

# Specification of

# Büscherhoff Flexitanks

# 24000 Litres

i. A. B. Due

*B. Due*

Version01, 2013-07-10

## 1.) Short description

Flexible tank for the transport of liquid products in sea-containers, approved by the German TÜV.



## 2.) Field of application

It is a one-way package for the transport of liquid foodstuff, chemical or industrial products – suitable for food

## 3.) Properties

This multilayer flexitank consists of:

- 1 layer HDPE film and 3 layers of standard LD polyethylene film.
- All films are sealed several times to obtain a triple kind of safety
- A solid PP woven fabric
- 3" bottom discharge system(sealed with white dust cap)
- 3" camlock adapter attached
- 2" camlock adapter attached
- An overpressure valve inside the middle flange
- With a 1500 mm Bulkhead
- Filling flange reinforcements for a safe tank filling of the tank
- made of films which are conform to FDA regulation
- the flexitank is approved according to the European Regulation 1935/2004

## 4.) Used norm

DIN EN ISO 527-1-3; DIN 53375; DIN 53370; DIN EN ISO 13934-1; European Regulation No. 1935/2004, European Directives 82/711/EEC, 93/8/EEC, 97/48/EEC, 85/572/EEC, 2002/72/CEE

## 5.) Technical properties

- |   |   |
|---|---|
| • Dimensions                                | 4000 x 7240 mm  |
| • thickness polyethylene film               | 1 x 0,100 mm HDPE<br>3 x 0,125 mm LDPE                  |
| • woven PP fabric                           | 174 gr/m <sup>2</sup> + 30 gr. coating                  |
| • longitudinal tensile strength of the film | > 187 N   |
| • transversely tensile strength of the film | > 225 N   |
| • film elongation longitudinal direction    | > 500 %   |
| • film elongation transversely direction    | > 650 %   |
| • strength of woven fabrics                 | > 180 Kg daN/5 cm                                       |
| • prolongation of woven fabrics             | > 12 %  |
| • temperature conditions                    | -20 °C to +60 °C, controlled via temperature indicators |
| • capacity                                  | 23520 – 24480 litres                                    |
| • max. filling weight                       | 24.000 Kg   |

- *storage*

flexitanks can be stored in their cardboard box for 12 months in a dry hall (5-25°C). No effects can be found regarding their quality.

## 6.) Declaration of no objection and opinions

The products conform to the terms of the regulations regarding the transport of foodstuff, tobacco products, cosmetics items and other consumer goods (law about food and consumer goods), as amended and promulgated on September 9th, 1997, last modification on August 6th, 2003 §§ 30 and 31, and they are shown in the Federal Law Gazette, following the regulation about consumer goods ordinance, which regulates the implementing of standard guidelines 89/109 EWG, 90/128/EWG and 2002/72/EG into national legislation, including latest amendments No. 20, issue day: 15th April 1992, publication version of 23rd December 1997, latest amendment 7th March 2003, up dated 12th August 2003, approved re its migration behaviour.

Furthermore these compounds are in accordance with the REGULATION (EG) No. 1935/2004 OF THE EUROPEAN PARLIAMENT AND COUNCIL dd. 27th October 2004. There is no objection to use the product within the range of food, even a direct contact is permitted.

We like to assure, that during the production of flexitanks no phthalates are being dumped inside.

The manufactured flexitanks are subject to a voluntary self-control of the accredited test laboratory LVL Lebensmittel- und Veterinärlabor GmbH, Emstek.

Opinions made by SKZ - TeConA GmbH, Certification, Quality Assurance. During a pre-trial with a flexitank, being installed in a container, no defect caused by wrong pressure was recognized.

During the main trial an overpressure of 0,14 bar was observed on a flexitank which was stored outside.

The certificate 07 07 90262 001 authorises company Büscherhoff Spezialverpackung GmbH & Co. KG to use the illustrated symbol.



## 7.) Quality characteristics

As a associated member of the COA (Container Owners Association) company Büscherhoff puts high importance to the quality and safety of the flexibags. Our flexibags are subject to constant improvements and developments.

- **DIN ISO 9001:2008 certified**

The production and quality processes for production of our flexitanks as well as Quality Management functions are certified according to DIN-ISO 9001:2008.

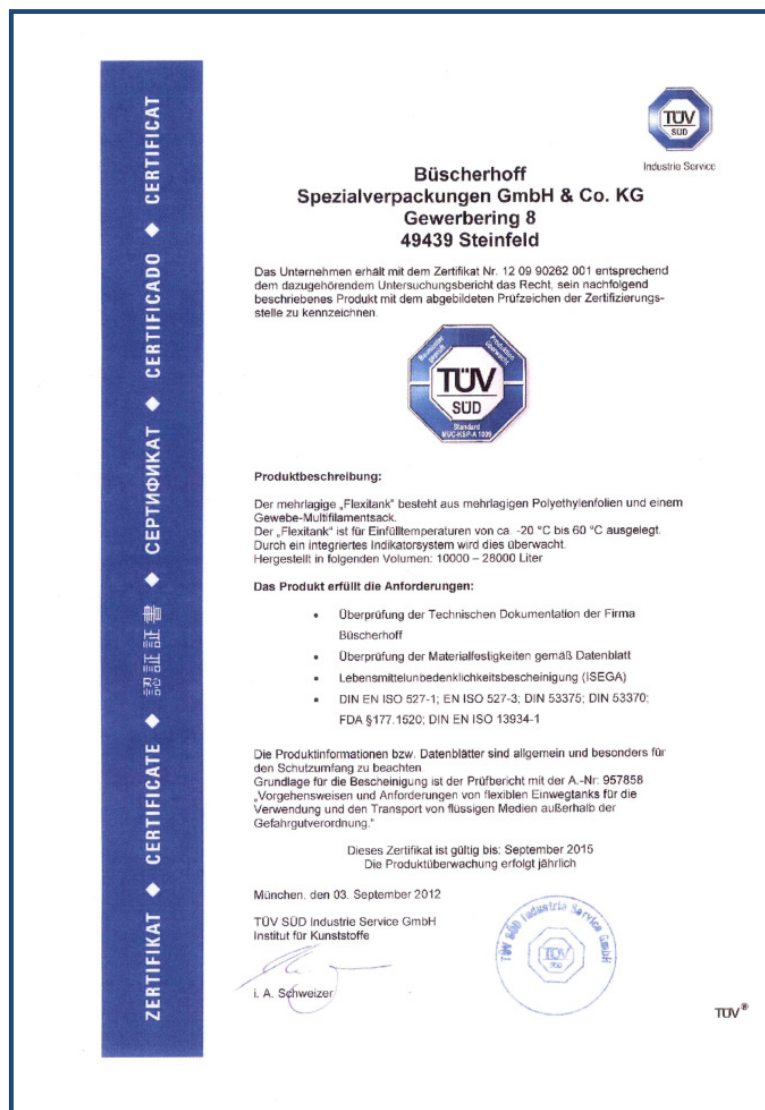


- **Associated member of the Container Owner Association (COA)**

As a member of the COA we are working out a standard for flexibags together with the largest international shipping companies and insurance agencies. This „Code Of Practice“ will become valid from 1st January 2010 on and will then become the standard for production of flexibags. From that date on only flexibags fulfilling this standard will be allowed for transportation in a container. Our flexitanks are currently already complying with this standard and we will get the corresponding certificate within the very near future.

- **Certified by the German TÜV**

As there was no standard for the flexitanks in the past we, as the first manufacturer of flexitanks, have instructed the German TÜV to check and to certify our flexitank.



- **Permanent observation of the production**

We installed individual quality circles for every single production step which gives an additional control. Products which are purchased from different suppliers are subject to a careful inspection test so that we can be sure that all accessories for the flexitanks have the requested quality. All these steps are permanently documented so that in case of any problem we will have the full traceability.

- **All accessories made in-house**

Another advantage regarding safety is the fact, that we are the only manufacturer who produces all accessories on our own and this will of course make sure that the single components fit exactly to each other.

- **Production quantity & error ratio**

We have an annual production of approximately 40.000 – 50.000 flexitanks whereas around 70 % will be used in the food and 30% in the chemical industry. We can trace back every single mistake into detail, every flexitank is stamped with a serial number and the DIN ISO prescribes that the traceability of our products must be assured. We can monitor every mistake to the last detail. This means that for every product we can determine which materials have been used and which employee has affected which individual production step.