Low Sulfur Additive (LSA)

Fluid Catalytic Cracking (FCC) additive for reduced sulfur in gasoline product

BASF's premier FCC additive, LSA, helps refiners meet the low sulfur gasoline regulations required by the worldwide drive for improved air quality

Premium Technology

Low Sulfur Additive (LSA) targets gasoline volume expansion while reducing sulfur compounds in gasoline without octane loss. 90% of gasoline sulfur is derived from FCC gasoline making a low sulfur additive useful for meeting air quality sulfur requirements. FCC catalysts and additives work alongside feed hydrotreating and post-treating of cut-point adjustment to help refiners meet low sulfur specifications. LSA can be a cost-effective contributor to sulfur reduction in gasoline.

Maximum Results by Design

LSA demonstrated 35% reduction in sulfur gasoline across numerous tests. LSA in combination with other sulfur reduction processes – such as FCC Gasoline Hydrodesulfurization units – drives a unit to economically achieve very low sulfur specifications such as 10 ppm.

LSA is a range of products depending upon the specific requirements of the refinery and FCCU. BASF's expertise in sulfur reduction also aids refiners in selecting the most appropriate products for each individual application.

Combining the Benefits

Combining LSA with BASF's Distributed Matrix Structures (DMS)-based FCC catalysts diminishes or eliminates the reduced overall activity caused by the dilution effect of additives addition to FCC catalysts from other suppliers.

Packaging

- 55 gallon drums
- 1 ton super sacks
- 1 ton tote bins

Typical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>0.79-0.90 g cm⁻³</td>
</tr>
<tr>
<td>Particle size*</td>
<td></td>
</tr>
<tr>
<td>APS, μm</td>
<td>74-95</td>
</tr>
<tr>
<td>0-40, %</td>
<td>6-14</td>
</tr>
</tbody>
</table>
About Us

BASF’s Catalysts division is the world’s leading supplier of environmental and process catalysts. The group offers exceptional expertise in the development of technologies that protect the air we breathe, produce the fuels that power our world and ensure efficient production of a wide variety of chemicals, plastics and other products, including advanced battery materials. By leveraging our industry-leading R&D platforms, passion for innovation and deep knowledge of precious and base metals, BASF’s Catalysts division develops unique, proprietary solutions that drive customer success.

BASF - We create chemistry

Distributed Matrix Structures is a trademark of BASF.

Although all statements and information in this publication are believed to be accurate and reliable, they are presented gratis and for guidance only, and risks and liability for results obtained by use of the products or application of the suggestions described are assumed by the user. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH. Statements or suggestions concerning possible use of the products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should not assume that toxicity data and safety measures are indicated or that other measures may not be required. © 2015 BASF