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# DICALITE TRADING NV

A  
 World of  
 Filtration  
 Experience

## DICALITE FILTER AIDS

### GENERAL INFORMATION: Dicalite 4500

Mineralogical .....	Diatomite
Type .....	Flux Calcined
Physical Form .....	Dry powder
Color .....	White
Permeability (PFR <sub>v</sub> ) <sup>(1)</sup> .....	190 - 210 (3.8-4.4 Darcy)
Density, (Wet) .....	max. 23.1 lbs/ft <sup>3</sup>
Retained on U.S. Std. Sieve, % <sup>(2)</sup>	
No. 140 .....	max. 18.0

Moisture Content .....	max. 0.5 g%
Bulk Density (Dry) .....	15 - 18 lbs/ft <sup>3</sup>
pH .....	8 - 11
Specific Gravity .....	2.33
Minimum GE Brightness .....	85

Shipping point .....	Burrey, CA
Packaging .....	50 lbs Bags Standard

(1) Water permeability flow rate  
 (2) Asphal oil test method

# Diatomite

Diatomite has been used as a filter aid for nearly a century. The ore is a soft, friable siliceous mineral. It is composed of the skeletons of microscopic plants deposited on the bottoms of oceans and lakes after and during the Miocene Age, from 100'000 to 15'000'000 years ago. Under the microscope the particles of diatomite show up in a variety of forms: symmetrical figures resembling disks, rods, cylinders and snowflakes. It is this shape factor combined with the rigidity of the particles that makes diatomite such an excellent raw material for the production of superior filter aids.



Diatomaceous earth is an amorphous form of silica containing a small amount of microcrystalline material. Filter aids are processed at above 800 °C (1500 °F). Both calcined and flux-calcined diatomite filter aids are free of organic matter and are non-adsorptive.

Dicalite<sup>®</sup> diatomite filter aids offer outstanding performance from the finest to the coarsest grades. These materials meet all requirements for good filter aids. This enables them to meet the exacting clarity and flow-rate demands of industrial filtration. Even more important, the user can depend on consistency and uniformity load after load.

## Typical Chemical Analysis Diatomite

Major Elements	Calcined D.E. in weight %	Flux - Calcined D.E. in weight %
SiO <sub>2</sub>	88 - 95	90 - 96
Al <sub>2</sub> O <sub>3</sub>	0.8 - 3.2	0.75 - 1.5
Fe <sub>2</sub> O <sub>3</sub>	0.4 - 2.1	0.45 - 1.10
Na <sub>2</sub> O	0.1 - 0.8	1.35 - 4.70
K <sub>2</sub> O	ND - 0.25	ND - 0.07
CaO	0.9 - 3.0	0.10 - 0.24
MgO	0.16 - 0.80	0.06 - 0.13

Product	PFRv		PCD		Colour	Packaging Product net kg	pH 10% slurry
	min.	max.	min.	max.			
<b>CALCINED PRODUCTS</b>							
Superaid / UF		36			pink	22.68	5 - 10
Speedflow	36	52		26.5	pink	22.68	5 - 10
231	52	65		27.5	pink	22.68	5 - 10
<b>FLUX-CALCINED PRODUCTS</b>							
341	70	85		25.0	white	22.68	8 - 11
Speedplus	85	105		25.0	white	22.68	8 - 11
375	105	125		23.1	white	22.68	8 - 11
Speedex	120	140		23.1	white	22.68	8 - 11
2500	140	165		23.1	white	22.68	8 - 11
4200	165	190		23.1	white	22.68	8 - 11
4500	190	210		23.1	white	22.68	8 - 11
5000	210	230		23.1	white	22.68	8 - 11
6000	260	300		23.1	white	22.68	8 - 11
7000	290	340		23.1	white	22.68	8 - 11

## Notes

### *Permeability Flowrate (PFRv)*

The constant volume filtration flowrate is measured by the permeability method (S.T.M. Nr. 1-9).

This relative value gives an idea of the filtration speed.

It is the fundamental characteristic which differentiates one filteraid grade from another when the particles are formed into a filter bed or cake. Permeability is related to particle size distribution.

### *Permeability Cake Density (PCD)*

The wet cake density is also measured by the permeability method (S.T.M. Nr. 1-9).

This value gives the wet cake density in lbs/ft<sup>3</sup> (x16 = kg/m<sup>3</sup>).

Perlite filteraids form lower density cakes than diatomite filteraids of comparable permeabilities. Densities of Dicalite<sup>®</sup> perlite filteraids are controlled at a level found to be optimum for most effective performance.