

Catalyst & Technology

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News

Criterion / Zeolyst Hydrocracking Catalysts and Technical Services

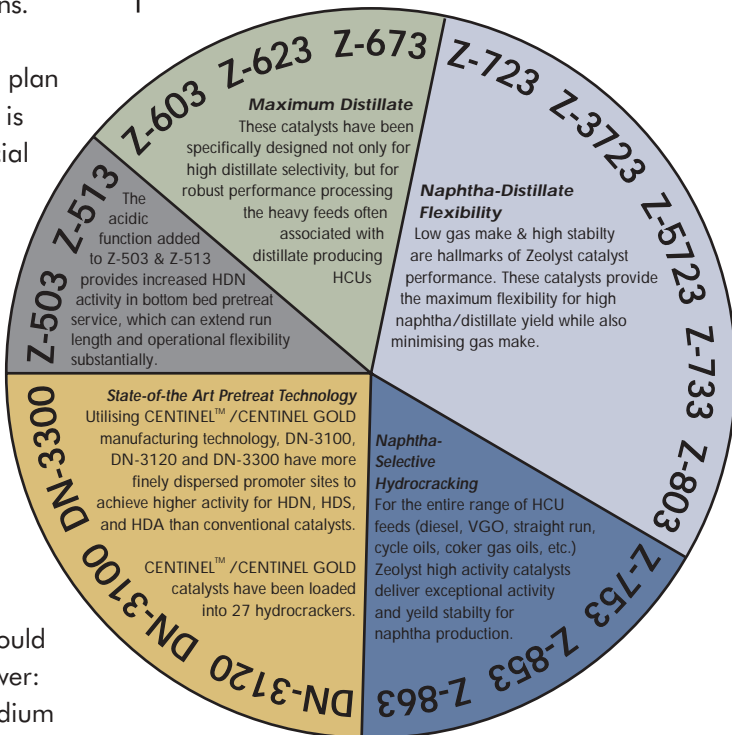
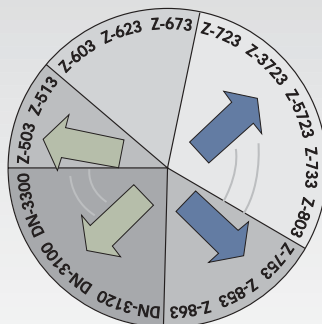
Dial-In the Catalyst for Your Needs

Customised Hydrocracker Loadings In Response to Customer Needs

Criterion and Zeolyst have one of the widest portfolios of hydrocracking catalysts in the industry. We take the time to get a complete understanding of the needs of each customer, and then design a customised catalyst loading to achieve the customer's goals. This customised loading can utilise stacked beds of catalysts as well as individual, customised catalyst formulations.

Our ability to prepare a catalyst loading plan specific to the individual customer needs is best illustrated by the following commercial example in which the catalyst package was modified for each of three operating cycles to build on the strengths of the previous loading. In the first cycle of operation, a stacked loading of Z-763 over Z-753 was used. Z-763 provided greater activity and tolerance in higher nitrogen slip environments while the Z-753 provided high naphtha yield and excellent naphtha quality. While this package exceeded previous cycle performance, we asked what further improvements would be profitable for the customer. The answer: higher naphtha selectivity. Z-723, a medium

activity, naphtha/distillate-selective catalyst was loaded for the next cycle to provide higher liquid yield. Its reduced activity was offset by loading our highest activity catalyst, Z-863, in the top bed with Z-763 loaded in between for activity grading. This loading increased naphtha yield by 10 vol% absolute while also increasing



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catalyst stability for an increase in cycle length of almost 200 days. For the third cycle, further increased profitability was driven by decreased hydrogen consumption. Therefore, we customised the formulation of Z-723 to reduce the hydrogen uptake while maintaining its high selectivity and stability.

On the pretreat side, this customer required high severity hydrotreating while also being heavily constrained by heat balance. Using our package of varying activity pretreat and bottom

bed acidic catalysts, we designed pretreat catalyst loadings which provided the required activity and matched cracking catalyst cycle lengths, thereby utilising catalyst value to its fullest.

This customer example demonstrates how we provide unique and individualized catalyst solutions based on the specific needs and situations of our customers. Please contact us so that we can work with you to develop the right solution to fit your needs.

For more details on the options and benefits to match your needs contact your Criterion Catalysts & Technologies representative and set up a meeting to explore the possibilities.



When you develop your next operation scenario, our teams will prepare customised solutions for you with Speed, Confidence, and Success

Important:

All information contained in this document is considered accurate at the time of the testing, based on the equipment, and specific conditions and other limitations during the testing process. It is being furnished upon the express condition that the user will make its own assessment to determine the accuracy and applicability for the user's particular purpose.

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