

Catalysts News

Criterion Catalysts for Hydroprocessing of Lubricating Oils

Criterion Catalyst Company L.P. is a leading supplier of catalysts for lube oil hydroprocessing units. Our ongoing development of catalysts for refining processes, such as feed pretreatment for hydrocracking and fluid catalytic cracking units, also yields catalysts offering improvements in lube hydroprocessing.

Criterion has a long history of providing catalysts to lube refiners via both our parent firms. American Cyanamid's Chemical Products Division (now part of Cytec Industries) developed numerous hydro-treating catalysts for the refining industry which were very effective for lube hydro-processing. These included HDS-9 that can still be found in service today. The Royal Dutch/Shell Group

also developed catalysts effective in lubricating oil production, such as 424 and 454. Criterion 424 has been enormously effective for hydrofinishing and for pre-treatment of lube distillates. Criterion 454 has been used successfully for over 20 years in lube hydrocracking units around the world and can also be used for aromatic saturation.

In addition to offering catalysts and catalyst related technical services to the refining industry, Criterion now works with Shell Global Solutions to offer refiners the latest in process technology. Shell Global Solutions not only offers refining process technology licenses, but also customized engineering technical services that can support all aspects of a refiner's operations. Shell Global Solutions

is a leader in lubricating oil and wax refining technology, with technology offerings including hydrocracking, wax isomerization and conversion, hydrofinishing and hybrid technology for debottlenecking lubricating oil production facilities.

Criterion also maintains an alliance with Lyondell Licensing in which Criterion provides catalysts for Lyondell's Duotreat technology for the production of FDA oils and waxes.

Lyondell is a technology provider with a long history in both lube hydroprocessing operations and licensing.

Criterion personnel can discuss your refining needs with you, enlisting the aid of these technology providers as needed to assist you in reaching your refining goals.

Lube Production by Hydrocracking

Criterion continues to offer the time tested 454 for use in lube hydrocrackers producing high VI base oils.

Criterion also offers a non-fluorided catalyst, known as Lube 1, for lube hydrocracking. Lube 1 has demonstrated its activity and stability in recent commercial service.

Lube Oil Hydrofinishing –

Criterion catalysts are used worldwide for the hydrofinishing of lube oil. This includes the hydrofinishing of lube hydrocracker products, solvent extracted base oils and both straight run and solvent extracted naphthenic oils. Criterion's 411 and 424 have been and continue to be very effective in this application. Our break-

through catalyst, Century technology DN-190, is in use in this service and is particularly suited for demanding applications. The very successful DN-200 is now available. These catalysts are also very effective for pretreating lube oil fractions in preparation for further processing, such as the production of FDA quality oils and waxes. Criterion also offers catalysts for high severity finishing of hydrocracked and other severely treated lube oils.

Lube Hydrodewaxing and Wax Isomerization –

Criterion cooperates in supplying catalysts used by Shell Global Solutions in the technology areas of catalytic dewaxing and of isomerization/conversion of waxes to produce lubricants of exceptional quality.

Food Grade Oil and Wax Production –

Criterion's offerings include both high activity hydrotreating catalysts for the initial processing of the feedstocks for these materials, and, extremely high activity noble metal catalysts for essentially complete saturation of oils and waxes which is necessary to meet FDA specifications. Application of Criterion's improved catalysts have allowed white oil refiners to increase throughput, improve product quality, and significantly extend cycle length.

Criterion continues to introduce new, improved lube oil hydroprocessing catalysts and to offer Total Catalyst

Management with the assistance of the CRI Group of companies: Catalyst Recovery, Zeolyst International, CS Metals and Catalyst Technology.

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