

## ZEOLUM® Series

Crystal structure	Series	Cation	Pore Size	Form	Type	Size*	Standard Packing			Main application
							Flexible Container	200L Drum	40L Drum	
 <b>A-TYPE</b>	A-3	K <sup>+</sup>	3 Å	Bead		4 – 8 mesh	–	150 kg	30 kg	<ul style="list-style-type: none"> <li>• Drying of various solvents at chemical plants</li> <li>• Prevention of cloudiness in multi-layer glass</li> <li>• Bio-ethanol dehydration</li> </ul>
						8 – 10 mesh				
						9 – 14 mesh				
						814				
						585				
				20 – 32 mesh	Cardboard (25kg)					
	Pellet	CGS	1.5 mmφ 3 mmφ	500 kg	125 kg	20 kg	<ul style="list-style-type: none"> <li>• Drying cracking gas</li> <li>• Drying of various solvents at chemical plants</li> </ul>			
	Powder		100 mesh ↓	–	–	20 kg	<ul style="list-style-type: none"> <li>• Removal of trace moisture in polymers</li> <li>• Foam inhibitor for materials such as urethane sealing</li> </ul>			
	A-4	Na <sup>+</sup>	4 Å	Bead		4 – 8 mesh	–	150 kg	30 kg	<ul style="list-style-type: none"> <li>• Drying of various solvents at chemical plants</li> </ul>
						8 – 10 mesh				
						9 – 14 mesh				
						14 – 20 mesh				
Pellet		1.5 mmφ	500 kg	125 kg	25 kg	<ul style="list-style-type: none"> <li>• Drying of various solvents at chemical plants</li> </ul>				
Powder		100 mesh ↓	–	–	18 kg	<ul style="list-style-type: none"> <li>• Brake pad</li> <li>• Cosmetics</li> </ul>				
						LPH	100 mesh ↓	<ul style="list-style-type: none"> <li>• Foam inhibitor for materials such as urethane sealing</li> <li>• Removal of trace moisture in polymers</li> </ul>		
A-5	Ca <sup>2+</sup>	5 Å	Bead		4 – 8 mesh	–	150 kg	20 kg	<ul style="list-style-type: none"> <li>• Drying of SF<sub>6</sub></li> </ul>	
			Pellet	SA-500A	1.5 mmφ	500 kg	125 kg	20 kg	<ul style="list-style-type: none"> <li>• O<sub>2</sub>-PSA, H<sub>2</sub>-PSA</li> </ul>	
			Powder		100 mesh	–	–	20 kg	<ul style="list-style-type: none"> <li>• Removal of moisture in polymerization</li> </ul>	
 <b>X-TYPE</b>	F-9	Na <sup>+</sup>	9 Å	Bead		4 – 8 mesh	–	140 kg	20 kg	<ul style="list-style-type: none"> <li>• Adsorption of gases generated during semiconductor manufacturing processes</li> <li>• Drying of SF<sub>6</sub></li> </ul>
						8 – 10 mesh				
						9 – 14 mesh				
						14 – 20 mesh				
	Pellet	HA	1.5 mmφ	500 kg	125 kg	20 kg	<ul style="list-style-type: none"> <li>• Drying, purification, and cryogenic separation in various chemical fields</li> </ul>			
Powder		100 mesh	–	–	15 kg	<ul style="list-style-type: none"> <li>• Adsorption of impurities in polymerization processes</li> </ul>				
		Ca <sup>2+</sup>		Pellet	SA-600A	1.5 mmφ	500 kg	125 kg	20 kg	<ul style="list-style-type: none"> <li>• O<sub>2</sub>-PSA, H<sub>2</sub>-PSA</li> </ul>
 <b>LSX-TYPE</b>	NSA-700	Li <sup>+</sup>	9 Å	Pellet		1.2 mmφ	500 kg	120 kg	20 kg	<ul style="list-style-type: none"> <li>• O<sub>2</sub>-PSA</li> </ul>

\* 4 – 8 mesh (4.75 – 2.36 mm), 8 – 10 mesh (2.36 – 1.40 mm), 9 – 14 mesh (2.00 – 1.18 mm), 12 – 20 mesh (1.40 – 0.85 mm), 14 – 20 mesh (1.18 – 0.85 mm), 20 – 32 mesh (0.85 – 0.50 mm), 100 mesh (0.15 mm)

\*\* Package sizes subject to change without notice.

## HSZ® Pellet Series

Crystal structure	Series	Pore Size	Form	Cation	Type	SiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> ratio (mol/mol)	Binder
<b>BETA</b>	HSZ-900	6.5 Å	1.5 mmφ Pellet	H <sup>+</sup>	931HOD1A	27	Alumina
					940HOD1C	40	Clay
					940HOD1A	40	Alumina
<b>ZSM-5</b>	HSZ-800	5.8 Å	1.5 mmφ Pellet	H <sup>+</sup>	822HOD1A	23	Alumina
					840HOD1A	40	Alumina
					891HOD1A	1,500	Alumina
					891HOD1C	1,500	Clay
<b>Ferrierite</b>	HSZ-700	4.8 Å	1.5 mmφ Pellet	K <sup>+</sup>	720KOD1C	18	Clay
<b>Mordenite</b>	HSZ-600	7 Å	1.5 mmφ Pellet	H <sup>+</sup>	640HOD1A	18	Alumina
				Na <sup>+</sup>	642NAD1C	18	Clay
				H <sup>+</sup>	690HOD1A	240	Alumina
<b>L-TYPE</b>	HSZ-500	8 Å	1.2 mmφ Pellet	K <sup>+</sup>	500KODAC	6.1	Clay
<b>Y-TYPE</b>	HSZ-300	9 Å	1.5 mmφ Pellet	Na <sup>+</sup>	320NAD1C	5.5	Clay
					320HOD1C	5.5	Clay
				H <sup>+</sup>	330HUD1A	6	Alumina
					330HUD1C	6	Clay
					385HUD1C	100	Clay

\* Please don't hesitate to ask if you are interested in another type.

**•Powder**

Crystal structure	Series	Pore Size	Cation	Type	SiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> ratio (mol/mol)	BET surface Area (m <sup>2</sup> /g)	Crystal Size (μm)	Particle Size (μm)	NH <sub>3</sub> -TPD (mmol/g)
 <b>BETA</b>	HSZ-900	6.5 Å	NH <sub>4</sub> <sup>+</sup> (template)	920NHA	18	580	0.02 - 0.04	7	—
				930NHA	27	590	0.04	5	—
				940NHA	40	580	0.5 - 1	4	—
			H <sup>+</sup>	931HOA	28	510	0.5	3	1.2
				940HOA	40	530	0.5 - 1	4	0.5
				941HOA	40	520	0.5 - 1	4	0.8
				980HOA	500	500	0.5 - 1	2.5	—
 <b>ZSM-5</b>	HSZ-800	5.8 Å	NH <sub>4</sub> <sup>+</sup>	820NHA	23	340	0.1 × 0.5	5	—
				840NHA	40	330	2 × 4	10	—
			H <sup>+</sup>	822HOA	24	330	0.1 × 0.5	5	1.8
				840HOA	40	330	2 × 4	10	1.3
				890HOA	1,500	310	2 × 5	10	—
				891HOA	1,500	310	2 × 5	4	—
 <b>Ferrierite</b>	HSZ-700	4.8 Å	NH <sub>4</sub> <sup>+</sup>	720NHA	18	260	≤ 1	6	2.6
			K <sup>+</sup>	720KOA	18	170	≤ 1	20	—
 <b>Mordenite</b>	HSZ-600	7 Å	Na <sup>+</sup>	642NAA	18	—	0.1 × 0.5	12	—
			H <sup>+</sup>	620HOA	15	400	1 - 3	18	2.0
				640HOA	18	380	0.1 × 0.5	12	0.7
				660HOA	30	400	0.1 × 0.5	12	1.2
				690HOA	240	450	0.1 × 0.5	12	0.2
 <b>L-TYPE</b>	HSZ-500	8 Å	K <sup>+</sup>	500KOA	6.1	290	0.4	4	—
 <b>Y-TYPE</b>	HSZ-300	9 Å	NH <sub>4</sub> <sup>+</sup>	341NHA	7	700	0.7 - 1.0	3 - 5	2.0
				371NHA	25	670	0.7 - 1.0	2 - 3	—
			Na <sup>+</sup>	320NAA	5.5	660	0.2 - 0.4	6 - 8	—
			H <sup>+</sup>	320HOA	5.5	550	0.2 - 0.4	6 - 8	0.7
				330HUA	6	550	0.2 - 0.4	6 - 8	1.0
				331HSA	6	600	0.7 - 1.0	2 - 3	2.0
				350HUA	10	650	0.2 - 0.4	5 - 7	1.1
				360HUA	15	550	0.2 - 0.4	5 - 7	0.1
				385HUA	100	600	0.7 - 1.0	2 - 3	—
				390HUA	500	630	0.2 - 0.4	5 - 7	< 0.1

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