



AdE-Sorb™ Product Benefits

Customer Requirement	Benefits
High desulfurization capacity of metal oxides at atmosphere pressure	✓ Capacity: up to 30 wt% S uptake
Excellent ultra deep desulfurization activity in the absence of H ₂	✓ Ultra deep S removal: from 1500 to 15 ppm ✓ No H ₂ needed
Stable start-of-run activity	✓ No sulfidation process ✓ Load and start the desulfurization immediately ✓ No H ₂ S generated from the desulfurization process ✓ No byproduct release
Materials density and packaging flexibility	✓ Extrudates bulk density: 0.8 g/ml
Handling and loading flexibility	✓ High mechanical strength and thermal stability ✓ Environmentally benign
Flexible delivery forms	✓ Extrudates with different shapes and diameters ✓ Packed and delivered in different forms
Various Sulfur removal applications	✓ Waste lube oil re-refineries ✓ Small scale refineries ✓ Fuel cell with ultra clean fuel ✓ Natural gas cleanup ✓ Bioethanol cleanup

AdE-Sorb™ Product Specifications

Chemical composition:	Nanowires based ULSD adsorbent
Physical properties:	
Shape	Extrudates
Color	Dark grey
Average size, mm	1.25-3 mm in diameter, 10 mm in length
Bulk density, g/ml	0.8
Crush strength, lb/mm	1.2
Desulfurization conditions:	
Temperature, °C	350-450
Reaction pressure, bar	1, atmospheric pressure
LHSV of liquid phase fuel, hr ⁻¹	1-2