

TECHNICAL INFORMATION 1422

**ZEOFREE® PURE 5841**

**QSR Filtration Media**

Active Filtration for Oil Life Extension



# QUALITY AND VALUE THAT IS EASY TO SEE

## Why Filtration of Oil

When exposed to heat, time and oxygen, frying oil degrades into many undesirable by-products. Some of these are visible (such as dark colored species which change the overall look of the oil), and some are invisible to the human eye (such as free fatty acids and polar compounds).

Passive filtration removes larger remnants of burned food and breading, but does nothing to remove those contaminants which are soluble in the oil.

Active filtration with ZEOFREE® PURE 5841 silicon dioxide removes soluble species which affect the color, quality and taste of the resulting fried food. The removal of free fatty acids, total polar compounds and off color oligomeric oil degradation products enables a significant extension in oil life and results in an increase in the quality of fried food.

PROPERTY	TYPICAL VALUE
Avg. Particle Size	50 µm
Oil Absorption	140 ml/100g
Moisture	10%
pH	7
Bulk Density	304 g/l
Form	Powder

## Approved and Certified by Regulatory Agencies

ZEOFREE® PURE 5841 active filtration media meets US FDA food contact regulations and is certified Kosher Pareve and Kosher for Passover and Halal.

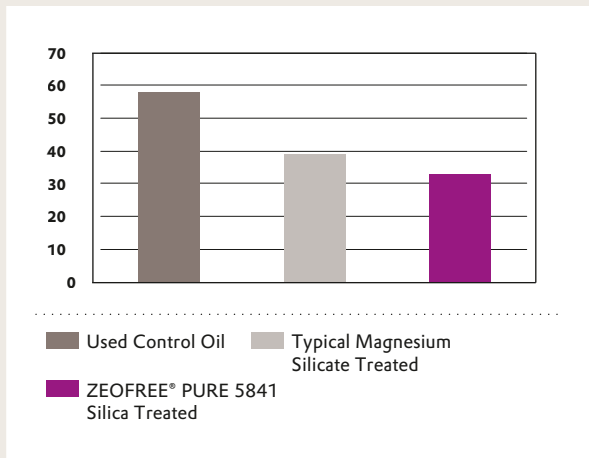


FRY YOUR FOOD  
NOT YOUR OIL WITH  
**ZEOFREE® PURE 5841**  
ACTIVE FILTRATION  
MEDIA

## Removal of Color Bodies

The easiest way to judge the quality of an oil is to look at the color change. As an oil degrades, it darkens due to the formation of polymeric compounds. As the graph below shows, ZEOFREE® PURE 5841 silica has industry leading performance with respect to removing off color compounds from oil.

**Figure 1:** Lovibond PFX-995 Tintometer, Path Length 10 cm. Higher number is greater color value.



**Significant extension in oil life**

**Superior removal of color bodies**

**Excellent suppression of free fatty acids**

**Reduced buildup of polar compounds**

**Minimal soap generation**

**Very user friendly dosing**

**Reduced overall cost of use**

## Free Fatty Acids (FFA) and Total Polar Compounds (TPC)

ZEOFREE® PURE 5841 silicon dioxide is designed to prevent the build up of FFA during extended frying cycles. Real world frying tests demonstrate the ability of ZEOFREE® PURE 5841 active filtration media to suppress the build up of FFA to less than 0.6% over a full week long extended frying session.

ZEOFREE® PURE 5841 silica also showed excellent performance in the suppression of the formation of TPC in fry oil over the entire extended fry period vs. a control with no filtration.

## Minimal Soap Generation

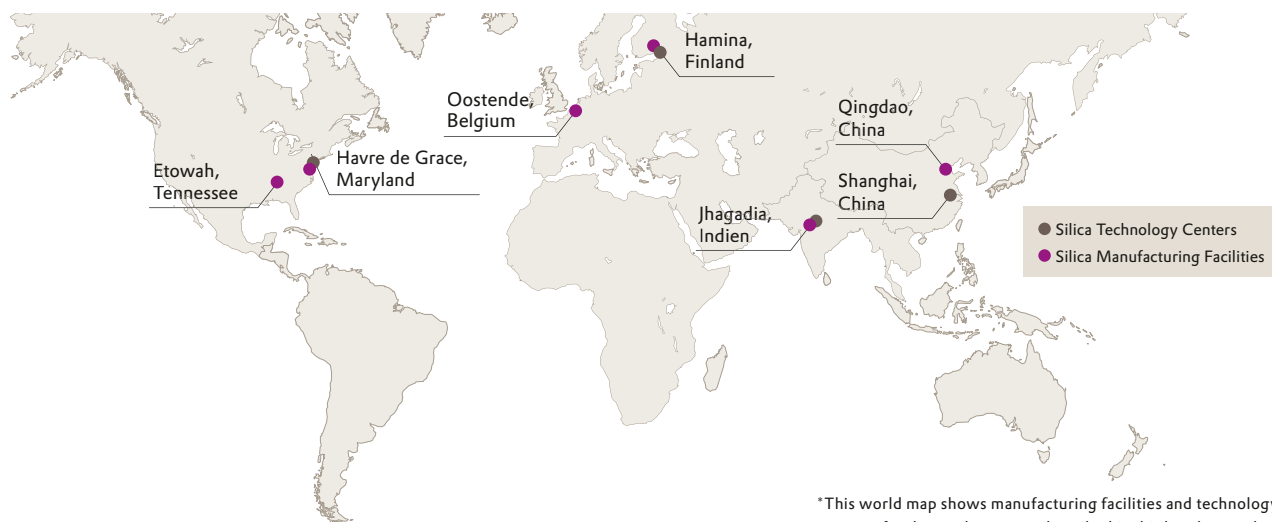
Soap is for cleaning, not for frying, as soaps will affect the taste and performance of fryer oil. ZEOFREE® PURE 5841 silicon dioxide generates significantly lower levels (up to 35% less) of soap versus competitive filtration media.

## Your Advantage

- Many decades of silica experience and expertise
- Global manufacturing ensures supply chain security
- Quality excellence through GMPs/ISO:9001 and BRC certified facilities



## The Trusted and Reliable Global Source for Specialty Silica\*



\*This world map shows manufacturing facilities and technology centres for the product range described in this brochure only.

This information and any recommendations, technical or otherwise, are presented in good faith and believed to be correct as of the date prepared. Recipients of this information and recommendations must make their own determination as to its suitability for their purposes. In no event shall Evonik assume liability for damages or losses of any kind or nature that result from the use of or reliance upon this information and recommendations. EVONIK EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION AND RECOMMENDATIONS PROVIDED. Reference to any trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. Evonik reserves the right to make any changes to the information and/or recommendations at any time, without prior or subsequent notice.

### Europe/Middle-East/ Africa/Latin America

Evonik Resource Efficiency GmbH  
Business Line Silica  
Rodenbacher Chaussee 4  
63457 Hanau-Wolfgang  
Germany

phone +49 6181 59-12532  
fax +49 6181 59-712532  
ask-si@evonik.com

[www.evonik.com](http://www.evonik.com)  
[www.zeofree.com](http://www.zeofree.com)

### North America

Evonik Corporation  
Business Line Silica  
299 Jefferson Road  
Parsippany, NJ 07054-0677  
USA

phone +1 800 233-8052  
fax +1 973 929-8502  
asi-si-nafta@evonik.com

### Asia/Pacific

Evonik (SEA) Pte. Ltd.  
Business Line Silica  
3 International Business Park  
#07-18 Nordic European Centre  
Singapore 609927

phone +65 6809-6877  
fax +65 6809-6677  
ask-si-asia@evonik.com

More silica grades  
from Evonik see also  
[www.aerosil.com](http://www.aerosil.com)  
[www.sipernat.com](http://www.sipernat.com)