



## Molecular Sieves ZSM-5

ZSM-5 is a silicon-rich zeolite and used as a product-selective catalysis. The structure of ZSM-5 consists of pentasil units linked together into chains, which together form layers.

### 1. Composition

(SiO <sub>2</sub> / Al <sub>2</sub> O <sub>3</sub> )=38	(SiO <sub>2</sub> / Al <sub>2</sub> O <sub>3</sub> )=50	(SiO <sub>2</sub> / Al <sub>2</sub> O <sub>3</sub> )=25
Na <sub>2</sub> O 2.8-2.9%	Na <sub>2</sub> O 2.1-2.3%	Na <sub>2</sub> O 4.0-4.5%
Al <sub>2</sub> O <sub>3</sub> 3.8-3.9%	Al <sub>2</sub> O <sub>3</sub> 2.3-2.5%	Al <sub>2</sub> O <sub>3</sub> 5.0-5.5%
SiO <sub>2</sub> 85-86%	SiO <sub>2</sub> 86-87%	SiO <sub>2</sub> 80-85%

### 2. Absorbability (wt%)

(SiO <sub>2</sub> / Al <sub>2</sub> O <sub>3</sub> ) ratio	Hexane	Cyclohexane	Water
(SiO <sub>2</sub> / Al <sub>2</sub> O <sub>3</sub> )=38	9.5-10.5%	1.9-2.3%	9.0-10%
(SiO <sub>2</sub> / Al <sub>2</sub> O <sub>3</sub> )=50	9.0-10%	1.5-2.0%	7.0-8.0%
(SiO <sub>2</sub> / Al <sub>2</sub> O <sub>3</sub> )=25	9.5-10.5%	2.05-2.5%	11-12%

### 3. Structure

- Relative Crystallinity: Na Type ≥85% H Type ≥95%
- Pore Diameter: 5 Angstrom
- Density: 1.81 (isooctane)
- 1200<sup>o</sup>C Thermal Stability: stable
- 700<sup>o</sup>C Steamed Stability: stable

### Storage

Keep container sealed at all times to prevent exposure to air moisture during storage. Working pH is at 5-11. Regenerate if stored for a long time. Regenerating temperature shall not exceed 600 °C.