

To discuss your purification needs, please contact us

mineralstech.com

bleachingearth@mineralstech.com

APAC

AMCOL Industrial Minerals Company Ltd.  
 Room 2701, WWT Tower, No. 6, Jianguomenwai Avenue,  
 Chaoyang District, Beijing, China  
 +86 13810272643

EMEA

AMCOL Mineral Madencilik  
 Ataturk Mah. Atasehir Bulvari Gardenya Plaza 3,  
 No. 20 K:13  
 34758 Atasehir, Istanbul, Turkiye  
 +90 850 393 49 30

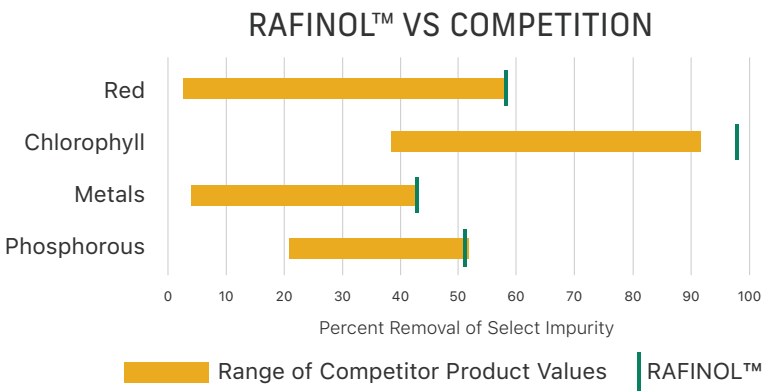
THE AMERICAS

American Colloid Company  
 2870 Forbs Avenue  
 Hoffman Estates, Illinois, 60192, U.S.A.  
 +1 847 476 0769



A MINERALS TECHNOLOGIES BRAND

RAFINOL™ adsorbents are a new generation material that exhibits excellent adsorption of impurities. RAFINOL™ adsorbents are broadly applicable across various feedstocks while maintaining consistent and superior performance, and are excellent at removing metals and phosphorous to protect catalysts and downstream equipment.



RAFINOL™ adsorbents versus several industry leading competitor products  
 Oil = crude, degummed, soybean, dose rate = 0.7%



OPTIMIZE YOUR PROCESS WITH RAFINOL™ ADSORBENTS



Consistent performance even with feedstock variability to reduce downtime



Best-in-class purification performance



Lower consumption rates, even for hard-to-bleach oils



Improved filtration rates to increase productivity



Just-in-time delivery



RAFINOL™ is a trademark of Minerals Technologies Inc. and its subsidiaries.

SUPERIOR PERFORMANCE IN  
 PURIFICATION  
 OF FEEDSTOCKS FOR RENEWABLE FUELS



## RENEWABLE FUEL OPERATIONS NEED RAFINOL™ ADSORBENTS

By 2050, global energy consumption is predicted to increase >30% due to population growth, increased manufacturing, and higher standards of living. This will also lead to higher greenhouse gas emissions, which is why many countries have committed to reducing their emissions - a process that depends on advances in renewable energy, including renewable fuels.

Renewable fuels are comprised of Renewable Diesel (RD) and Sustainable Aviation Fuel (SAF). RD is made from vegetable oil and other feedstocks when big molecules are hydrocracked or hydrogenated. The only commercially deployed method for producing significant amounts of SAF is hydroprocessing of esters and fatty acids (HEFA).

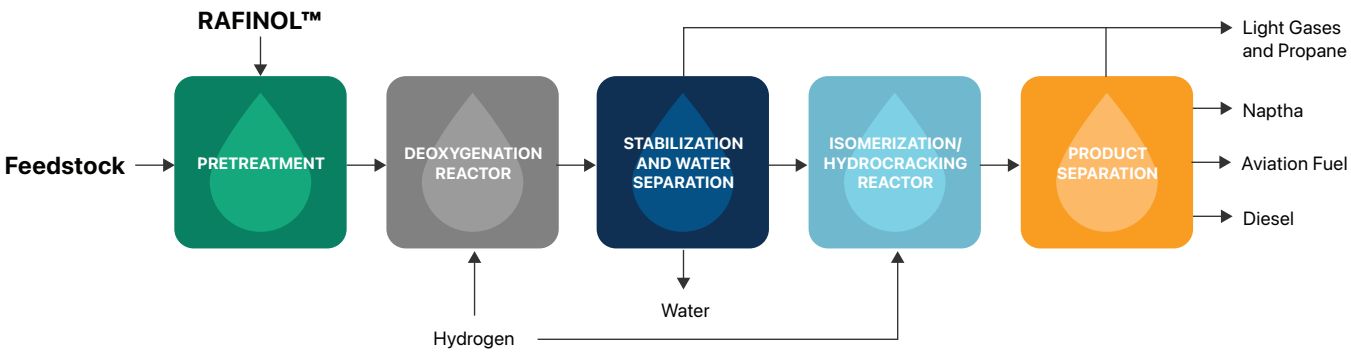
Increased availability of renewable fuel will depend on the processing of various feedstocks, including soybean, canola (rapeseed), corn oil, yellow grease, tallow, and advanced feedstocks currently under global consideration. The superior performance of RAFINOL™ adsorbents, backed by the R&D and manufacturing expertise of Minerals Technologies, enables processors to quickly adapt to various feedstocks.



## GUIDELINES FOR RAFINOL™ ADSORBENTS USE

RAFINOL™ is a unique mineral clay adsorbent with a naturally high surface area that is well suited to adsorb dissolved impurities. Porosity and surface activity can be further improved with acid activation of clay used in RAFINOL™ adsorbents to meet specific application needs. Particle size distribution is precisely controlled to optimize filtration efficiency.

During pretreatment, RAFINOL™ adsorbents are mixed with oil feedstock to absorb impurities at a defined resonance time. RAFINOL™ adsorbents and captured impurities are then removed from the oil before deoxygenation.



Phosphorous and other metal contaminants have to be removed during pretreatment in order to maximize downstream processes and prolong catalyst life. RAFINOL™ adsorbents offer consistent pretreatment performance across various feedstocks.

Companies strive to minimize the production of Spent Bleaching Earth (SBE), which contains residual oil and adsorbed impurities, as it creates costly disposal challenges. RAFINOL™ adsorbents offer superior performance at reduced consumption (or dose) rates compared to competing products.



## EXPORT GLOBAL SUPPORT

### RAFINOL™ ADSORBENTS APPLICATION GUIDE

SOURCE	GRADES/BEST RECOMMENDATIONS
Cottonseed Oil	RAFINOL™ 930 FF — efficient on very Heavy Bio-Oil (HBO)
Sunflower Seed Oil	RAFINOL™ 900 FF, RAFINOL™ 910 FF, RAFINOL™ 920 FF
Canola Rapeseed Oil	RAFINOL™ 930 FF — efficient on high chlorophyll and red color content
Soybean Oil	RAFINOL™ 930 FF — efficient on high chlorophyll and red color content
Crude Palm Oil	RAFINOL™ 900 FF — effective on low 3MCPD formation
RBD Palm Oil	RAFINOL™ 920 FF, RAFINOL™ 930 FF — effective on Glycydl Ester (GE) removal
Renewable Feedstock	RAFINOL™ 920 FF, RAFINOL™ 930 FF — effective on impurities removal
BioDiesel Finishing	RAFINOL™ 930 FF — effective on color and impurities removal
Animal Fats	RAFINOL™ 930 FF — effective on color and impurities removal

## JUST-IN-TIME DELIVERY

RAFINOL™ adsorbents are available in kraft bags, bulk sacks, bulk truck, and rail options. Please reach out to your regional sales representative to confirm packaging and custom label availability for your desired product or solution. Minerals Technologies ships thousands of containers annually and we are experts in working with ports, ocean carriers, and in Incoterm standards.

