TECHNICAL DATA SHEET

SAPO-34 Molecular Sieve

Silicoaluminophosphate molecular sieve · chabazite-like microporous structure · Type B: BET ~450 m²/g, D50 0.8–2.3 µm · Type A discontinued



ACS Material SAPO-34 — Representative Packaging

ACS Material SAPO-34 Molecular Sieve, Type B, 100 g (MSSB3421). Image shown for reference; label and packaging may vary.

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SECTION I

Product Overview

The crystal structure of SAPO-34, a microporous silicoaluminophosphate molecular sieve, is similar to that of chabazite and has a special water-absorbing capacity and Brønsted acidity. It can be used as an adsorbent, catalyst and catalyst support in applications such as low-carbon olefin transfer, automotive gas purification and MTO reactions.

ACS Material SAPO-34 is calcined and ready to use directly. Type B is currently available in 100 g and 1 kg packages. Type A has been discontinued; its specifications and typical SEM images are retained in this data sheet for reference.

SECTION II

Core Advantages

- **Chabazite-like** — microporous crystal structure.
- **Acidity** — Brønsted acid sites.
- **Water adsorption** — special water-absorbing capacity.
- **Ready to use** — calcined; calcination temperature 550 °C.

SECTION III

Specifications

Technical data

Specifications	
Product name	SAPO-34 Molecular Sieve
Brand	ACS Material
Linear formula	$(SiO_2)x(Al_2O_3)y(P_2O_5)z$
Supplied	Calcined, ready to use directly
Calcination temperature	550 °C
Preparation method	Solvothermal Method

Characterizations — Type B

Characterizations	Type B
Appearance	Powder
BET surface area (m^2/g)	~450
D50 particle size (μm)	0.8–2.3
SiO_2 (wt%)	~4–7
Al_2O_3 (wt%)	~40–46

Selected composition parameters, expressed as oxides; not a complete compositional analysis.

Characterizations — Type A (Discontinued)

Characterizations	Type A (Discontinued)
Appearance	White powder
Average crystal size (μm)	~2
D50 particle size (μm)	<5
Bulk density (g/mL)	0.463
Tap density (g/mL)	0.826
BET surface area (m^2/g)	≥550
Pore volume (cm^3/g)	≥0.27
SiO_2/Al_2O_3 molar ratio	~0.5
SiO_2 (wt%)	~10
Al_2O_3 (wt%)	~42
Na_2O (wt%)	≤0.1
Cation	H^+
Purity (%)	>99

Selected composition parameters, expressed as oxides; not a complete compositional analysis. Type A has been discontinued; its specifications are kept here for reference.

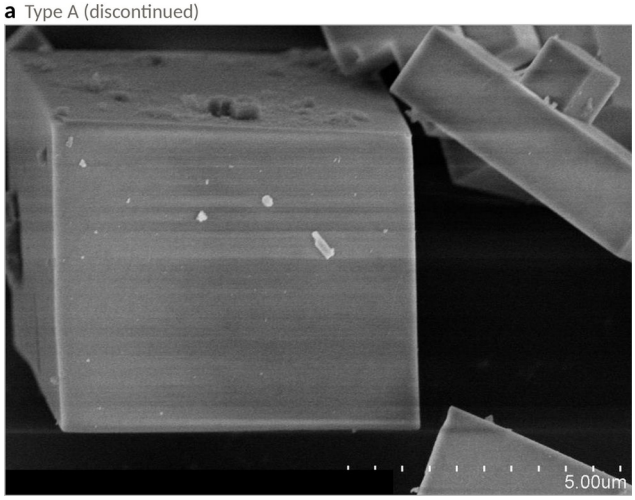
Ordering information

Type	Package	Product No.
Type B	100 g	MSSB3421
Type B	1 kg	MSSB3431

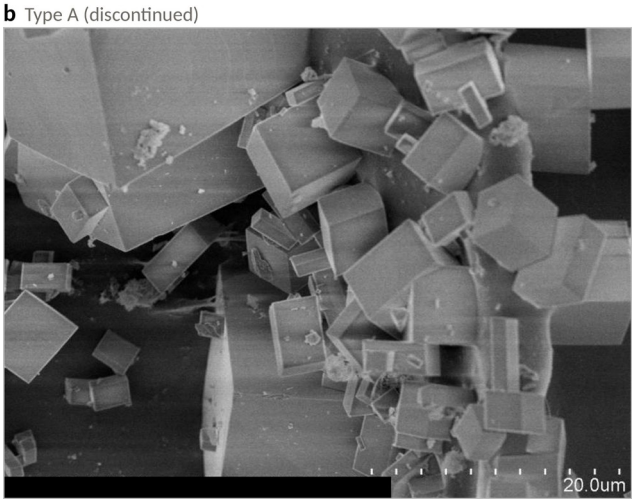
Please contact us at contact@acsmaterial.com for a quote if your order quantity is larger than 5 kg.

Typical data

a Type A (discontinued)



b Type A (discontinued)



a SEM image of ACS Material SAPO-34, Type A (Discontinued), ×11.0k (scale bar 5.00 µm). **b** SEM image, ×2.50k (scale bar 20.0 µm).

SECTION IV

Applications

1) Catalyst.

2) Adsorbent.

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