

FIBC Safe Handling Guidelines



Flexible Intermediate Bulk
Container Association



IMPORTANT!

Handling Guidelines for FIBCs

Attached are generic FIBC handling guidelines that could be used as a reference in various situations. By accessing and/or using some portion or all of these handling guidelines, users agree to be legally bound and to abide by the terms set forth below.

Any use of these guidelines is at the users' own risk. FIBCA does not warrant the accuracy or timeliness of the handling guidelines, nor does it warrant that the handling guidelines comply with all governing laws or regulations. FIBCA shall have no liability for any errors or omissions in the handling guidelines, whether provided by FIBCA or third parties. FIBCA does not warrant that the handling guidelines are reasonably appropriate for any particular circumstance and there may be circumstances where different or additional warnings and/or handling guidelines are required.

IT IS THE RESPONSIBILITY OF EACH INDIVIDUAL COMPANY TO ENSURE THAT ITS HANDLING GUIDELINES ARE REASONABLY APPROPRIATE UNDER THE CIRCUMSTANCES AND COMPLY WITH THE LAW. FIBCA ASSUMES NO RESPONSIBILITY IN THAT REGARD.

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Who is FIBCA?

There was a need for an FIBC / Bulk Bag association in dealing with the regulatory bodies that controlled the shipment of products. The Flexible Intermediate Bulk Container Association (FIBCA) was formed in 1983 by the companies that were manufacturing FIBCs / Bulk Bags at that time. FIBCA today is committed to educating the public on the benefits, uses, correct handling methods for bulk bags and much more!



100+ Member Companies

FROM



25+ Countries on 5 Continents

FIBCA'S MISSION IS TO:

- Educate its members about regulations and standards, promote the use of their products, and to be a strong voice for the FIBC industry with regulatory agencies around the world.
- Motivate customers to use FIBCs to maximize their profitability, safety, and sustainability.

FIBCA members are global providers of:

BULK BAGS / FIBCS, FABRIC, LINERS, THREAD, WEBBING, WOOD PALLET REPLACEMENTS, TAPE EXTRUSION EQUIPMENT, LOOMS, COATING & PRINTING, PERFORMANCE TESTING, CONSULTING SERVICES, HANDLING EQUIPMENT, FILLING EQUIPMENT, DISCHARGING EQUIPMENT, BULK BAG COMPONENTS, BULK BAG RECONDITIONING, RECYCLING LINES, SEWING MACHINES AND MUCH MORE!

This set of safe handling guidelines has been provided as part of our commitment to educate the public on how to safely handle FIBCs / Bulk Bags. The guidelines address some common situations but always consult your FIBC / Bulk Bag supplier regarding your specific application and handling environment.

**VISIT WWW.FIBCA.COM FOR ADDITIONAL EDUCATIONAL RESOURCES,
LINKS TO FIBCA MEMBER COMPANIES AND MUCH MORE!**



FIBC Safe Handling Guidelines

FIBC = Flexible Intermediate Bulk Container or Bulk Bag

General Guidelines

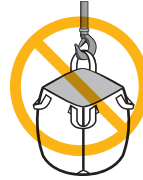
- ① Consult with your manufacturer or supplier to select the right FIBC for your product and distribution environment. FIBCA has created a guide to assist the buyer / user in selecting the right FIBC. The guide can be downloaded for free in the Bulk Bag Resource Center at fibca.com.
- ② Ensure the FIBC is approved for the product (i.e., dangerous goods / hazardous materials, food, pharmaceuticals, etc.) and it is appropriate for the filling & emptying environment (i.e., electrostatic concerns in flammable or explosive environments).
- ③ Ensure the product going into the FIBC is compatible with the FIBC and all of its components.
- ④ Ensure every FIBC is free from any damage that would compromise its strength. Never handle a damaged FIBC without consulting your FIBC manufacturer or supplier first.
- ⑤ Adhere to all FIBC manufacturer's recommendations and any information printed on the label or FIBC.
- ⑥ Adhere to all applicable regulatory and safety requirements.

Filling & Emptying



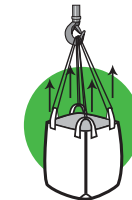
- ▶ Ensure the FIBC is appropriate for the filling & emptying environment (i.e., electrostatic concerns in flammable or explosive environments). Refer to static protective FIBC guidelines below.
- ▶ Verify the bottom discharge spout is closed correctly prior to filling the FIBC. Closed correctly means according to the FIBC manufacturer's instructions.
- ▶ Devices used to handle FIBCs must be designed for FIBCs, have safety latches, be rated for the capacity of the filled FIBC and adhere to approved handling methods.

Never suspend an FIBC using fewer lift loops, sleeves, etc., than have been provided.



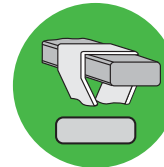
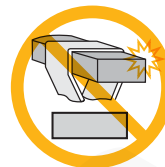
Never gather loops to lift with one hook, unless the FIBC is specifically designed and approved by the manufacturer for doing so.

If lifting with one hook, slings or other lifting devices must be used to keep the loops vertical and prevent damaging lateral forces.



Ensure all forklift tines, crane hooks, bars or handling devices used are free of sharp edges or protrusions.

Edges must be rounded to at least the thickness of the lift loops, sleeves, etc., used to support the FIBC. The radius must be a minimum of 5 mm.



Never allow personnel to stand or place any appendage under a suspended FIBC.

All personnel must be safely clear of any potential hazards when lifting, handling or emptying an FIBC.



- ▶ Take appropriate measures with regard to dust control.
- ▶ Never exceed the safe working load (SWL) / rated capacity specified for an FIBC.
- ▶ Don't fill an FIBC to a level that adversely affects its stability and/or exceeds the height to width limitations set forth in applicable industry standards or regulatory codes. A maximum ratio of 2:1 is typical, however current industry standards or regulatory codes should be referenced.
- ▶ The fill spout or duffle of the FIBC must be closed in accordance with the FIBC manufacturer's instructions.

STATIC PROTECTIVE FIBCS

- ▶ Ensure that the FIBCs are tested and labeled in accordance with the current version of the IEC 61340-4-4 Standard and that the type of static protective FIBC and liner being used are appropriate for the flammable or explosive environment.
- ▶ If FIBCs are to contain combustible or flammable powders or products with flammable solvents or gases, it is essential that all conductive objects and materials (personnel, plant, machinery and tools, etc.) be properly and securely grounded at all times.
- ▶ If it has been determined that Type B or Type D static protective FIBCs are required, reference the IEC 61340-4-4 Standard for requirements; these bags do not require grounding.
- ▶ If it has been determined that Type C static protective FIBCs are required, reference the IEC 61340-4-4 Standard for requirements; these bags must be securely grounded before and during the filling and emptying process according to manufacturer's instructions.
- ▶ Never begin filling or emptying a Type C static protective FIBC with, or in the presence of, flammable or combustible materials unless a secure ground connection to the FIBC has been established.
- ▶ Never re-connect a detached ground cable to a Type C static protective FIBC after filling or emptying has started. Stop the process immediately and allow charge to relax before any further handling of the FIBC. This may take several hours or days. The process of charge relaxation can be accelerated using suitable ionizers (static eliminators).

LINERS

- ▶ Pre-inflate liners prior to filling for ease of use.
- ▶ Extend liners past the fill spout or duffle when filling.
- ▶ Ensure liners are properly attached or secured to prevent them from coming out during discharge.
- ▶ Tie off liners within the fill spout or duffle per the manufacturer's closure instructions.

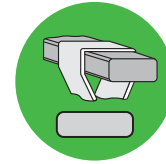
Handling by Forklift, Crane or Hoist



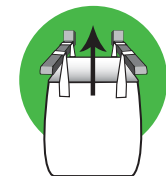
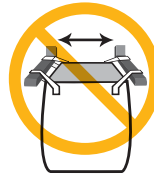
- ▶ Use a forklift truck, crane or hoist with a rated capacity sufficient to support the filled FIBC.
- ▶ Devices used to handle FIBCs must be designed for FIBCs, have safety latches, be rated for the capacity of the filled FIBC and adhere to approved handling methods.

Ensure all forklift tines, crane hooks, bars or handling devices used for lifting are free of sharp edges or protrusions.

Edges must be rounded to at least the thickness of the lift loops, sleeves, etc., used to support the FIBC. The radius must be a minimum of 5 mm.



The distance between the forklift tines must be adjusted to the correct width to ensure all lift loops or sleeves are vertical to prevent damaging lateral forces.



Maintain a clear line of sight when moving an FIBC. Never move the FIBC if your line of sight is blocked.

When handling by forklift, hold the FIBC close to the mast, as low as possible with the mast tilted back to an appropriate angle.



Keep the FIBC clear of the floor so there is no contact with the floor or the wheels of the forklift. Never drag or push an FIBC.

Never tilt the mast of a forklift truck forward when handling an FIBC.

Never suspend an FIBC using fewer lift loops, sleeves, etc., than have been provided.



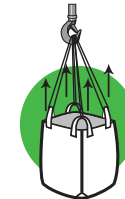
Handling by Forklift, Crane or Hoist

⚠ WARNING

- ▶ Stop the forklift before raising or lowering the FIBC.
- ▶ Never withdraw the forklift tines without removing all of the load from the loops or sleeves.
- ▶ Never subject an FIBC to sudden lifts or sudden stops.

Never gather loops to lift with one hook, unless the FIBC is specifically designed and approved by the manufacturer for doing so.

If lifting with one hook, slings or other lifting devices must be used to keep the loops vertical and prevent damaging lateral forces.

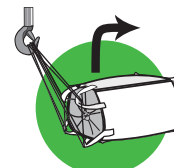
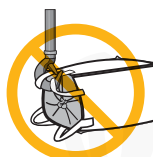


Always ensure personnel are safely clear of any potential hazards and never allow personnel to stand or place any appendage under a suspended FIBC.



- ▶ Ensure any pallets used for handling are:
 - ▶ Free from nails or protrusions that could damage the FIBC.
 - ▶ Of appropriate size so the FIBC does not overhang the side, unless specifically designed and approved to do so by the manufacturer.

Always use slings and all lift loops when righting an FIBC that has tipped over.



STATIC PROTECTIVE FIBCS

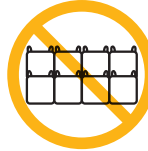
- ▶ Crane hooks, forklift tines or other devices used as a means of grounding Type C static protective FIBCs during handling shall be kept clear of any substances (paint, oil, dust, etc.) that might otherwise impede the connection with FIBC lift loops.

Storage & Transportation



- ▶ Ensure any pallets used for storage & transportation are:
 - ▶ Free from nails or protrusions that could damage the FIBC.
 - ▶ Of appropriate size so the FIBC does not overhang the side, unless specifically designed and approved to do so by the manufacturer.

Only stack FIBCs if they are designed to be stacked, you are sure of their stability and they are stacked using a "Pyramid" or "Supported" stacking method:



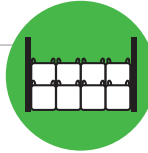
Pyramid Stacking

Each bag above the first layer must sit on at least four lower bags. Each layer is subsequently tiered inwards forming a pyramid structure.



Supported Stacking

Bags are stacked against two retaining walls of sufficient strength.



Never approach or repair a damaged bag without first removing all bags stacked on top.



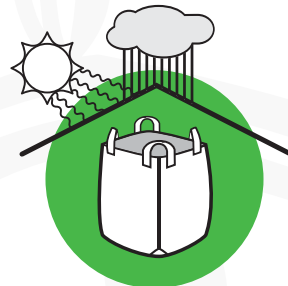
- ▶ Beware of water or moisture contamination inside storage facilities:
 - ▶ Always try to store your FIBCs inside a covered facility or warehouse that is free from any water or moisture contamination that could come into contact with your FIBCs and damage them.

Beware of sunlight & UV rays:

- ▶ Always protect your FIBCs from sunlight and the harmful effects of UV rays.
- ▶ Exposure to UV rays will weaken the strength of an FIBC.

Beware of inclement weather:

- ▶ Always protect your FIBCs from inclement weather (rain, snow, etc.)
- ▶ Exposure to inclement weather could significantly weaken the strength of an FIBC.



- ▶ Outside storage is not recommended:
 - ▶ Storing FIBCs outside is not recommended, but if you do, you should always cover them with some type of material that will prevent their exposure to UV rays and inclement weather. However, FIBCA does not support or endorse this type of outdoor storage, and this would be solely at your own risk. There is no guarantee that FIBCs stored outside and unprotected from UV rays & inclement weather will be safe to handle.
- ▶ Adequately secure FIBCs during transportation.
- ▶ Avoid subjecting an FIBC to sudden lifts or sudden stops during transportation.

F I B C S H E L F - L I F E

- ▶ As of this present date, the FIBCA is not aware of, nor has it ever been presented with, any data, test reports, or studies determining the shelf life of an FIBC. Any recommendations in regards to the shelf life of an FIBC, are solely the responsibility of each company making such declarations. The Flexible Intermediate Bulk Container Association does not endorse any typical shelf life for an FIBC / Bulk Bag. Variables such as UV inhibitor used, construction (fabric weight, thread, webbing, etc.), exposure to environmental hazards (UV, temperature and humidity), storage methods, handling methods and the contents of the FIBC can dramatically impact the shelf life of an FIBC. The best method for determining if an FIBC remains suitable for use is to conduct periodic performance testing (top lift, UV, etc.) on samples and compare the results to the results from the newly manufactured samples from same lot. Samples should continue to meet industry standards such as those set forth in ISO 21898.

S T A T I C P R O T E C T I V E F I B C S

- ▶ Whereas most static protective FIBCs do not need special storage, some designs of FIBC and inner liners rely on anti-static additives, which may be added during manufacturing of fabric or coatings, or applied as a topical finish. Such additives typically have a reduced shelf life and are more sensitive to environmental hazards than are non-anti-static FIBC materials. Advice should be obtained from manufacturers or suppliers on how to properly store FIBCs and/or inner liners that contain anti-static additives, and how such FIBCs can be checked prior to use in a safety critical application.
- ▶ The inherently conductive or dissipative materials used in most Type C static protective FIBCs or in Type D static protective FIBCs do not require special storage.



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