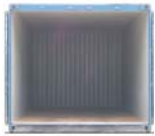




## Bulk Liquid Solutions

### Container Selection Criteria & Preparation

#### Bottom loading Bottom Discharge flexi tank



Bulkflex requires that all shipping containers supplied shall be suitable for safe and legal transport of upto 23000 Kgs of Non Hazardous liquid in flexitanks. Containers must be in strict compliance with the following criteria

- 1 Containers shall be 30 Tonne rated
- 2 All 20 ft ISO dry freight containers shall be 5 years of age or less
- 3 The containers shall not have 'decal' panels ( flat steel sections in the wall where advertising stickers are placed adjacent to the corrugated walls)
- 4 All containers supplied shall be manufactured in accordance with all relevant ISO requirements defining design, testing, identification , markings, corner fitting dimensions, ratings and operational requirements.
- 5 Containers shall be suitable for transport by road, sea or rail.
- 6 Vertical recess in door end corner post assemblies to accept bulkhead bars or fixing dowels
- 7 Two operative locking bars on each door
- 8 Containers shall be free of any hazardous cargo markings or labels
- 9 The container shall be free of any debris, sharp edges, floor splinters, proud or loose floor screws/nails, dents or any such weld or similar repair on the inside surface of the cargo area that may cause damage to the flexitank
- 10 All interior surfaces, including the floor shall be free of transferable stains and other sources of contamination that may react with the flexitank material or leak into the liquid cargo.
- 11 Containers shall be lined with a suitable lining material on the entire floor surface, the front panel and the two side panels upto the height of the fully loaded flexitank.

#### Installation of the Flexitank and the Bulk Head

- A Check if the container floor and the walls are covered with paper roll / PP Fabric. No sharp objects that may damage the tank be present in the container.
- B Visually inspect the carton and the tank for any signs of damage. If any, the flexitanks should be replaced immediately.
- C Place the flexitank centrally in the container.  
Carefully unroll the flexitank in such a way that the flaps are evenly spread on the side walls of the container.  
Fold the excess from each side towards the centre of the container.  
Care to be taken not to walk on the flexi tank wearing shoes  
Ensure that the valve is located on the right hand side of the container
- D Install the bulk heads as shown with the pre fab bulk head frame at the bottom and the other 3 floating bars on the top spaced evenly.  
Place the cardboard sheet against the metal bars on the inside and line with cardboard, ensuring that the edges between the bulkhead and the sides of the container are covered  
Use cardboard or polypropylene spacers between the bars and tape them into position
- E Place the backing behind the cardboard and the valve should be placed properly in the groove. The valve should not rest on the bulk head
- F Place the polystyrene shim inside the edge of the left hand door.
- G Close the left hand door and once closed it should not be opened until the flexitank is totally discharged.
- H Place the warning sticker on the left hand side door and the warning tag on the left hand side door latch.



## Flexitank Loading Procedure



Please note : Flexitank MUST be loaded to +/- 5 % of the capacity



- 1 The left hand door should remain closed at all times.
- 2 The left hand door of the container must be locked securely in place before loading commences.
- 3 Check the inside of the container to make sure the flexitank is in proper position
- 4 Remove shoes if there is a necessity to enter the container.



- 5 Remove the dust cap from the valve and connect the loading hose to the valve on the flexitank.
- 6 The loading hose should be supported to ensure no undue strain is placed on the hose connection as shown in picture



- 7 Maximum load temperature should not exceed to 60 ° C /140 ° F
- 8 Open the valve on the flexitank and commence pumping. It is recommended to use` self priming pump with positive displacement or a diaphragm pump.
- 9 The valve should never be used as a means of repositioning the flexi tank



- 10 Pumping to be done at a maximum rate of 800 litres / minimum ( 210 gallons /minimum)

- 11 Monitor the pumping process throughout. Never leave the flexitank unattended
- 12 After filling the flexi tank to the rated capacity, shut off the pump and close the valve on the flexitank.



- 13 Disconnect the loading hose, whilst avoiding spillage from the loose end.
- 14 Place the dust cap, clean up any spillage and close the right hand door securely.
- 15 Place the red tag and the warning sticker on the outside of the left hand door of the container and apply the security seal.

## Flexitank Discharge Procedure



The Left Hand door should remain closed until the flexitank is completely discharged

- 1 The container should be positioned as close as possible to the receiving storage end.
- 2 Position the container, so that there is a gentle slope from the front end to the door end ( Refer Picture A)



Picture A

- 3 Before opening the right hand door check for any sign of damage to the container that may have occurred during transit.
- 4 Open the right door slowly and cautiously and check the condition of the flexi tank and the bulk heads

- 5 Remove the dust cap on the valve and connect the discharge hose to the camlock fitting on the flexitank, open the valve on the flexitank and start the pump slowly. The speed of the pump can be increased gradually

- 6 It is recommended to use` self priming pump with positive displacement.



- 7 The discharge hose should be supported to ensure no undue strain is placed on the flexitank valve assembly connection.

- 8 Monitor the pumping process throughout. Never leave the flexitank unattended

- 9 The surface of the flexitank will collapse as the product is discharged: continue to pump until there is only about 3-4 metric tonnes left in the flexi tank.



- 10 Reduce the flow of the pump to avoid suction of the layers of polyethylene into the valve, the natural tilt of the trailer will assist in liquid flow towards the container door end.

- 11 Continue to pump at low speed.

- 12 After the flexi tank has completely emptied shut off the pump and close the valve of the flexitank.

- 13 Disconnect the discharge hose, whilst avoiding spillage from the loose end.

