

Doc.No.033 CALSORB Data Sheet

APPLICATION

CalSorb is a heat activated adsorbing/clarifying media that finds application in a variety of specialist applications. Some of the uses include the clarification of fuels such as diesel, petrol and jet fuel. It also finds application as a carrier medium for pesticides where a high resistance to attrition together with its absorption ability ensures long shelf life of the pesticide granules. The product can be manufactured to the client’s specific size distribution requirements. Typically, the product is supplied larger than 0.5 mm and smaller than 1.4 mm.

MINERAL DESCRIPTION

This versatile mineral is better known as Fuller’s earth. Attapulgite is a needle-like clay mineral composed of magnesium-aluminium phyllosilicate $(Mg, Al)2Si_4O_{10}(OH) \cdot 4(H_2O)$.

CalSorb is a natural occurring Attapulgite clay-based product that has been mined, crushed, dried, calcined and accurately screened before packing. The heat treatment (calcining) removes the water of crystallization, that then in turn creates large surface areas that are electrically charged. This enables the product to absorb a variety of contaminants found in fuels and oils. The calcination also ensures the granules are hard and inert with a high resistance to attrition. The high-quality deposit of attapulgite is mined and processed near Mabeskraal in the North-West province of South Africa.

PACKAGING AND TRANSPORT

CalSorb is packaged in 25 Kg woven polypropylene bags and is transported by truck or container.

PRODUCT OPTIONS

Non-standard CalSorb sizes are available on request. Please refer to physical properties table.

TYPICAL PHYSICAL PROPERTIES

Property	CalSorb 1214	CalSorb 1435	CalSorb 3560
Particle Size	12 - 14 # 1.8 - 1.4mm	14 - 35 # 1.4 - 0.5mm	35 - 60 # 0.5 - 0.25mm
Bulk density	660 kg/m ³ 41 lb/ft ³	660 kg/m ³ 41 lb/ft ³	660 kg/m ³ 41 lb/ft ³
LOI	5%	5%	5%
pH	7 - 8	7 - 8	7 - 8
Volatile Classification	LVM	LVM	LVM
Free Moisture	0 – 2%	0 – 2%	0 – 2%
Colour	Tan	Tan	Tan

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TYPICAL CHEMICAL PROPERTIES

Compound identity	Wt%
SiO ₂	61.20%
Al ₂ O ₃	8.16%
Fe ₂ O ₃	6.91%
K ₂ O	0.27%
CaO	7.90%
Na ₂ O	0.06%
MgO	15.50%
TOTAL	100%

Property	Value
Surface area	92 m ² /g
Specific gravity (20 °C)	2.3 – 2.5 g/cm ³
Porosity	0.405
Void space	68 %
Oil absorption	Approximately 0.85 Kg/Kg