

## TECHNICAL DATA SHEET



### Bentonite Clay Desiccant Bag

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#### 1. DESCRIPTION AND APPLICATION

*Desert Bentonite Clay Desiccant Bags* are suitable to keep low humidity inside closed spaces containing susceptible to deterioration in presence of high concentration of water vapour both during the transport phase and during storage time.

#### 2. REFERENCE STANDARDS

The *Desiccant Bags* are produced following the indications of the following reference standards:

- DIN 55473:2015
- MIL D3464E
- NF H00321

##### Desiccant Unit (UD)

- According to DIN 55473:2015 and MIL D3464E standards, 1 Desiccant Unit (in German TME=Trockenmitteleinheit) corresponds to the amount of desiccant product necessary to absorb at least 6,0 g of water vapour at an air temperature of 23°C and at a relative humidity (RH%) of 40%.
- According to French standard NF H00321, 1 Desiccant Unit corresponds to the amount of desiccant product necessary to absorb at least 100 g of water vapour at the same conditions.

#### 3. DESICCANT RAW MATERIAL

##### 3.1. COMPOSITION

Material	Weight %	CAS no.	EC / List no.
Natural Bentonite Clay	> 95 %	1302-78-9	215-108-5

The Bentonite clay contained in these bags is non-corrosive and chemically inert product.

##### 3.2. TECHNICAL SPECIFICATIONS

Property	Condition	Typical Value	UM	
Density	-	≥ 860	g/L	
pH value of the aqueous extract	10 g in 100 ml of H <sub>2</sub> O	7 - 8	-	
Electrical conductivity of the aqueous extract	10 g in 100 ml of H <sub>2</sub> O	≤ 0.3	S / m	
Content of water-soluble substances	-	≤ 2	%	
Residual Humidity	180 °C	≤ 2	%	
Particle size	Fine	-	0.5 – 1.5	mm
	Standard	-	1.0 - 4.0	mm

The above information is the result of standardised laboratory tests and should not be considered as a particular quality guarantee of the product. The data are for guidance only in order to facilitate the choice and use of the product. The user is required to ensure the suitability and completeness of the information in relation to the use to be made of the product.

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#### 4. WRAPPING MATERIAL

The *Desiccant Bags* wrapping is made of non-woven fabric that allows the absorption of water vapour inside the bag.

There are two classes of casings (in accordance with DIN 55473) which differ according to the amount of dust that may be released through the bag.

- Class A: The bag must release less than 10 mg of powder per Desiccant Unit
- Class B: The bag must release less than 1 mg of powder independently of the number of Desiccant Unit

According to Customer's request, it is possible to realize the bag wrapping in *Tyvek*®.

*Tyvek*® is a special non-woven fabric produced by *DuPont*, suitable for applications that require high protection against contamination.

#### 5. SIZES

The *Desiccant Bags* are available in different sizes listed according to the Desiccant Units.

DIN - MIL [UD – TME]	NF H [UD]	Wrapping material	Approximate width [mm]	Approximate length [mm]
1/6	1/100	TnT A or TnT B or Tyvek®	35 ± 2	90 ± 5
1/3	1/50	TnT A or TnT B or Tyvek®	70 ± 2	75 ± 5
1/2	1/32	TnT A or TnT B or Tyvek®	70 ± 2	90 ± 5
1	1/16	TnT A or TnT B or Tyvek®	70 ± 2	110 ± 5
2	1/8	TnT A or TnT B or Tyvek®	100 ± 5	110 ± 10
4	1/4	TnT A or TnT B or Tyvek®	100 ± 5	140 ± 10
8	1/2	TnT A or TnT B or Tyvek®	100 ± 5	200 ± 10
16	1	TnT A or TnT B	140 ± 5	200 ± 10
32	2	TnT A or TnT B	140 ± 5	300 ± 10
64	4	TnT A or TnT B	140 ± 5	450 ± 10

Other customized sizes are available according to Customer's request.

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#### 6. CUSTOMIZATION

The *Desiccant Bags* are customizable according to Customer's request:

**6.1. Drop moisture indicator** (for bags equal to 2 UD – TME or bigger)

The solution **does not contain Cobalt (II) Chloride**

**6.2. Hanging system** (for bags equal to 2 UD – TME or bigger)

6.2.1. Tape

6.2.2. Cord

6.2.3. Hook

**6.3. Other customizations are available according to Customer's request**

#### 7. LABELLING

The product does not require classification and labelling as hazardous according to CLP/GHS.

#### 8. PACKAGING

The *Desiccant Bags* are packed inside sealed HDPE containment bags.

There are different configurations in terms of the number of Desiccant Bags inside each HDPE bag and the number of HDPE bags inside the box. The configurations depend on the size of the Desiccant Bags, the indications of the DIN55473 standard and the needs of the customer.

#### 9. STORAGE

Store the *Desiccant Bags* in the original packaging in a dry and sheltered place.

If you use a smaller number of bags than the one contained inside the protective HDPE bag, close the bag hermetically as soon as you have taken the sample.

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### Bentonite Clay Desiccant Bag DIN 55473

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#### 1. DESCRIPTION AND APPLICATION

*Desert Bentonite Clay Desiccant Bags* are suitable to keep low humidity inside closed spaces containing products susceptible to deterioration in presence of high concentration of water vapour both during the transport phase and during storage time.

#### 2. REFERENCE STANDARDS

The *Desiccant Bags* are manufactured in accordance with DIN 55473.

*Desert* is a DIN 55473 certified manufacturer (registration number 5B013):

<https://www.dincertco.tuv.com/registrations/60102868?locale=en>

#### 3. DESICCANT RAW MATERIAL

##### 3.1. Composition

Material	Weight %	CAS no.	EC / List no.
Natural Bentonite Clay	> 95 %	1302-78-9	215-108-5

The Bentonite clay contained in these bags is non-corrosive and chemically inert product.

##### 3.2. Technical specifications

Property	Condition	Typical Value	UM
Density	-	≥ 860	g/L
pH value of the aqueous extract	10 g in 100 ml of H <sub>2</sub> O	7 - 8	-
Electrical conductivity of the aqueous extract	10 g in 100 ml of H <sub>2</sub> O	≤ 0.3	S / m
Content of water-soluble substances	-	≤ 2	%
Particle size distribution	< 0.25 mm	≤ 2	%
	< 6.30 mm	100	%

#### 4. DESICCANT UNIT

According to DIN 55473:2015 standard, 1 Desiccant Unit (in German TME=Trockenmitteleinheit) corresponds to the amount of desiccant product necessary to adsorb at least 6.0 g of water vapour at an air temperature of 23°C and at a relative humidity (RH%) of 40%.

Property	Condition	Typical Value	UM
Adsorptive capacity	23 °C – RH 40%	≥ 6.0	g H <sub>2</sub> O
Adsorption rate	≤ 16 TME	23 °C – RH 40% – 7 h	≥ 0.25
	> 16 TME	23 °C – RH 40% – 7 h	≥ 0.10
Volume	-	≤ 45	cm <sup>3</sup>
Mass	-	≤ 39	g

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### 5. WRAPPING MATERIAL

The *Desiccant Bags* wrapping is made of non-woven fabric that allows the absorption of water vapour inside the bag. There are two classes of casings (in accordance with DIN 55473) which differ according to the amount of dust that may be released through the bag.

- Type A (*low-dust / staubarm*): The bag must release less than 10 mg of dust per Desiccant Unit
- Type B (*dust-proof / staubdicht*): The bag must release less than 1 mg of dust independently of the number of Desiccant Unit

According to Client's request, it is possible to realize the bag wrapping in *Tyvek*®.

*Tyvek*® is a special Type B non-woven fabric produced by *DuPont*, suitable for applications that require high protection against contamination.

### 6. SIZES

The *Desiccant Bags* are available in different sizes listed according to the Desiccant Units (TME).

Number of Desiccant Units (TME)	Wrapping material	Approximate width [mm]	Approximate length [mm]
1/6	Type A or Type B or Tyvek®	35 ± 2	90 ± 5
1/3	Type A or Type B or Tyvek®	70 ± 2	75 ± 5
1/2	Type A or Type B or Tyvek®	70 ± 2	90 ± 5
1	Type A or Type B or Tyvek®	70 ± 2	110 ± 5
2	Type A or Type B or Tyvek®	100 ± 5	110 ± 10
4	Type A or Type B or Tyvek®	100 ± 5	140 ± 10
8	Type A or Type B or Tyvek®	100 ± 5	200 ± 10
16	Type A or Type B	140 ± 5	200 ± 10
32	Type A or Type B	140 ± 5	300 ± 10

### 7. LABELLING

The product does not require classification and labelling as hazardous according to CLP/GHS.

On the Desiccant Bags are printed all the information required by DIN 55473 such as:

- Name and address of the manufacturer
- DIN-Geprüft certification mark with the respective registration number (5B013)
- Number of desiccant units
- Type of the desiccant bag (A or B)

DESICCANT BAG - SACCHETTO DISIDRATANTE  
 TROCKENMITTEL - SACHET DESHYDRATANT  
 BOLSA DESECADORA



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DO NOT EAT - NON INGERIRE  
 NICHT EINNEHMEN - NE PAS AVALER  
 NO INGERIR

**DIN 55473 - 16 Einheiten - B**  
**MIL D 3464 E - 16 UD**  
**NF H 00-321 - 1 UD**

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#### 8. FASTENERS

The *Desiccant Bags* (> 8 TME) can be provided with fasteners that ensure safe hanging of the bag:

- Tape
- Cord

#### 9. PACKAGING

Desiccant bags are packed in tightly sealed group packages with a moisture indicators.

##### 9.1. Technical specifications

The group package is made of HDPE, a transparent materials with water vapour permeability (WDD) lower than  $0.5 \text{ g}/(\text{m}^2 \times \text{d})$  – measured at  $(23 \pm 0.5) ^\circ\text{C}$  and at  $(85 \pm 2) \% \text{RH}$  – and it is labelled as follow:

*Attention! Sensitive to moisture – Humidity indicator must be blue*

The moisture indicator is set at 8% RH and complies with the requirements of TL 6685-0003 Issue 6, Type 1 (colour change from blue to pink).

##### 9.2. Number of desiccant bags per group package

Standard number of desiccant bags per group package suggested by DIN 55473 is the following:

<b>Desiccant Units of the bags</b>	1/6	1/3	1/2	1	2	4	8	16	32
<b>N. of bags per group package</b>	100	80	60	50	30	15	10	5	3

Regarding the number of group packages per box, *Desert* standard configuration is the following:

<b>N. of group packages per box</b>	15	10	10	8	8	8	7	7	6
<b>N. of bags per box (total)</b>	1500	800	600	400	240	120	70	35	18

Both number of bags per group package and number of group packages per box can be modified accordingly to Client's need.

#### 10. STORAGE

Store the *Desiccant Bags* in the original packaging in a dry and sheltered place.

If you use a smaller number of bags than the one contained inside the protective HDPE bag, close the bag hermetically as soon as you have taken the sample.