



select[®]:ff

fast filtering natural silicate

product

Select[®] FF is a natural silicate that is engineered for the removal of polar contaminants such as soaps, metals, and phospholipids in the refining of fats and oils. It is used to produce clean, quality edible oils and biodiesel feedstock that meet the most demanding specifications.

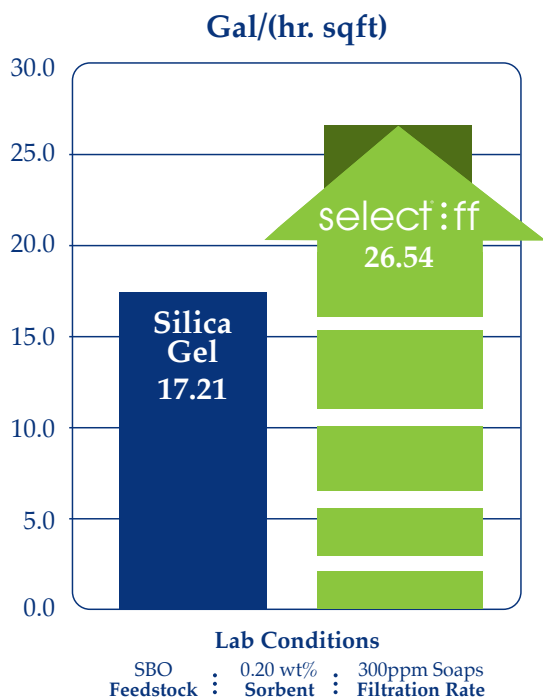
applications

- Processing of biodiesel feedstock
- Interesterification
- Elimination of water wash centrifuge
- Physical refining
- Enzymatic degumming

key advantages

	select:ff	Silica Gels
Fast Filtration	✓	✓
Soaps Removal	✓	✓
Metals Removal	✓	✓
Wet Bleaching Efficiency	✓	—
Flowability in Extreme Cold or Wet Conditions	✓	—
Color Pigments and Chlorophyll Removal	✓	—

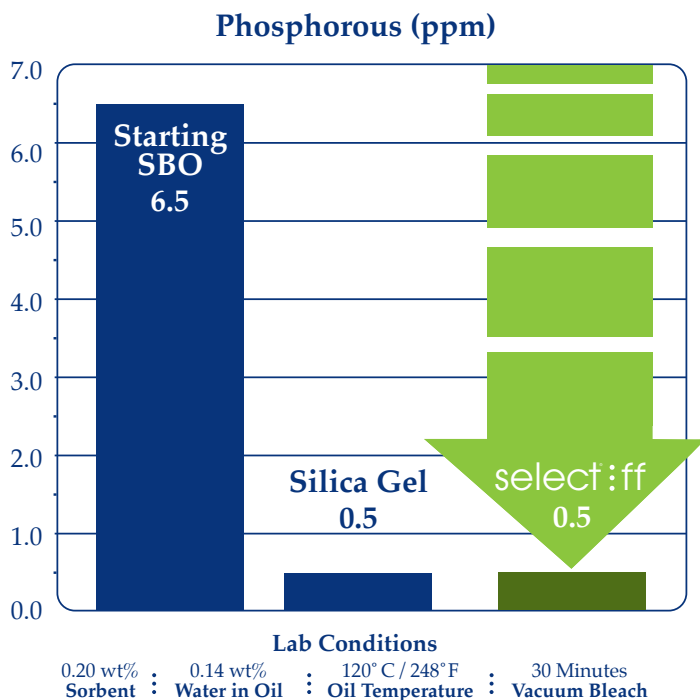
fast filtration increases productivity



maximizes reduction in soaps

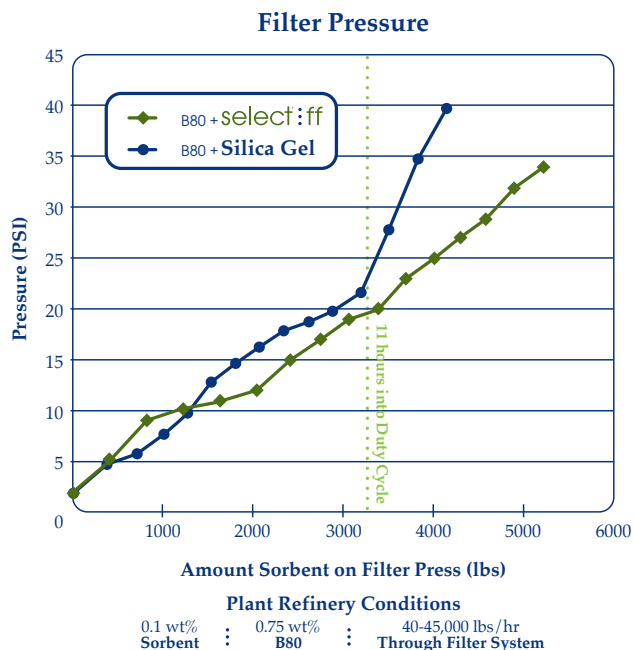


phosphorous removal



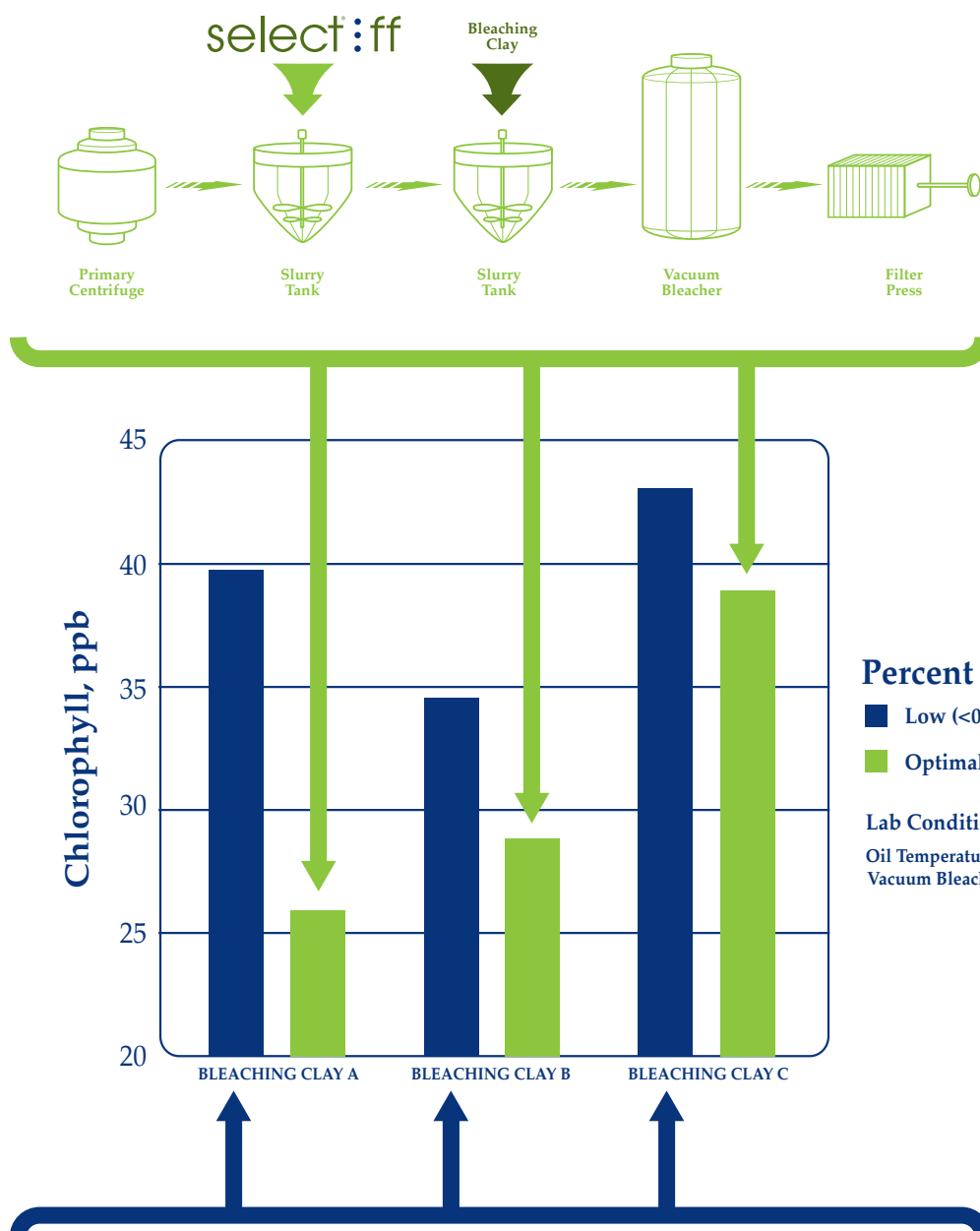
uniform pressure rise

After ~11 hours into “duty cycle”, the competitor shows an abrupt increase in filter pressure, which is likely the result of “soaps” starting to plug up and reduce the hydraulic conductivity of the cake bed on the filter screen.



allows for wet bleaching efficiency

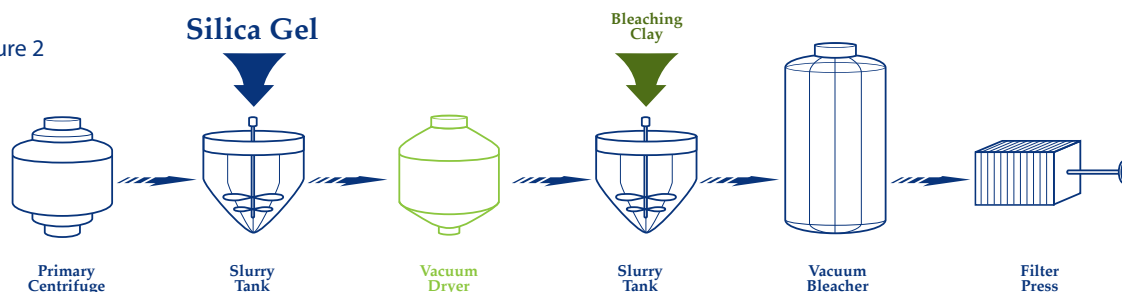
figure 1

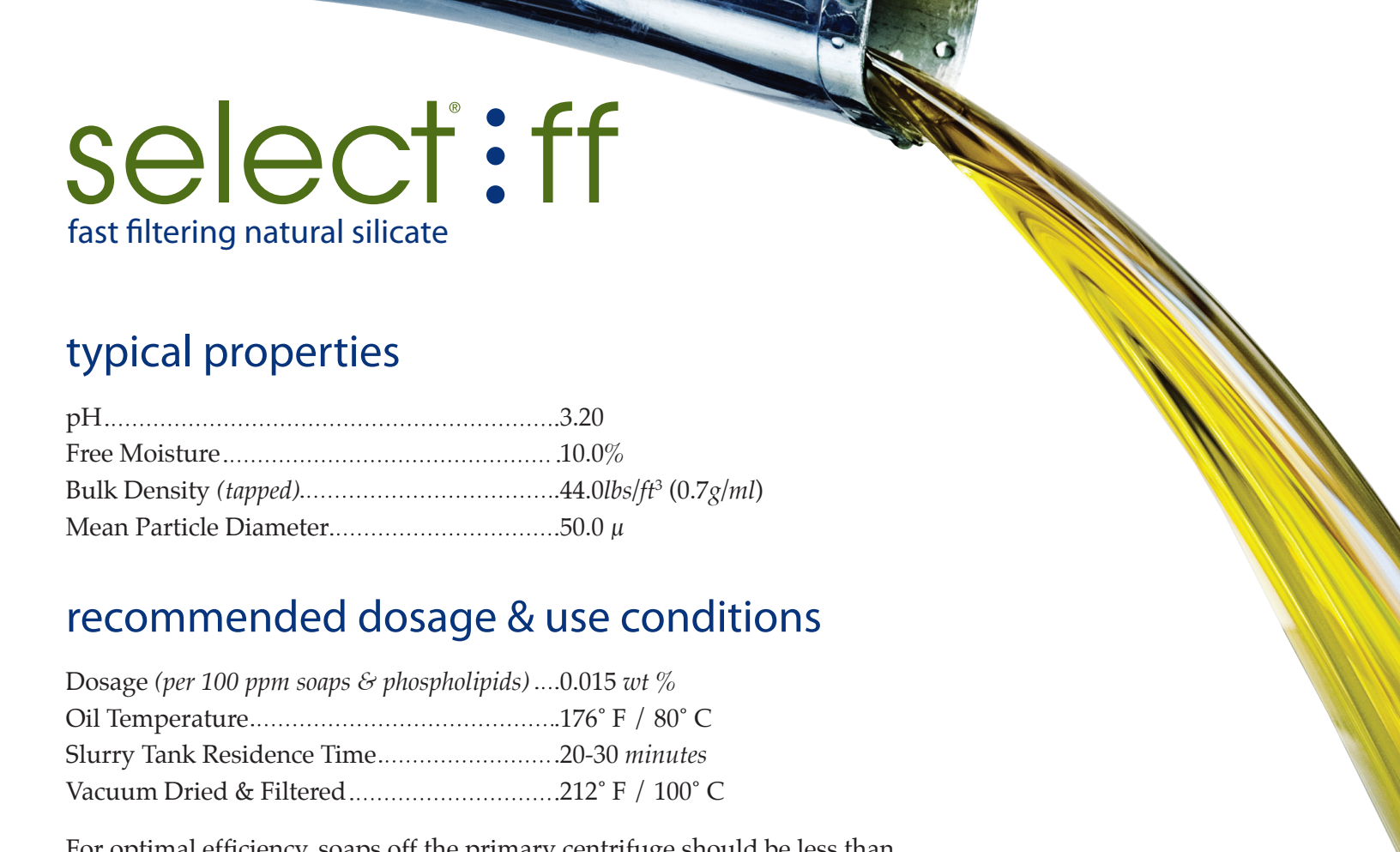


Conventional silicas require drying of the oil in order to achieve optimal performance (Fig. 2). However, going into bleaching with dry oil reduces the efficiency of the bleaching clay to remove chlorophyll and color bodies.

Select FF does not require drying of the oil to achieve optimal performance (Fig. 1) which results in a more efficient removal of chlorophyll and color bodies in bleaching regardless of the type of bleaching clay.

figure 2





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typical properties

pH.....	3.20
Free Moisture.....	10.0%
Bulk Density (<i>tapped</i>).....	44.0lbs/ft ³ (0.7g/ml)
Mean Particle Diameter.....	50.0 μ

recommended dosage & use conditions

Dosage (<i>per 100 ppm soaps & phospholipids</i>)	0.015 wt %
Oil Temperature.....	176° F / 80° C
Slurry Tank Residence Time.....	20-30 <i>minutes</i>
Vacuum Dried & Filtered.....	212° F / 100° C

For optimal efficiency, soaps off the primary centrifuge should be less than 500 ppm. Soap levels in oil determine the sorbent dosage.

processing options

Select FF offers flexibility to customize and simplify your edible oil production process. By treating with Select FF, the water wash centrifuge can be eliminated or reconfigured as a second primary centrifuge, allowing for increased production.

Select FF is also well suited to physical refining processes where free fatty acids are removed by distillation in the deodorization stage.

certifications

Select FF is made in accordance with ISO-9001, FAMI-QS, and HACCP and is Generally Recognized as Safe (GRAS) as a food processing aid by the U.S. Food and Drug Administration.

contact

410 N. Michigan Ave.
Chicago, IL 60611, USA

toll-free: 888-787-3356
online: www.selectfastfiltering.com
email: fluidspurification@oildri.com

oil:dri
fluids purification