

# **ABMA SPECIFICATIONS FOR ASEPTIC BAGS UP TO 1500 LITRES**

These recommendations were designed to specify aseptic bags up to 1,500 litres volume.

They are always overruled by national law whenever this requires lower tolerances or individual agreements between supplier and customer.

These specifications were developed by following ABMA members:

- Aran Packaging
- Liqui-Box
- Goglio
- Scholle IPN
- Smurfit Kappa Bag-in-Box

[www.aseptic-packaging.org](http://www.aseptic-packaging.org)

*Issue May 2020*

All bags must be compatible with the type of filler and the outer packaging used.

## **Standard Bag Sizes (all internal)**

### Small Bags up to 30 litres:

Dimensions should be designed to suit the outer type used ensuring that the outer acts as to support the bag when used in the service conditions of the application.

### 200 and 220 litres (55 and 60 Gall):

905 (+/- 15) x 1560 (+/- 15) mm, 1" spout,  
position: centre 150 mm (+/-15) mm  
distance from inner edge of top seal  
mode of filling: conveyor belt / horizontal  
for old and new types of conical drum

### 200 and 220 litres (55 and 60 Gal):

905 (+/- 15) x 1560 (+/- 15) mm, 1" spout,  
position: centre 60-80 mm (+/-15) mm  
distance from inner edge of top seal  
mode of filling: direct into drum / vertical  
for old and new types of conical drum

### 1000 and 1200 litres (300 Gal):

2060 (+/- 20) x 2160 (+/- 20) mm, 1" spout,  
position: in bag centre (+/-30 mm)  
for standard bin: Length: 1143 mm, width: 1041mm, height: 990 mm (internal)

### 1400 litres (330 Gal):

2400 (+/- 20) x 2080 (+/- 20) mm, spout,  
position: in bag centre (+/-30 mm)

### 800 litres:

2050 (+/- 20) x 1800 (+/- 20) mm, 1" spout,  
position: in bag centre (+/-30 mm)

### Lab bag:

1-5 litres (depending on the filler type)  
Other sizes and films on request

### Notes:

Regarding the above-mentioned nominal values, a further +/- 10 mm tolerance is possible. For dispensing applications, where two fitments are used, one for filling and one for dispensing, consult with the supplier for the position of the dispensing spout. (Position of the filling spout remains the same as above).

Any bag dimension should be checked with the dimension of the outer packaging. Consult the supplier for further details.

Aseptic Bags spout location should be checked with the supplier according to the filling head specifications.

For product sampling to customer High Barrier bags should always be used.

## Standard Closures

- 1) heat resistant types for temperatures max. up to 105°C
  - a) low rise spout 1" with pressure cap
  - b) high rise spout with flat rigid 1" cap
  - c) 2" A.B.M.A. flat cap
  - d) 2" Piercing Type closure
- 2) For temperatures above 105°C, please contact the bag manufacturer.  
non heat resistant types for temperatures max. up to 65°C
  - a) high rise spout with 1" flat cap
  - b) high rise spout with flexible 1" soft cap

## Standard Barrier films

- 1) **M-** Metalized barrier films (Typical values)
  - a) Oxygen transmission rate: < 1 cc/sqm/24 h  
Oxtran 23° C, 75 % RH  
Measured on unflexed laminate
  - b) Tensile strength: measured over welds  
➤ 50 Newton MD and TD  
sample size: 2 x 30 mm, 15 mm width
  - c) Corrosion resistance: delamination (loss of aluminium) should not exceed 2 mm from the exposed edge in a solution of hypochlorite containing 200 ppm chlorine, buffered to pH6-pH8, for 24 hours at 20 – 25° C.
- 2) **T-** Transparent EVOH based barrier films (Typical values)
  - a) Oxygen transmission rate: < 2 cc/sqm/24 h  
Oxtran 23° C, 75 % RH  
Measured on unflexed film
  - b) Tensile strength: measured over welds  
40 Newton MD and TD  
sample size: 2 x 30 mm, 15 mm width
- 3) **F-** Alu foil-based films (Typical values)
  - a) Oxygen transmission rate: < 0.02 cc/sqm/24 h  
Oxtran 23° C, 75 % RH  
Measured on unflexed laminate
  - b) Tensile strength: measured over welds  
50 Newtons MD and TD  
sample size: 2 x 30 mm, 15 mm width
  - c) Corrosion resistance: delamination (loss of aluminium) should not exceed 2 mm from the exposed edge in a solution of hypochlorite containing 200 ppm chlorine, buffered to pH6-pH8, for 24 hours at 20 – 25° C.

4) Combinations of film may be used to achieve higher barrier levels. Internal layer may be barrier (T) or Polyethylene.

Such a structure of **M-T-** film can give an oxygen transmission rate of < 0.5 cc/sqm/24 h  
23 °C and 75 % RH

Note: Oxygen transmission rate measured according to ASTM D3985 standards.

**NB: Any leakage of steam from the filling chamber may cause damage.**

## **Bag Irradiation:**

Irradiation dosage: **15 kGray** (gamma irradiation)

This irradiation level may be required to be different and is subject to local requirements

Irradiation indicators shall be present on the instruction leaflet to be put into shipping boxes and on the shipping boxes – it must have red colour

## **Packaging:**

Aseptic bags to be packed preferably into sealed polybags and boxes

## **Bag Marks:**

Bags must be marked with:

**Supplier code/name**

**Code No**

**Production date**

**Glass/fork logo**

## **Documentation:**

Invoices and delivery notes must show

**"Material suitable for food contact"**