

## Safe Work Procedures (SWP)

# Bulk Bags/ FIBC

### General Information

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<b>Last Revision Date</b>	January 2024
<b>Job Task</b>	Bulk Bag/ FIBC Handling
<b>Related Policies &amp; Documents</b>	<ul style="list-style-type: none"> <li>● WHS Environment &amp; Sustainability Policy</li> <li>● WHS Fire Safety Policy</li> <li>● WHS Hazards &amp; Risk Policy</li> <li>● WHS Task Analysis / Job Safety Policy</li> <li>● WHS Working Alone or In Remote Locations Policy</li> </ul>
<b>Related Codes &amp; Standards</b>	<ul style="list-style-type: none"> <li>● Code of Practice – AFIBCA’s - Supply and Use of FIBCs</li> </ul>

### Responsibilities

Position	Duties
<b>Employer</b>	To provide workers with safe equipment and workplaces, appropriate Personal Protective Equipment (PPE) for the task, adequate training and ongoing supervision.
<b>Workers / Operators</b>	To follow these Safe Work Procedures and the recommendations from the Equipment Manufacturer. Inform Farm Managers of potential hazards in performing the task. Report any faults as soon as practical, and <b>do not</b> use faulty equipment.  <b>Immediately stop performing a task if you feel unsafe</b>

### Job Task Assessment

Job Task	Hazards	Hazard Control
<b>Lifting, transporting and emptying bulk bags</b>	Crushing injuries	Never allow anyone to stand under or place any body parts under a suspended bulk bag. Never exceed the Safe Working Load (SWL) when filling a bulk bag. Always ensure people are safely clear of any potential hazards.
<b>Filling and emptying bulk bags</b>	Static electricity can cause fire, explosions, burns to the body and / or equipment	Ensure the type of bulk bag being filled is compatible with the contents. Consider flammable or explosive environments when filling or emptying bulk bags.

# People in Paddocks





## Safe Work Procedures (SWP)

# Bulk Bags/ FIBC

### Skill Level / Training Required

Licences / Certificates:	<b>DO NOT UTILISE PRIOR TO:</b>
	<ul style="list-style-type: none"> <li>Reading &amp; fully understanding these Safe Work Procedures</li> </ul>


### Personal Protective Equipment:

Personal Protective Equipment	 <p>SAFETY FOOTWEAR MUST BE WORN ON THIS SITE</p>	 <p>PROTECTIVE CLOTHING MUST BE WORN IN THIS AREA</p>	 <p>DUST MASK MUST BE WORN IN THIS AREA</p>	 <p>EYE PROTECTION MUST BE WORN IN THIS AREA</p>	
	Protective Boots (essential)	Protective clothing (essential)	Dust mask (when filling & emptying bags)	Eye Protection (when filling & emptying bags)	

### Operating Procedures

Important Information	<p><i>Bulk bags are also known as <b>FIBC</b> (Flexible Intermediate bulk Containers)</i></p> <p><b><u>The Safety Factor (SF) of a bulk Bag is a Ratio according to ISO 21898</u></b></p> <ul style="list-style-type: none"> <li>Typically, the ratio will be 5:1 or 6:1.</li> <li>5:1 means that a bag is specified to hold 5 times the bag's Safe Working Load (SWL).</li> <li>Therefore, if the SWL is 1,000kg and the SF is 5:1, the bulk bag will break if it's loaded with material that weighs in excess of 5,000kg.</li> <li><b>An SF of 5:1 indicates a single-use bag.</b></li> <li><b>NEVER reuse a single-use bag!</b></li> <li>An SF of 6:1 indicates a multiple-use bag.</li> <li>A multiple-use bag can handle repeated loads, however - ALWAYS inspect bags between loads to ensure no sustained wear and tear.</li> </ul> <p><b><u>Know the different types of bulk bags – Static Discharge</u></b></p> <p>When products move or rub against each other inside the bulk bag, large amounts of static electricity can be generated. Ensure the bulk bag is appropriate for the filling and emptying environment taking into consideration flammable or explosive substances and materials.</p>
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<p><b>Important Information (cont...)</b></p>	<p><b><u>Type A Bulk Bag</u></b></p> <ul style="list-style-type: none"> <li>Made from plain-woven polypropylene as well as other non-conductive fabrics. Type A bulk bags provide no static protection.</li> <li>These bags are not to be used for combustible materials or utilised in flammable or combustible environments.</li> </ul> <p><b><u>Type B Bulk Bag</u></b></p> <ul style="list-style-type: none"> <li>Also made of plain-woven polypropylene as well as other non-conductive materials. Type B bags can prevent incidents involving highly energetic and dangerous multiple brush discharges on the inside of the bag.</li> <li>These bags can safely transport dry, flammable powders but there are to be no flammable solvents or gases present around the bag.</li> </ul> <p><b><u>Type C Bulk Bag– Anti-Static</u></b></p> <ul style="list-style-type: none"> <li>Made from non-conductive polypropylene fabrics sewn with conducting threads in a grid pattern. These threads must be electrically connected to the earth while filling and emptying.</li> <li>The bag <b>MUST</b> be grounded when filling.</li> <li>Used safely to transport flammable powders even when flammable solvents or gases are present around the bag.</li> </ul> <p><b><u>Type D Bulk Bag– Anti-Static</u></b></p> <ul style="list-style-type: none"> <li>Made from anti-static and static fabrics which are designed to prevent the occurrence of sparks, brush discharge and multiple brush discharges.</li> <li>You do not need a connection from the bulk bag to the earth.</li> <li>Used safely to transport flammable powders even when flammable solvents or gases are present around the bag.</li> <li>DO NOT USE when the surface is contaminated or coated with conductive material such as water, grease or solvents.</li> </ul> <p><b><u>Food Grade Bulk Bag</u></b></p> <ul style="list-style-type: none"> <li>Food grade bulk bags are made from 100% virgin polypropylene resin, which meets standards outlined by the Therapeutic Goods Administration (TGA) for contact with food grade materials.</li> <li>It is extremely important they are manufactured with 100% virgin resin as this ensures there are no recycled materials included in the bags that could contaminate food once in the bag.</li> </ul>
<p><b>Pre-Operational Procedures</b></p>	<p><b>Ensure all people are safely clear of any potential hazards when lifting, handling or emptying a bulk bag</b></p> <ul style="list-style-type: none"> <li>Make sure bulk bags are in good condition and free of cuts and tears before filling, loading or unloading. Any damage may compromise structural integrity. New bags can be damaged during transport.</li> <li>Check the correct safety label of the bag.</li> </ul>

<p><b>Pre-Operational Procedures (cont...)</b></p>	<ul style="list-style-type: none"> <li>• Always use a special lifting attachment to load or unload bulk bags.</li> <li>• Ensure the lifting attachment has smooth, rounded edges to avoid damaging the lifting loop or piercing the bag.</li> <li>• Ensure the lifting attachment is secured to the lifting device as per the Manufacturer’s instructions.</li> <li>• Check the load rating of the lifting attachment and the lifting equipment by referring to load rating plates.</li> <li>• Do not exceed the lifting capacity of the attachment or lifting device.</li> <li>• Ensure no-one is standing beneath or close to a load when it is being lifted, moved or emptied.</li> </ul>
<p><b>Operating Procedures</b></p>	<p><b>Filling Bulk Bags</b></p> <ul style="list-style-type: none"> <li>• Know the Safe Working Load of the bulk bag and never exceed it.</li> <li>• Use dust control Personal Protective Equipment.</li> <li>• Check the bottom discharge spout is closed correctly prior to filling.</li> <li>• Pre-inflate liners prior to filling for ease of use.</li> <li>• Extend liners past the fill spout or duffle when filling.</li> <li>• Ensure liners are properly attached to prevent them from coming out when emptying the bulk bag.</li> <li>• While filling a bulk bag suspended by the forks of a forklift or Telehandler, do not bounce the bag to fill extra products. Overly filled bags may fail due to the huge pressure of volume around the bag.</li> <li>• Fill your material free flowing, so as to not put extra pressure on the material to fit excessive volumes.</li> <li>• Fill evenly and straight to avoid the bulk bag creasing.</li> <li>• Tie off liners within the fill spout or duffle as per the Manufacturer’s closing instructions.</li> </ul> <p style="text-align: center;"><b>NEVER exceed the Safe Working Load (SWL)</b></p> <p><b>Emptying bulk bags</b></p> <ul style="list-style-type: none"> <li>• Typically, bulk bags are emptied through an opening at the bottom spout.</li> <li>• Never stand, sit or work beneath a suspended filled bag.</li> <li>• While a bag is being emptied, do not try to control the flow using the tie rope.</li> </ul> <div style="text-align: center;">  </div> <p style="text-align: center;"><b>Never stand under a suspended filled bulk bag</b></p>

#### Operating Procedures (cont...)

#### Emptying Bulk Bags with a long handled knife

- Never walk under a suspended bag or stand inside the bin, truck or container that the material is being emptied into.
- Use a long-handled knife (mounted to a pole if need be so that it is long enough to reach underneath a suspended bag) to cut the bottom of the bag.
- Empty bulk bags by making two crossed incisions (approx. 30 to 40 cm) in the middle of the underside of the bag.



Use a knife with a long handle to cut the bag.  
Never walk under suspended load!



The bulk bag is emptied by two crossed incision in the middle of the underside of the bag (30-40 cm).

#### Emptying Bulk Bags onto a Splitter

- There is a product on the market called a JACKY Bulk Bag Splitter - it is a bin with a pyramid -shaped blade mounted inside the hopper and comes in many different sizes.
- Lower the bag onto the blade where it will be split 4-ways. **Note:** the splitter isn't as neat as a knife blade so small fibres from the bag could fall into the contents as they discharge.
- The bag can be left on Splitter until empty.
- The run slope of the bin allows the discharge rate of most granular products to be easily controlled.



#### Lifting Bulk Bags

- Check the lifting attachment for any sharp edges like rust before lifting.
- Edges must be rounded at least the thickness of the lift loops used to support the bulk bag. The radius of the forks must be a min. of 5mm to avoid snapping.

#### Operating Procedures (cont...)

- The distance between the forklift tines must be adjusted to the correct width to ensure all lift loops are vertical to prevent damaging lateral forces.
- Ensure that the loops are not twisted or folded.
- Use all loops to lift the bag vertically.
- Never gather loops to lift with one hook unless approved by the Manufacturer.
- If lifting with one hook, slings or other lifting devices must be used to keep the loops vertical and prevent damaging lateral forces.
- Never suspend a bulk bag using fewer loops than have been provided.
- The lift should be smooth and vertical.
- Avoid lifting the bag suddenly.
- Hold the bulk bag close to the mast of the forklift, tilt backwards as slow as possible and stop at an appropriate angle so the bag won't slide forwards or backwards.
- Never tilt the mast of a forklift forward when handling a bulk bag.



- Keep the bulk bag as low as possible to the ground. Lift the bag up or down as necessary, but do it gently.
- However, also keep the bag clear of the floor so there is no contact with the ground or the wheels of the forklift.
- Never drag or push a bulk bag.
- Always complete the transfer—do not leave the load hanging in the air.
- Maintain a clear line of sight whilst moving the bulk bag. Never operate machinery when your line of sight is blocked.
- Always use slings and all lift loops when lifting a bulk bag that has tipped over.

#### Straightening the Loops of a Bulk Bag

The lifting loops of a bulk bag are made in such a way that you have to use all the lifting loops at the same time. A bulk bag is made in such a way that the full weight must be distributed over all the lifting loops.

#### Transporting Bulk Bags

- Make sure bulk bags are in good condition and free of cuts and tears
- Know the load rating of the transport vehicle and do not exceed it.
- Weight must be evenly distributed on the vehicle or trailer.
- Spread the load evenly and share the weight between the axles.
- The weight distribution of a load can also affect vehicle dynamics.
- Secure the bags down with straps.

### Operating Procedures (cont...)

- The bags must not rub against any object during transport. Rubbing could damage the bag but also cause static electricity.
- If the bags are on pallets, make sure that the filled bags are not overhanging the pallets.
- Regularly check the load during a trip to ensure no movement.

#### During transport

Lashings may become loose during transport as the load settles. Check lashing tensions at regular intervals during transport and re-tighten as required.

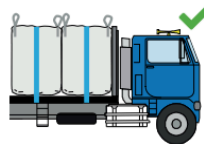


Check lashing tensions

#### Loading Methods:

##### Block forwards

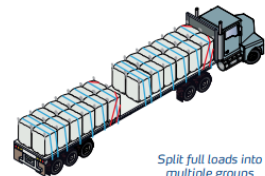
Containing bulk bags can be an effective form of restraint. Load bulk bags in groups without gaps and block in the forwards direction.



Block bulk bags forwards

##### Split loads

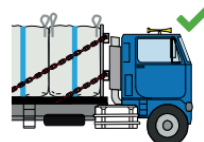
Split full loads into multiple groups to reduce the load on each blocking surface. Apply a minimum of one webbing strap to every row and two webbing straps to the final row of each group. Additional straps may be required depending on the weight of the load.



Split full loads into multiple groups

##### Reinforce unrated blocking surfaces

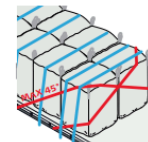
Reinforce unrated blocking surfaces using chains (or similar) wrapped across the face of the blocking surface. Pass reinforcing chains through a hollow section welded to the blocking surface. Note that unrated blocking surfaces, even if reinforced, may fail if used improperly.



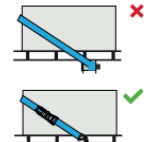
Reinforce unrated headboards

##### Crossover strap tension

Where a suitably engineered blocking surface is not available, block bags with crossover straps angled at a maximum of 45° to the horizontal. Tension crossover straps using in-line ratchets. Do not use drum winches to tension crossover straps.



Block bags with crossover straps



Tension crossover straps

#### Storing Filled Bulk Bags

Pallet racking is the Industry's preferred method for stacking bulk bags.

- Ensure any pallets are free from nails, splinters or protrusions that could damage bulk bags.
- Ensure the bulk bag doesn't overhang the sides of a pallet.

Only stack bulk bags if they are designed to be stacked, you are sure of their stability and they are stacked using a 'pyramid' or 'supported' stacking method.

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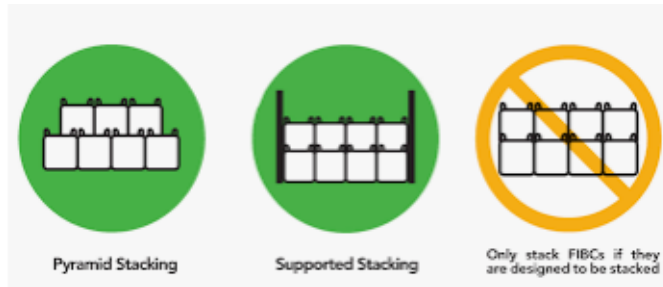
Operating Procedures (cont...)

### Pyramid Stacking Method:

- Each bag above the first layer must sit on at least four lower bags.
- Each layer is subsequently tiered inwards forming a pyramid structure.
- Bags can be stacked 5 high using this method.

### Supported Stacking Method:

- Bags are stacked against two retaining walls of sufficient strength.
- Bags can be stacked 3 high using this method.
- **Note:** pallet racking or pyramid stacking is preferred over this method.



- Never approach or repair a damaged bag without first removing all of the bags stacked on top.
- Always protect bulk bags from sunlight, UV rays and inclement weather (rain, snow). Exposure to UV rays or inclement weather will significantly weaken the strength of a bulk bag.
- Always store bulk bags under cover so they are free from any water or moisture contamination.

### Operation of this Procedure

If you are unsure or unclear about any aspect of this Safe Work Procedure, or any procedural step required to safely perform the task, please seek further assistance, and do not engage in such activity.

Any Employee who does not abide by this Safe Work Procedure will be subject to disciplinary action which may include dismissal with or without notice, depending on the severity and gravity of the offending conduct.

Employee Name: \_\_\_\_\_

Employee Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Supervisor Name: \_\_\_\_\_

Supervisor Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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