

Circular Economy



FÁBRICA CARIOCA DE CATALISADORES

Our products, services and projects that contribute to a circular economy.

Recently, the circular economy model is gaining space while the awareness on the importance of reducing the excessive exploration of natural resources and huge waste accumulation is increased. This model is based on waste and pollution elimination from the beginning, on the regeneration of natural systems and on the extended life cycle of products and materials by replacing the concept of end of useful life of the linear economy by new circular flows, in an integrated process.

Fábrica Carioca de Catalisadores is committed to applying the circular economy principles to its businesses and identifying solutions and opportunities to help its customers enhance the circularity of their processes while optimizing the resource use throughout the value chain, thus contributing to sustainable development.

THE CYCLUS CATALYST



This catalyst is designed for the chemical recycling of urban solid wastes (rubber, plastics, etc.) through one-shot pyrolysis processes. This process aims at transforming these residues into higher added-value products to enable their reinsertion into the value chain.

The **Cyclus** catalyst has a promoters-containing active phases multicomponent system that secure the selectivity to liquid products, minimizing gas formation, besides making it possible to obtain energy gains in the process.

In view of its high accessibility and pore structure, the **Cyclus** catalyst has proven its ability for converting useless tire chips into liquid fuels in the gasoline range, kerosene and diesel oil, and fuel gas.

E-CAT REUSE

As a catalyst manufacturer, since several years Fábrica Carioca de Catalisadores assists its customers in the equilibrium catalyst (E-CAT) management and is very experienced in reverse logistics systems aiming at providing the withdrawal of spent catalysts for reuse if applicable, either in their productive cycle or in other productive cycles, to keep the product in use and prolong its useful life.

E-CAT can be reused as flushing for loss replacement in residue fluidized catalytic cracking units (RFCCU), it being recommended for units where the feed is highly concentrated in Nickel and Vanadium among other contaminants.

Besides, equilibrium catalysts can also be reclaimed for other industrial applications in the replacement of conventional raw materials, reducing both their orientation towards landfills and the environmental impact caused by excessive resource exploitation.

Related Services



E-CAT
Withdrawal and availability /
Supply for use as **flushing**

ADVANCED PLASTICS RECYCLING

OUR PARTNERS



By developing projects and supporting partners in studies and tests to operate firmly in favor of a circular economy, Fábrica Carioca de Catalisadores adds to the development of advanced plastics recycling technologies.

One of the current projects is the Cooperation Agreement between Braskem, FCC S.A., SENAI CETIQT and EngePol (PEQ/COPPE/UFRJ) aiming at extending the efficiency of the pyrolysis technology, strengthening the quality of the products obtained from plastics advanced recycling. For this project, which counts on the financial support of the SENAI Innovation Platform, our aim is the development of catalysts for the transformation of plastics wastes into circular raw materials able to be reinserted into the productive chain, reducing the use of fossil derived natural resources and thus contributing for the elimination of wastes.

Additionally, Fábrica Carioca de Catalisadores supports the plastics chemical recycling projects of Valoren, a waste reclaimer.