

## **FLEXIBLE INTERMEDIATE BULK CONTAINER (FIBC) BULK BAGS**



**YUAN DA**

### **CORPORATE INFORMATION**

Yuan Da Plastic Fabric Corp. has been manufacturing polypropylene woven bags and flexible containers (FIBC) since 1991. Its products have been used widely in fertilizer, grain, cement, pet feed, mining and other industries, both domestic and international.

The company has been growing significantly in the last several years. Currently we have over 700 employees, over 400 weaving and sewing machines, and many laminating, and printing machines.

Being a direct manufacturer, we can quickly and accurately meet any special requirements of our customers. Technology and quality has always been essential at Yuan Da. Our team of engineers has been keeping our technology at the leading edge. The dedicated quality team ensures stringent control of the production process and inspects each piece of the products thoroughly.

Our production facility is ISO 9001:2000 certified.

### **OUR SUPPORT**

We have a dedicated support team in the US to address your concerns immediately. You can rest assured that dealing with us is as easy as dealing with the company next door.

### **FIBC**

Flexible Intermediate Bulk Containers (FIBC) have been gaining popularity in the last two decades due to the many advantages over rigid containers, such as lightweight, flexibility and strength. Annual usage of FIBCs is about 30 million pieces in the US and is growing at a rate of 15-20% annually.

### **BULK BAG MATERIAL**

Woven polypropylene is the most common material used in FIBC bulk bags.

- All the polypropylene materials we use have UV inhibitor for UV protection. Double UV treatment is available for greater durability.
- We use only new materials in bulk bag production to ensure material strength.
- All threads, lift loops and coatings are UV treated.



### **BULK BAG FABRIC**

The safety work load (SWL) of a bulk bag is directly related to the fabric thickness (even though the design of the bag also plays an important role). The gauge of fabric

| SWL (Lbs.) | Fabric Thickness (oz./yd <sup>2</sup> ) | Safety Factor |
|------------|---|---------------|
| 2000       | 5~6                                     | 5~6 : 1       |
| 3000       | 6~7                                     | 5~6 : 1       |
| 4000       | 7~9                                     | 5~6 : 1       |

Reuse of bags is at the user's risk, as we cannot control the condition of used bags.

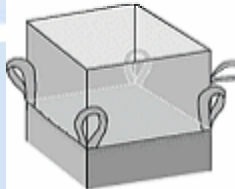
thickness is the woven fabric weight per unit fabric area (oz./yd<sup>2</sup>). The following is a general reference on SWL and fabric thickness.

### DESIGN AND STYLE

A variety of bag designs can be customized to meet the requirements of different products and applications. Our sales and support team can help you to decide on the most suitable designs.

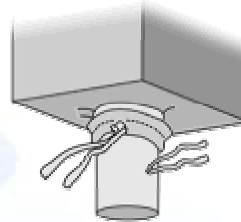
#### Filling

- *Top Spout*  
Designed to fit automatic filling machines
- *Duffel Top*  
For easy covering of products
- *Open Top*  
For easy operation when product is not sensitive to the environment
- *Custom Design*  
We can custom design filling styles to meet your particular needs



### Bottom Discharge

- Flat bottom (most economical, slit open, one-time use)
- Discharge spout with B-lock (remote release for safety)



- Discharge spout with B-lock and protective cover

### Body Style

- U-Panel structure for strength
- Perimeter bands at top and bottom are used to add strength and for stackability

### Baffle / Non-Baffle Bags

- Baffled bags have the ability to maintain a relatively square shape, which increases storage efficiencies. The drawbacks are higher cost and more seam lines, which could potentially lead to decreased bag strength.
- Non-baffle bags take a more rounded shape when filled which takes more storage space. However, in these bags stress is distributed more uniformly, there are fewer seam lines on the bags, and they are less expensive to make.

**Lift Loops (All UV treated)**

- Four corner lifting straps (most common)
- Full length lift sleeves
- Stevedore straps
- Cross-corner loops
- Top-to-bottom corner band for enhanced strength

NOTE: Color-coded loops and wear resistance loop sleeves are available.

**SIZE SELECTION**

Bulk bag size is selected according to the type and weight of the product held

Bags made out of flexible fabric will expand in volume on average by 15-20% when filled. With the weight of product defined, the volume of the product can be calculated. At the end of this brochure is a density table for some products

**Example:**

- For 2000 lbs of soybean seeds with density of 50 lbs/ft<sup>3</sup>, the volume is 40 ft<sup>3</sup>. Using a 40"x48" pallet and considering the bag will expand in length and width after filled, the pre-fill bag's foot print can be 35"x41".
- Considering product volume of 40 ft<sup>3</sup>, taken as the after-fill bag volume, the pre-fill bag volume is 34.8 ft<sup>3</sup>. Using 35"x41" footprint, the height of the bag is 42".
- To help with filling and spill prevention, we recommend 4" of extra height. A 35"x41"x46" bag will be perfect for this application.

The table below is a list of bag sizes. It is recommended that the height-to-length ratio of bulk bags be less than or equal to 2:1. All the bag sizes can be customized for specific applications.

**BULK BAG SIZE COMBINATIONS**

|              | Style      | Length x Width (inches) |       |       |       | Bag Height (inches) |
|--------------|------------|-------------------------|-------|-------|-------|---------------------|
|              |            | 35x41                   | 36x36 | 40x48 | 40x72 |                     |
| DESIGN STYLE | All Styles | 20                      | 20    | 25    | 25    |                     |
|              | All Styles | 22                      | 22    | 27    | 27    |                     |
|              | All Styles | 25                      | 25    | 31    | 31    |                     |
|              | All Styles | 27                      | 27    | 33    | 33    |                     |
|              | All Styles | 31                      | 31    | 36    | 36    |                     |
|              | All Styles | 33                      | 33    | 40    | 40    |                     |
|              | All Styles | 36                      | 36    | 45    | 45    |                     |
|              | All Styles | 40                      | 40    | 49    | 49    |                     |
|              | All Styles | 45                      | 45    | 54    | 54    |                     |
|              | All Styles | 49                      | 49    | 58    | 58    |                     |
|              | All Styles | 54                      | 54    | 62    | 62    |                     |
|              | All Styles | 58                      | 58    | 64    | 64    |                     |
|              | All Styles | 62                      | 62    | 68    | 68    |                     |
|              | All Styles | 66                      | 66    | 70    | 70    |                     |
| All Styles   | 70         | 69                      | 73    | 73    |       |                     |
| All Styles   |            | 72                      | 76    | 76    |       |                     |
| All Styles   |            |                         | 80    | 80    |       |                     |

\* All Net Inner Dimensions

**MOISTURE RESISTANCE FABRIC COATING**

Woven fabric is naturally breathable. Moisture resistance is available by coating the woven fabric with one or more layers of Polyethylene film.

**ANTI-SATIC AND GROUNDABLE**

Anti-static and groundable Type C and Type D fabrics are available for applications in special environmental conditions.

**LINER OPTIONS**

For additional moisture resistance, contamination control, and reusability, liners are available for all bag size and types.

Liners can be loose fit, glued on, or stitched onto the woven bulk bags.

**SIFT-PROOF SEAM**

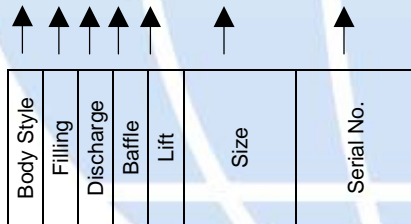
To prevent fine power material from sifting through the seams, a strip felt or cord is stitched into the seams.

**DESIGN STYLE CODE**

The following is a guideline of design coding. Because of the many custom features, a specific serial number is defined for each product.

*Example:*

**BKB-U-D-S-B-F-40x48x58-123456**



**CODES:**

**Body Style:**

- (U) U-panel
- (C) Circular
- (O) Others

**Filling:**

- (D) Duffle Top
- (S) Top Spout
- (O) Open Top
- (C) Custom Design

**Discharge:**

- (S) Bottom Spout

- (F) Flat Bottom
- (V) Spout with Cover
- (C) Custom Design

**Baffle:**

- (B) With Baffle
- (N) Non-Baffle

**Lifting:**

- (F) Four Corner Straps
- (S) Full length Sleeves
- (E) Stevedore Straps
- (X) Cross Corner Loops
- (C) Custom Design



**Reference Table: Material Density**

| Materials                   | Density (lbs/ft <sup>3</sup> ) | Density (kg/m <sup>3</sup> ) |
|-----------------------------|--------------------------------|------------------------------|
| Alumina                     | 65                             | 1042                         |
| Asphalt, crushed            | 45                             | 721                          |
| Baking soda                 | 55                             | 882                          |
| Bronze chips                | 50                             | 801                          |
| Calcium phosphate           | 50                             | 801                          |
| Cashew nuts                 | 37                             | 593                          |
| Cast iron chips             | 200                            | 3206                         |
| Cement, aerated, portland   | 75                             | 1202                         |
| Cement, motor               | 133                            | 2132                         |
| Cement, portland            | 94                             | 1507                         |
| Charcoal, ground            | 38                             | 609                          |
| Charcoal, lumps             | 28                             | 449                          |
| Coal, anthracite sized 0.5" | 61                             | 978                          |
| Cocoa, power                | 35                             | 561                          |
| Concrete, dry pre-mix       | 120                            | 1923                         |
| Copper ore                  | 150                            | 2404                         |
| Cork, ground                | 15                             | 240                          |
| Corn cobs                   | 15                             | 240                          |
| Corn seeds                  | 45                             | 721                          |
| Flour wheat                 | 40                             | 641                          |
| Granite, fine               | 90                             | 1443                         |
| Hay, chopped                | 12                             | 192                          |
| Limestone, agricultural     | 68                             | 1090                         |
| Limestone, crushed          | 90                             | 1443                         |
| Malt, dry, Ground           | 30                             | 481                          |
| Oats                        | 26                             | 417                          |
| Rice, grits                 | 45                             | 721                          |
| Rice, hulled                | 49                             | 785                          |
| Rye                         | 48                             | 769                          |
| Salt, fine, dry             | 80                             | 1282                         |
| Sand                        | 104                            | 1667                         |
| Sodium sulfite              | 96                             | 1539                         |
| Soybean whole               | 50                             | 801                          |
| Sugar, raw                  | 65                             | 1042                         |

