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رایمون سرام پارس (آر سی پی)

# Datasheet for Ceramic Random Packing



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## Ceramic Ball

Size (inch/mm)		Specific surface (m <sup>2</sup> /m <sup>3</sup> )	Void volume (m <sup>3</sup> /m <sup>3</sup> )	Bulk number (n/m <sup>3</sup> )	Bulk density (kg/m <sup>3</sup> )
1/8"	2 - 4	720	0.44	8.000.000	1.400
1/4"	5 - 7	420	0.44	4.750.000	1.400
3/8"	9 - 11	390	0.44	1.140.000	1.400
1/2"	11 - 13	320	0.45	580.000	1.400
5/8"	14 - 17	230	0.45	330.000	1.400
3/4"	18 - 21	170	0.45	142.000	1.400
1"	23 - 27	130	0.45	71.000	1.400
1 1/4"	30 - 34	110	0.46	35.000	1.350
1 1/2"	35 - 40	90	0.47	19.200	1.350
2"	48 - 56	70	0.47	8.000	1.300

Chemical composition of Ceramic Ball:

SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>	CaO+MgO	K <sub>2</sub> O+Na <sub>2</sub> O
71±2%	21±2%	<0.7%	<0.3%	0.2-0.3%	2.5-3.5%

Physical properties of Ceramic Ball

Index	Value
Particle Density	2.30-2.40 (gr/cm <sup>3</sup> )
Water Absorption	Max 0.3%
Acid Resistance	99%
Porosity	Max 0.6%
Hardness	6.5-7 mohs
Operating Temperature	1000 °c
Compressive Strength	400 (N/mm <sup>2</sup> )





## Ceramic Raschig Rings

Size (inch/mm)	D*H*δ mm	Specific surface (m <sup>2</sup> /m <sup>3</sup> )	Void volume (m <sup>3</sup> /m <sup>3</sup> )	Bulk number (n/m <sup>3</sup> )	Bulk density (kg/m <sup>3</sup> )	Dry packing (factorm-1)	
	Φ10	10*10*2	440	0.70	720000	700	1280
	Φ15	15*15*2	330	0.70	250000	690	960
1"	Φ25	25*25*3.5	190	0.78	50000	680	400
	Φ35	35*35*4.5	150	0.76	18500	650	320
1.5"	Φ40	40*40*5	126	0.75	13200	630	305
2"	Φ50	50*50*5.5	93	0.81	6400	600	177
3"	Φ80	80*80*9.5	90	0.68	1950	500	234
4"	Φ100	100*100*10	70	0.70	1000	700	172
6"	Φ150	150*150*15	50	0.68	295	790	142

Chemical composition of Ceramic Raschig rings:

SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>	CaO+MgO	K <sub>2</sub> O+Na <sub>2</sub> O
71±2%	21±2%	<0.7%	<0.3%	0.2-0.3%	2.5-3.5%

Physical properties of Ceramic Raschig rings:

Index	Value
Particle Density	2.30-2.40 (gr/cm <sup>3</sup> )
Water Absorption	Max 0.3%
Acid Resistance	99%
Porosity	Max 0.6%
Hardness	6.5-7 mohs
Operating Temperature	1000 °c
Compressive Strength	400 (N/mm <sup>2</sup> )



## Ceramic Cross Partition

Size (inch/mm)		D*H* $\delta$ mm	Specific surface ( $m^2/m^3$ )	Void volume ( $m^3/m^3$ )	Bulk number ( $n/m^3$ )	Bulk density ( $kg/m^3$ )
1"	$\Phi 25$	25*25*3.5	300	0.50	50000	680
1.5"	$\Phi 40$	40*40*5	295	0.50	13200	630
2"	$\Phi 50$	50*50*5.5	145	0.50	6400	600
6"	$\Phi 150$	150*150*15	60	0.58	295	980

Chemical composition of Ceramic Cross Partition Packing:

SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>	CaO+MgO	K <sub>2</sub> O+Na <sub>2</sub> O
71 $\pm$ 2%	21 $\pm$ 2%	<0.7%	<0.3%	0.2-0.3%	2.5-3.5%

Physical properties of Ceramic Cross Partition Packing:

Index	Value
Particle Density	2.30-2.40 ( $gr/cm^3$ )
Water Absorption	Max 0.3%
Acid Resistance	99%
Porosity	Max 0.6%
Hardness	6.5-7 mohs
Operating Temperature	1000 °c
Compressive Strength	400 ( $N/mm^2$ )





## Ceramic Pall Rings

Size (inch/mm)		D*H* $\delta$ mm	Specific surface ( $m^2/m^3$ )	Void volume ( $m^3/m^3$ )	Bulk number ( $n/m^3$ )	Bulk density ( $kg/m^3$ )
1"	$\Phi 25$	25*25*3.5	240	0.75	50000	680
2"	$\Phi 50$	50*50*5.5	120	0.78	6400	600
3"	$\Phi 80$	80*80*9.5	80	0.79	1950	500

Chemical composition of Ceramic Pall rings:

SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>	CaO+MgO	K <sub>2</sub> O+Na <sub>2</sub> O
71 $\pm$ 2%	21 $\pm$ 2%	<0.7%	<0.3%	0.2-0.3%	2.5-3.5%

Physical properties of Ceramic Pall rings:

Index	Value
Particle Density	2.30-2.40 ( $gr/cm^3$ )
Water Absorption	Max 0.3%
Acid Resistance	99%
Porosity	Max 0.6%
Hardness	6.5-7 mohs
Operating Temperature	1000 °c
Compressive Strength	400 ( $N/mm^2$ )



## Ceramic Saddle

Size (inch)	Specific surface (m <sup>2</sup> /m <sup>3</sup> )	Void volume (m <sup>3</sup> /m <sup>3</sup> )	Bulk number (n/m <sup>3</sup> )	Bulk density (kg/m <sup>3</sup> )
0.75"	335	0.73	199000	690
1"	256	0.73	75900	680
1.5"	195	0.74	23800	630
2"	118	0.75	6400	600
3"	68	0.75	1950	500

Chemical composition of Ceramic Saddle:

SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>	CaO+MgO	K <sub>2</sub> O+Na <sub>2</sub> O
71±2%	21±2%	<0.7%	<0.3%	0.2-0.3%	2.5-3.5%

Physical properties of Ceramic Saddle:

Index	Value
Particle Density	2.30-2.40 (gr/cm <sup>3</sup> )
Water Absorption	Max 0.3%
Acid Resistance	99%
Porosity	Max 0.6%
Hardness	6.5-7 mohs
Operating Temperature	1000 °c
Compressive Strength	400 (N/mm <sup>2</sup> )





## Ceramic Honey Comb

Size (mm)	Specific surface (m <sup>2</sup> /m <sup>3</sup> )	Void volume (m <sup>3</sup> /m <sup>3</sup> )	Bulk number (n/m <sup>3</sup> )	Bulk density (kg/m <sup>3</sup> )
25*40*15	280	0.70	48000	720

Chemical composition of Ceramic Honey Comb:

SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>	CaO+MgO	K <sub>2</sub> O+Na <sub>2</sub> O
71±2%	21±2%	<0.7%	<0.3%	0.2-0.3%	2.5-3.5%

Physical properties of Ceramic Honey comb:

Index	Value
Particle Density	2.30-2.40 (gr/cm <sup>3</sup> )
Water Absorption	Max 0.3%
Acid Resistance	99%
Porosity	Max 0.6%
Hardness	6.5-7 mohs
Operating Temperature	1000 °c
Compressive Strength	400 (N/mm <sup>2</sup> )

