



SORBEO

ADSORBENTS



DESCRIPTION

SORBEO type adsorbents are highly porous materials suitable for use in many adsorption applications. Adsorbents are available in several pack sizes. For detail specification please refer to technical data sheet of specific adsorbent.

APPLICATIONS

- Adsorption dryers

SORBEO MS 3A - Molecular sieve



Adsorbent SORBEO MS3 is a highly porous, crystalline aluminosilicate in beaded form. The pore openings in the crystals have a diameter of approximately 3 Å. Adsorbent has been specially designated for drying of ethylene in cracked gas units. Also, propylene, butadiene and other unsaturated hydrocarbons are dried using this molecular sieve. Adsorbent is also used in **drying of gases containing H₂S and CO₂** where COS formation has to be minimized.

| Model | Shape | Bulk density | Package | Mass |
|----------------|----------------------------|--------------|------------------|---------|
| SORBEO MS3-S | Granulate 2,5mm - 5,0mm | 0,7 kg/l | 5,8 L container | 4 kg |
| SORBEO MS3-M | | | 16,6 L container | 11,5 kg |
| SORBEO MS3-L | | | 35,4 L container | 24 kg |
| SORBEO MS3-XL | | | 216,5 L barrel | 150 kg |
| SORBEO MS3-XXL | | | 4 x barrel | 600 kg |

SORBEO MS 4A - Molecular sieve



Adsorbent SORBEO MS4 is a highly porous, crystalline aluminosilicate in beaded form. The pore openings in the crystals have a diameter of approximately 4 Å. SORBEO MS4 is a product for dynamic drying of most gases and vapors. It can also be used to remove other impurities with effective molecule diameters smaller than 4 Å. Typical applications for SORBEO MS4 adsorbent are **drying/purification of natural gas, reformer gas and air**.

| Model | Shape | Bulk density | Package | Mass |
|----------------|----------------------------|--------------|------------------|---------|
| SORBEO MS4-S | Granulate 2,5mm - 5,0mm | 0,7 kg/l | 5,8 L container | 4 kg |
| SORBEO MS4-M | | | 16,6 L container | 11,5 kg |
| SORBEO MS4-L | | | 35,4 L container | 24 kg |
| SORBEO MS4-XL | | | 220 L barrel | 150 kg |
| SORBEO MS4-XXL | | | Big bag | 800 kg |

SORBEO MS 10A - Molecular sieve



Adsorbent SORBEO MS10 is a highly porous, crystalline aluminosilicate in beaded form. The pore openings in the crystals have a diameter of approximately 10 Å. Due to its high capacity for water and CO₂ this molecular sieve is widely used for **air purification in cryogenic air separation plants**. It is also applied in the **removal of H₂S/mercaptans and other sulphur compounds** from natural gas and LPG.

| Model | Shape | Bulk density | Package | Mass |
|-----------------|----------------------------|--------------|------------------|---------|
| SORBEO MS10-S | Granulate 2,5mm - 5,0mm | 0,64 kg/l | 5,8 L container | 3,5 kg |
| SORBEO MS10-M | | | 16,6 L container | 10,5 kg |
| SORBEO MS10-L | | | 35,4 L container | 22 kg |
| SORBEO MS10-XL | | | 216,5 L barrel | 130 kg |
| SORBEO MS10-XXL | | | 4x barrel | 520 kg |

SORBEO AA - Activated Alumina



Adsorbent SORBEO AA is a smooth sphere of activated alumina. It is a desiccant for drying a wide variety of liquids and gases. Although all molecules are adsorbed to some extent on activated alumina, those molecules having the highest polarity are preferentially absorbed. SORBEO AA can be used as **adsorbent in adsorption dryers, acid removal originating from lubricating oils and refrigerants, process stream purification/removal of highly polar compounds**.

| Model | Shape | Bulk density | Package | Mass |
|---------------|----------------------------|--------------|------------------|--------|
| SORBEO AA-S | Granulate 2,0mm - 5,0mm | 0,77 kg/l | 5,8 L container | 4 kg |
| SORBEO AA-M | | | 16,6 L container | 12 kg |
| SORBEO AA-L | | | 35,4 L container | 27 kg |
| SORBEO AA-XL | | | 220 L barrel | 170 kg |
| SORBEO AA-XXL | | | Big bag | 907 kg |

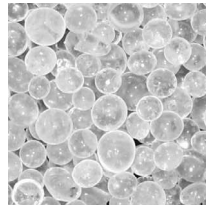
SORBEO SGW - Silica Gel



Water resistant adsorbent SORBEO SGW is a wide pore, beaded form of silica gel. It is a buffer adsorbent used to protect adsorbent beds. SGW exhibits a high water capacity under conditions of high relative humidity and in particular when water is present in the liquid phase. It also has a high capacity for liquid hydrocarbons and other organic liquids. It is used as a **buffer layer in molecular sieve and silica gel beds** which may be subject to occasional liquid carryover.

| Model | Shape | Bulk density | Package | Mass |
|----------------|----------------------------|--------------|------------------|--------|
| SORBEO SGW-S | Granulate 2,0mm - 5,0mm | 0,45 kg/l | 5,8 L container | 2,5 kg |
| SORBEO SGW-M | | | 16,6 L container | 7 kg |
| SORBEO SGW-L | | | 35,4 L container | 15 kg |
| SORBEO SGW-XL | | | 220 L barrel | 100 kg |
| SORBEO SGW-XXL | | | 4x barrel | 400 kg |

SORBEO SGR - Silica Gel



Adsorbent SORBEO SGR is a narrow pore, beaded form of silica. SORBEO SGR consists of relatively large beads and is used in a wide variety of drying and purification processes. Main applications are in **dynamic drying and hydrocarbon dew point control of Natural Gas, drying of other gases and liquids in refining and petrochemical processes, and in air drying**. Beaded silica gels are specifically suitable, when dust and attrition are critical in application.

| Model | Shape | Bulk density | Package | Mass |
|----------------|----------------------------|--------------|------------------|---------|
| SORBEO SGR-S | Granulate 2,0mm - 5,0mm | 0,7 kg/l | 5,8 L container | 4 kg |
| SORBEO SGR-M | | | 16,6 L container | 11,5 kg |
| SORBEO SGR-L | | | 35,4 L container | 24 kg |
| SORBEO SGR-XL | | | 220 L barrel | 150 kg |
| SORBEO SGR-XXL | | | Big bag | 500 kg |

SORBEO AC - Activated Carbon



Activated carbon packages can purify compressed air and gases by means of an adsorptive process and is mainly used for separating oil vapors from compressed air flows. Activated carbon can be used for other applications according to its specifications at any time. Typical applications for activated carbon are **purification of natural gas, reformer gas and air**.

| Model | Shape | Bulk density | Package | Mass |
|--------------|-----------------|--------------|------------------|---------|
| SORBEO AC-S | Pellets 3 mm | 0,47 kg/l | 5,8 L container | 2,7 kg |
| SORBEO AC-M | | | 16,6 L container | 7,8 kg |
| SORBEO AC-L | | | 35,4 L container | 16,5 kg |
| SORBEO AC-XL | | | 220 L barrel | 103 kg |

SORBEO HC - Catalyst



Catalyst SORBEO HC is intended for catalytic oxidation of CO to CO₂ in dry air or other gases. In this way poisonous CO is removed and CO₂ is generated instead. This process is used in applications such as **compressed breathing air, respirators, escape masks and cryogenic gas purification**.

| Model | Shape | Bulk density | Package | Mass |
|--------------|-------------------|--------------|------------------|--------|
| SORBEO HC-S | Granulate 3 mm | 0,9 kg/l | 5,8 L container | 5 kg |
| SORBEO HC-M | | | 16,6 L container | 14 kg |
| SORBEO HC-L | | | 35,4 L container | 31 kg |
| SORBEO HC-XL | | | 220 L barrel | 190 kg |

SORBEO CMS - Carbon Molecular Sieve



Sorbeo CMS is pelletised form carbon molecular sieve CMS is mainly used to separate N₂ from air but it can also be used in many other applications (separating methane from methane / CO₂ mixture or ethylene from ethylene mixture gasses...). Typical applications for activated carbon are **Oxygen/Nitrogen separation**.

| Model | Shape | Bulk density | Package | Mass |
|---------------|-------------------------|------------------|------------------|--------|
| SORBEO CMS-S | Pellets 1,8 ± 0,2 mm | 0,68 - 0,73 kg/l | 5,8 L container | 4,0 kg |
| SORBEO CMS-M | | | 16,6 L container | 11 kg |
| SORBEO CMS-L | | | 35,4 L container | 24 kg |
| SORBEO CMS-XL | | | 220 L barrel | 137 kg |

SORBEO SGC - Silica gel



Adsorbent SORBEO SGC is a beaded silica gel with very high mechanical integrity. It meets the demand for a heavy-metal free and environmental friendly indicating agent. Sorbeo SGC provides safe moisture indication without any concerns regarding carcinogenic ingredients. It also provides superior moisture indication with a crisp color change. Typical applications are **transformer air breathers as well as other breather filters, laboratory uses, packaging of moisture sensitive goods and many others**.

| Model | Shape | Bulk density | Package | Mass |
|---------------|---------------------|--------------|------------------|---------|
| SORBEO SGC-S | Granulate 2-5 mm | 0,8 kg/l | 5,8 L container | 4 kg |
| SORBEO SGC-M | | | 16,6 L container | 11,5 kg |
| SORBEO SGC-L | | | 35,4 L container | 24 kg |
| SORBEO SGC-XL | | | 220 L barrel | 150 kg |