



Unifrax Introduces FlexCat™ - A New Custom High-Performance Specialty Catalyst Material

Backed by Clearlake Capital, Unifrax's new fiber-based catalysis media offers enhanced production for specialty chemical and industrial catalytic reactions, with applications in hydrogen gas and fuel cell production

BUFFALO, NY, April 21, 2021 – [Unifrax](#), the leading manufacturer of high-performance specialty materials, today introduced FlexCat™ by Unifrax, a new high-surface area flexible media designed to provide enhanced catalyst effectiveness with increased yield using fewer raw materials. For use in fuel cells, specialty gas production, chemical processing, air purification and other applications, FlexCat offers catalyzers and industrial partners better performance, considerable cost savings, and improved safety for employees.

A game-changing solution for specialty catalyst markets

With many industries currently relying on alumina pellets to drive catalytic reactions, specialty chemical companies often grapple with stalled reactions because of clogged materials, large upfront investments, and significant space requirements. They are also forced to contend with environmentally harmful emissions. To address these issues, Unifrax has designed a fibrous catalyst support solution that is 15 times lighter on average than the industry standard, while using significantly less precious metal catalysts and rare earth metals to drive an increase in yield while improving purity. This allows for increased output using existing equipment and enables a smaller reactor footprint for future designs. FlexCat can be incorporated into existing plant emission control systems to drive lower carbon footprints and allow customers to meet tougher EPA standards.

“FlexCat is a truly revolutionary offering as a very lightweight, customized product form that is extremely durable in the harsh conditions typically encountered in many reactors,” said Chad Cannan, Senior Vice President of Research and Development, Unifrax. “FlexCat provides our industry partners with the potential to save millions of dollars across their operations in material costs, capital investments, and improved quality from existing equipment. From cleaner emissions to meeting tougher EPA standards to increased purity, flow rates, and conversion speeds, the introduction of FlexCat is a true ESG game changer for the industry.”

FlexCat is also poised to impact the hydrogen economy. As the demand for hydrogen increases, FlexCat supports the growth of hydrogen production through better selectivity and increased yield using significantly less catalyst material. FlexCat technology drives greater adoption by utilizing smaller and more efficient units that span from fuel cells to consumer devices.

Fiber-based technology that delivers

Leveraging the effective surface area of Unifrax's unique fibrous material, FlexCat offers enhanced outputs by providing a more tortuous path for improved catalysis inside a reactor. FlexCat eliminates the need for any prewash or zeolite-coating process before applying catalyst metals. Testing to date has shown:

- Ability to use up to 80% less metal, including platinum group metals ("PGMs"), while obtaining the same conversion yield;
- Extreme durability to nearly 1,850°F (~1,000°C) with more consistent product purity;
- Enhanced conversion and selectivity of catalytic reactions, even after aging, allowing industrial plants better output with existing equipment; and
- Strong adhesion of PGMs and almost no loss of catalyst, even after thermal aging

FlexCat's lightweight fiber mat structure allows for safer installation and removal while limiting hazardous waste, which are important benefits for Unifrax's client's workforce and the safety of the environment.

FlexCat and Unifrax's deep technology portfolio

FlexCat is Unifrax's first step into industrial catalysis, building on the company's deep history of fiber-based technology and manufacturing. Unifrax has a track record of 75+ years developing and supplying engineered inorganic materials on a large scale to advanced industries worldwide, including electric vehicles, aerospace and chemical processing.

"Unifrax continues to pursue its mission to provide greener, cleaner, and safer solutions for our customers and partners. FlexCat is a revolutionary step forward for industrial catalysis that delivers on those three pillars," commented John Dandolph, President and CEO, Unifrax. "Unifrax has worked closely with petrochemical and renewable fuels partners throughout our company's history. As these industries look for new and innovative technologies to deliver cost-savings and efficiencies that current products can't offer today, products like FlexCat, along with our new vehicle emissions technology Eco-lytic™, deliver unique, game-changing solutions to catalysis industries overall. These products will have a transformational impact on safety, cost, and the environment in hundreds of industrial and chemical processes."

Customizable for individual partners, processes and specific reactions, FlexCat can be manufactured at scale today. Unifrax will be available at Hydrogen 2021 Digital Conference & Exhibition to discuss in more detail with interested parties. For more information on the event [visit this link](#).

Learn more about FlexCat at www.unifrax.com.

About Unifrax

Unifrax develops and manufactures high-performance specialty materials used in advanced applications, including high-temperature industrial insulation, electric vehicles, energy storage, filtration and fire protection, among many others. Unifrax products are designed with the ultimate goal of saving energy, reducing pollution and improving safety for people, buildings and equipment by delivering on our commitment to our customers of greener, cleaner, safer solutions for their application challenges. Unifrax has 37 manufacturing facilities operating in 12 countries and employs 2,700+ employees globally. More information is available at www.unifrax.com. For updates, follow us on [Twitter](#), [LinkedIn](#), and [Facebook](#).

About Clearlake

Founded in 2006, Clearlake Capital Group, L.P. is an investment firm operating integrated businesses across private equity, credit and other related strategies. With a sector-focused approach, the firm seeks to partner with experienced management teams by providing patient, long-term capital to dynamic businesses that can benefit from Clearlake's operational improvement approach, O.P.S.® The firm's core target sectors are industrials, technology and consumer. Clearlake currently has approximately \$35 billion of assets under management and its senior investment principals have led or co-led over 300 investments. The firm has offices in Santa Monica and Dallas. More information is available at www.clearlake.com and on Twitter [@ClearlakeCap](#).

###

Media Contacts:

For Unifrax:
Deborah L. Myers
Global Marketing Communication Director
dmyers@unifrax.com
716.812.4802

For Clearlake:
Jennifer Hurson
jhurson@lambert.com
845.507.0571