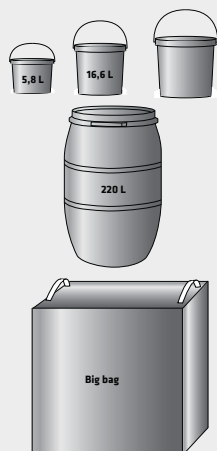


ADSORBENTS



DESCRIPTION

Our 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
- N₂/O₂ generators
- Air/Gas/Water purification



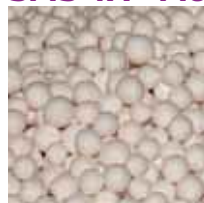
MS 3A - Molecular sieve



Adsorbent 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
MS3-S	Granulate 2,5mm - 5,0mm	0,7 kg/l	5,8 L container	4 kg
MS3-M			16,6 L container	11,5 kg
MS3-L			35,4 L container	24 kg
MS3-XL			216,5 L barrel	150 kg
MS3-XXL			4 x barrel	600 kg

SMS 4A - Molecular sieve



Adsorbent MS4 is a highly porous, crystalline aluminosilicate in beaded form. The pore openings in the crystals have a diameter of approximately 4 Å. 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
MS4-S	Granulate 2,5mm - 5,0mm	0,7 kg/l	5,8 L container	4 kg
MS4-M			16,6 L container	11,5 kg
MS4-L			35,4 L container	24 kg
MS4-XL			220 L barrel	150 kg
MS4-XXL			Big bag	800 kg

MS 10A - Molecular sieve



Adsorbent 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
MS10-S	Granulate 2,5mm - 5,0mm	0,64 kg/l	5,8 L container	3,5 kg
MS10-M			16,6 L container	10,5 kg
MS10-L			35,4 L container	22 kg
MS10-XL			216,5 L barrel	130 kg
MS10-XXL			4x barrel	520 kg

AA - Activated Alumina



Adsorbent 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. 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
AA-S	Granulate 2,0mm - 5,0mm	0,77 kg/l	5,8 L container	4 kg
AA-M			16,6 L container	12 kg
AA-L			35,4 L container	27 kg
AA-XL			220 L barrel	170 kg
AA-XXL			Big bag	907 kg

SORBEO SGWS - Water resistant silica gel



Adsorbent SGWS is a beaded form of aluminosilicate gel resistant to liquid water. It is most frequently used as a protective layer in combination with silica gel or other adsorbents such as molecular sieves, activated alumina, activated carbons and catalysts in order to increase the reliability of the system. It is ideal for applications where adsorbent regeneration with humid gas occurs (e.g. Heat of Compression dryers, ...).

Model	Shape	Bulk density	Package	Mass
SGWS-S	Granulate 2,0mm - 5,0mm	0,7 kg/l	5,8 L container	4 kg
SGWS-M			16,6 L container	11,5 kg
SGWS-L			35,4 L container	24 kg
SGWS-XL			220 L barrel	150 kg
SGWS-XXL			Big bag	750 kg

SGW - Silica Gel



Water resistant adsorbent 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

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
AC-S	Pellets 3 mm	0,47 kg/l	5,8 L container	2,7 kg
AC-M			16,6 L container	7,8 kg
AC-L			35,4 L container	16,5 kg
AC-XL			220 L barrel	103 kg

CMS - Carbon Molecular Sieve



CMS is pelletized form. Mainly is 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 gases, separation of smaller polar molecules....). **Typical applications for carbon molecular sieve are nitrogen generators.**

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

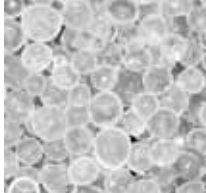
SL - Soda lime



SL is absorbent for acidic gases, e.g. carbon dioxide (CO₂), in industrial plants as well as in shelter and rescue rooms with indicator. Typical application of soda lime is absorption of carbon dioxide (CO₂) and other acidic gases under usual air conditions in rooms or environment including various industrial plants and laboratories. As an external signal for the replacement of soda lime it contain colour indicator which with acid gases change from white to violet.

Model	Shape	Bulk density	Package	Mass
BTN-S	Hemispherical pellet	0,93 kg/l	5,8 L container	5,3 kg
BTN-M			16,6 L container	15,4 kg
BTN-L			35,4 L container	32,9 kg
BTN-XL			220 L barrel	204,6 kg

SGR - Silica Gel



Adsorbent SGR is a narrow pore, beaded form of silica. 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
SGR-S	Granulate 2,0mm - 5,0mm	0,7 kg/l	5,8 L container	4 kg
SGR-M			16,6 L container	11,5 kg
SGR-L			35,4 L container	24 kg
SGR-XL			220 L barrel	150 kg
SGR-XXL			Big bag	500 kg

HC - Catalyst



Catalyst 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
HC-S	Granulate 3 mm	0,9 kg/l	5,8 L container	5 kg
HC-M			16,6 L container	14 kg
HC-L			35,4 L container	31 kg
HC-XL			220 L barrel	190 kg

SGC - Silica gel



Adsorbent 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. 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
SSGC-S	Granulate 2-5 mm	0,8 kg/l	5,8 L container	4 kg
SGC-M			16,6 L container	11,5 kg
SGC-L			35,4 L container	24 kg
SGC-XL			220 L barrel	150 kg

BTN - Bentonite



A sodium exchanged bentonite of instant high gel forming. It is used as a fluid mud in oil, gas and water well drilling, in earthing applications and in civil engineering. Typical applications for bentonite are oil removing from condense.

Model	Shape	Bulk density	Package	Mass
BTN-S	Powder	0,9 kg/l	5,8 L container	5,22 kg
BTN-M			16,6 L container	14,9 kg
BTN-L			35,4 L container	31,8 kg
BTN-XL			220 L barrel	198 kg