



We Are Nano Pars We Invent The Method H



Our Portfolio:

Generation	Code	Application	Copper Ratio	Development year	
First	O1B1	Fluidized-Bed	High	2013	
Second	01A1	Fluidized-Bed	Low	2016	
Forth	01A4	Fluidized-Bed	Low	2019	
Forth	O1B4	Fluidized-Bed	High	2019	
First	O2A-HE	Fixed-Bed	Varies	2017	

Technical information:

Param	neter/Unit	O1B1	O1A1	O1A4	O1B4	O2A-HE
Surface	Area (m ² /g)	120-180	100-160	110-150	110-150	120-180
Al ₂ O	₃ (%wt)	Balance	Balance	Balance	Balance	Balance
Cu	(%wt)	9-13	3.5-4.2	4-4.5	10-13	4-10
Promo	ters(%wt)	Variant	Variant	Variant	Variant	Variant
Form		Semi spherical powder	Micro spherical powder	Micro spherical powder	Micro spherical powder	Hollow Cylinderical
Particle size (%wt)	<30(µm)	7	15	15	7	Length 5-7mm
	30-120(µm)	85	82	82	85	Outside D :5 mm
	>120 (µm)	8	3	3	8	Inside D : 2 mm





Nano Pars Technology:

Optimized catalyst promoters to achieve higher Ethylene and HCL efficiency and lower catalyst attrition .

Commercial Evaluation:

The annual production of EDC using Oxypars 3rd generation Fluidized bed is compared with the Foreign imported catalyst. The data is taken from the same production unit over the span of 6 years during which half of the period the reactor was working with OxyPars and the other half it was working with foreign imported catalyst¹.



1. Source of data is confidential



OXYPARS 4TH GENERATION FLUIDIZED BED CATALYST

IS MORE EFFICIENT MAINLY DUE TO:

- Multi-layer impregnation
- Micro-spherical particle shapes
- Optimized structure of its promoters



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More economical benefits

Excellent C2H4 efficiency to Pure EDC Improved HCl conversion rate Improved EDC purity Higher selectivity rate More productivity More efficiency Less by products Less by products

LOW COMBUSTION RATE RESULTING IN REDUCTION OF ETHYLENE CONSUMPTION

Optimal Physical Properties

- Low Stickiness
- Low Catalyst lost rate
- Low Attrition rate
- Low abrasion rate



References

"Our reactors have been charged with Oxypars catalyst 18 month ago and have been functioning since then. compared to foreign catalyst (imported) and under ideal working conditions, Oxypars has outperformed the Imported catalyst with higher conversion rate and selectivity, thus increasing our productivity and EDC purity. "

CEO of Abadan Petrochemical Company

"In a pilot test in which under identical conditions Oxypars catalyst have been studied with compared to reference catalyst (Foreign imported), the results indicate that the former has excellent performance and get certification by our unit. "

Research and Technology center of Ghadir Petrochemical Company





We are specialized in manufacturing Nano-particles and Nano catalysts specially for Refinery, Petroleum, Food and Pharmaceutical Industries. Our research oriented approach has enabled us to invent and patent an alternative method for producing Nano-particles, called Shoj method.

We are proud to receive numerous positive feedbacks from our clients which makes us confidant in our path toward shaping a sustainable future. Our Mission is to provide Sustainable Solutions for our clients based upon Research and Innovation.





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