

Denstone® deltaP® Support Media

Reshaping How You Think About Support Media

Denstone® deltaP® is the revolutionary bed support media designed by Saint-Gobain NorPro to provide added value over traditional support balls in fixed bed catalyst applications for the hydrocarbon processing industry.

Denstone deltaP shaped support media is engineered so that only two layers of support media are used. This can decrease fill costs, lower unit pressure drop, simplify vessel loading and reduce the total volume of support media, allowing you to increase capacity by adding more adsorbent or catalyst to your vessel.

Improve Performance

Only two layers of Denstone® deltaP® support media are needed to retain even the smallest catalyst sizes, versus as many as four layers of support balls. This can free up valuable space for more catalyst to boost reactor performance.

- A 100 mm deep layer of Denstone deltaP size P1 media is intended to be layered directly beneath the catalyst, replacing layers of costly small support balls.
- Denstone deltaP size P2 media typically replaces the remaining layers of larger diameter support balls.
- Denstone deltaP size P1.4 media is recommended as an alternative to size P2 for vessels with narrower filling and dump ports.

Lower Pressure Drop

The unique engineered shape of Denstone® deltaP® media improves your operational performance by reducing pressure drop. On average there is a 50% pressure drop decrease across the support media when utilizing Denstone deltaP media vs. traditional support balls.



To see how pressure drop compares, visit the

«**Pressure Drop Estimator**» on our website.

Saint-Gobain NorPro

DENSTONE® deltaP® Support Media



Traditional
Spherical
Media

Denstone®
deltaP® Shaped
Media



Typical support media loading configuration (not to scale)

Physical Properties

Size	Typical Diameter		Crush Strength*			Bulk Density**	
	(width, height)						
	(in)	(mm)	(lb)	(kg)	(n)	kg/m ³	lb/ft ³
P1	0.45	11.5	500	227	2224	1170	73
P1.4	0.69	17.4	750	340	3336	1170	73
P2	1.22	31.0	1500	680	6672	1120	70

*Crush strength is the average of the strength in the axial and radial orientations.

**Average bulk density will vary based on manufacturing location.

Chemical Properties

	min %	max %
SiO ₂	67.0	77.0
Al ₂ O ₃	18.0	26.0
Fe ₂ O ₃	-	1.7
TiO ₂	-	1.5
CaO	-	1.0
MgO	0	1.0
Na ₂ O	0	2.0
K ₂ O	-	6.0
Al ₂ O ₃ + SiO ₂	90.0	96.0

Other Properties

Leachable Iron	≤ 0.1%
Water Absorption	< 6.0%
Max Operating Temperature	1000°C



Testing Confirms No Migration Effect

Extensive testing proves that Denstone® deltaP® support media effectively retains catalyst particles with minimal migration into the support media.

Laboratory simulations confirm that Denstone® deltaP® P1 media, with a typical diameter of 11.5mm, supports a bed of 1.6mm catalyst with no migration into the support media layer. Only one additional bottom layer of Denstone deltaP P2 media is required.



Denstone® deltaP® Support Media Migration Testing Video

Ask about our video on Denstone® deltaP® support media on «**Performance Migration Testing**» or visit our website.

Start improving your overall operating performance and bottom line results today with Denstone® deltaP® support media, the newest technological breakthrough from the name you've trusted for over 70 years.

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