HydroPars ™ Series

Hydrogenation Catalysts for Optimal Performance







HydroPars[™] HDS Series For fixed-bed atmospheric and vacuum residue Hydrodesulphurization units

Nano Pars Technology

• Neutralizing the catalyst support and increasing the resistance to contaminants. The result is an enhanced stability and extended cycles.



- Market Improved activity
- 💀 High selectivity

Our portfolio

Туре	H2A-Ex	H2B-Ex	H2B-HE	H2B-QL
Form	Extrudate	Extrudate	Holow Cylinderical	Quadrolobe
Size-Length(mm)	5-8	5-8	2-3	3-5
Size-Diameter (mm)	1.5-3.6	1.5-3.6		
Color	Blue	Blue	Green	Green
Surface Area (m_2/g)	120-200	120-200		
Al ₂ O ₃ %	Balance	Balance	Balance	Balance
Co%	3.2-4	-	-	-
Mo%	12-19	2-5	4-8	7-13
Ni %		2-7	1-3	1-3
Promoters	Variant	Variant	Variant	Variant



HydroPars™ Hydrocracking Series

For Hydrodesulphurization of low-severity feeds under Hydrogen-constrained conditions

Nano Pars Technology

• Neutralizing the catalyst support resulting in enhanced stability and a low yield decline



- * Higher selectivity
- Higher Hydrodesulphurization rate

Туре	H1A-Ex	H1A-Tr	H1B-Ex	H1B-Tr
Form	Extrude	Trilobed	Extrudate	Trilobed
Size-Diameter (mm)	1.5-2	1.5-2	1.5-2	1.5-2
Surface Area(m²/g)	90-240	90-240	90-240	90-240
Al2O3(%wt)	Balance	Balance	Balance	Balance
NiO(%wt)	2.5-5	2.5-5	2.5-5	2.5-5
CoO(%wt)	-	-	3-6	3-6
WO3(%wt)	19-30	19-30	19-30	19-30
Promoters(%wt)	<=]	<=]	<=]	<=1

Our portfolio





HydroPars ™Acetylene Hydrogenation Catalyst

New generation catalyst designed for Ethylene production

Nano ParsTechnology

• Minimum reactivity with Ethylene to maximize product yields





- Near-perfect selectivity
- 와 Ultra-high stability
- * Optimized activity

Our portfolio

Туре	H3C-Ex	H3B-Am	H3A-Sp
Form	Extrudate	Amorphous	spherical
Size	Variant	Variant	Variant
Color	Light brown	Dark brown	Light brown
Surface Area (m2/g)	100-200	<0.5	100-200
Al ₂ O ₃ (after1000C)(%wt)	Min 99	-	Min 99
SiO ₂ (%wt)	-	Min 99	-
Pd(%wt)	0.15 -0.35	0.15 -0.35	0.15 -0.35



HydroPars™ Raney Nickel Series

For various Hydrogenation processes

Nano Pars Technology

• Uniform particle size without formation of fines



- High activity
- * Enhanced selectivity
- * High degree of versatility
- * Ease of filtration
- * Excellent settling characteristics

Our portfolio

Type	HIA_EV		H/R_Su	
туре	114/\-LX	1140-30	114D-30	1147-30
Form	Extrude in H_2O	Slurry in H_2O	Slurry in H_2O	Slurry in H_2O
Color	Grey Extrude	Grey Powder	Grey Powder	Grey Powder
Density(g²/ cm³)	-	~2	~2	~ 2
Particle Size	30-150 µ	30-150 µ	30-120 µ	30-150 µ
Nickel(%wt)	92-95	92-97	92-95	92-95
Alumina(%wt)	Max7	Max7	Max7	Max 7
Molybdenum(%wt)	max 0.2	max 0.2	max 0.2	max 0.2
PH of supernatant water	11±1	11±1	11±1	11±1





References

 "We verify the high performance of HydroPars ™ Acetylene Hydrogenation catalyst which was used in our Acetylene converter reactor of the OxyChlorination unit."





Masoud Jebraeili – CEO of Abadan Petrochemical Company -2018

● "We certify the Mesoporous structure of the HydroPars™ Series ."







References

● "HydroPars [™] was used in our Isomaltulose Hydrogenation reactor . We verify its optimal function and high conversion rate."



• "We verify the quality of HydroPars ™ (Alumina-Nickel) catalyst"





We are Nano Pars We Invent the Method

Nano Pars is specialized in manufacturing Nano-particles and Nano catalysts specifically for Refining, Petroleum, Food and Pharmaceutical Industries. The company is launched as a research project in 2007 with the aim of exploring the possibilities of domestic production of petrochemical catalysts, joining scholars from different fields. After 5 years the research group succeeded in patenting an alternative method of producing Nano particles. since then, Nano Pars expanded its operations both as a producer of catalysts and provider of technical and productivity based solutions. The company is a sole manufacturer of significant number of catalysts including Hydrogenation, Dehydrogenation, Oxychlorination, Isomeration, Reduction, Guards and

Gauze for Iranian market.

Overview of Our Products			
Catalysts			
HydroPars ™	More information in this catalogue		
DehydroPars ™			
OxyPars ™			
GuardPars ™			
GauzePars ™			
RedPars ™			
lsoPars ™			
Supports			

SupPars ™

8

