

Adsorption of volatile organic compounds and hydrocarbones from sewage gas and landfill gas



Product description

ACO|sorb[si-g] is a granular activated carbon, which is manufactured from coal by water vapour activation. It is particularly suited to the tasks of adsorbing siloxanes and hydrocarbons, so-called VOCs, from gases and eliminating odours. It has a particle size of 3.35 to 8.00 mm and a special porous structure, which makes it highly effective in removing volatile organic compounds.

Special properties

- High take-up capacity for siloxanes
- Odour elimination
- Protects internal combustion engines and valves from wear caused by quartz build-up
- Assures compliance with the required limiting values
- High mechanical hardness
- Low pressure loss
- High product quality

Quality

ACO|sorb[si-g] activated carbon is a premium product with a consistently high quality standard, a key component that plays an important role in efficient system operation.

Technical description:

Specifications

Vibrated density	420 - 430 kg/m ³
Iodine number (min.)	950 mg/g
Grain size	3.35 - 8.00 mm
Sieve analysis	
< 8.00 mm (min.)	95%
> 3.35 mm (min.)	88%

Typical properties

Bed density	430 kg/m ³
BET surface	1.050 m ² /g
Hardness	94%

Safety information

Moist activated carbon adsorbs oxygen from the air. In closed and partially-closed rooms or containers, this can lead to a life-threatening lack of oxygen. The regulations for entering closed rooms and the provider's safety datasheets must be heeded.

Important information on disposal

SILOXA Engineering AG can take care of disposal for you upon request, including the provision of a record of proper disposal.

Only the waste producer can declare the type of waste. In this case, the waste producer is the customer, who must declare to SILOXA AG on placing the order that the activated carbon is not contaminated with substances defined as hazardous under waste legislation. Biogas plants operated with renewable raw materials, for example, do not generate any hazardous waste.

SILOXA carries out disposal according to Waste Code 150203 (absorption and filter materials). If disposal according to this waste code is not possible because the gas contained substances defined as hazardous under waste legislation, the customer is liable for any additional disposal costs incurred.

Packaging

- Approximately 1 m³ big bag on pallet (1,000 l)
- Other packaging available on request



Description for activated carbon service

I. Activated carbon replacement for all brands and manufacturers

- Delivery of the activated carbon, including unloading
- Establishment of a secure atmosphere inside the activated carbon adsorber
- Discharge/extraction of the used activated carbon into big bags
- Checking of the interior for damage (visual inspection to check for damage and corrosion on the flange connections, butterfly valves and temperature displays)
- Filling with fresh activated carbon
- Flushing of the activated carbon adsorber with gas
- Checking the leak tightness of the flange connections

Optional:

Handling of the big bags filled with used activated carbon, including removal and proper disposal of the activated carbon

II. MAKA replacement service for standalone adsorbers

- Delivery of an activated carbon adsorber with fresh carbon, including unloading
- Establishment of a secure atmosphere inside the activated carbon adsorber while still in operation
- Disconnection of the activated carbon adsorber with used carbon from the gas system
- General visual inspection to check for damage and corrosion on the flange connections, butterfly valves and temperature displays.
- Installation of the activated carbon adsorber with fresh carbon in the gas system
- Flushing of the activated carbon adsorber with gas
- Checking the leak tightness of the flange connections
- Removal of the adsorber with used activated carbon and proper disposal of the activated carbon

Note:

The term VOC and siloxanes covers a large number of different chemical compounds. Each of these compounds behaves differently when adsorbed by activated carbon. For this reason, it is to be expected that the predicted service life that may have been calculated could be adversely affected by increased hourly concentrations and multi-component mixtures.

III. Replacement service for MAKA built into the GRW range

- Delivery of an activated carbon adsorber with fresh carbon, including unloading
- Establishment of a secure atmosphere inside the activated carbon adsorber while still in operation
- Disconnection of the activated carbon adsorber with used carbon from the gas system
- General visual inspection to check for damage and corrosion on the flange connections, butterfly valves and temperature displays
- Installation of the activated carbon adsorber with fresh carbon in the gas system
- Flushing of the activated carbon adsorber with gas
- Checking the leak tightness of the flange connections
- Inspection of the control unit based on VDMA (German Engineering Association) standard sheet 24186 part 4.
- Checking for wear and improper handling of the control components, sensors and regulators
- Removal of the activated carbon adsorber and proper disposal of the activated carbon

IV. Delivery of MAKA

- Delivery of an activated carbon adsorber with fresh carbon, including unloading
- Removal of the activated carbon adsorber and proper disposal of the activated carbon

V. Delivery and disposal of activated carbon

- Delivery of the activated carbon, including unloading
- Handling of the big bags filled with used activated carbon, including removal and proper disposal of the activated carbon

VI. Return of the used activated carbon, including proper disposal

