Dismantling of the stack of containers should be done in the reverse order of its formation. In heated warehouse containers must be placed at least 1 meter from heaters.

At low temperatures container must not be placed directly on the ground or on the floor of the vehicle because of possibility freezing and break slings during lifting.

#### Discharging of containers.

Discharging of containers can be carried by gravitational means or pneumatic.

Before discharging containers the accompanying documents should be removed from the special pocket, liner must be fixed to prevent it from getting together with the contents of the container into the hopper, hang container using lifting elements, pick up and bring the container to the point of discharge.

When discharging by cutting bottom of the containers, it is necessary to use special tools - a knife, permanently installed on the hopper or a knife mounted on the rod excluding the presence of worker's hands under the container. Discharge the unleashing of the discharging spout should be done only at a fixed position at container support frame.

When discharging goods from the containers into hopper staff should be located on the windward side and use the according to established standards personal protective equipment.



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In all cases where the consumer (user) containers doubt on the exact match actual operating conditions of containers the requirements of this statement, he must consult with the manufacturer.



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#### Warning.

In the event of failure to comply with these instructions the manufacturer can not guarantee the safety of the cargo (content) of the container, all the risks associated loss of, damage the contents of the container, as well as other negative effects of improper use of the container shall be borne by the consumer (user).