TECHNICAL DATA SHEET

Beta Zeolite

Powder · H^+ form · SiO_2/Al_2O_3 molar ratio ~40 · pore diameter 0.55–0.70 nm · SSA ~500 m^2/g · hydrothermal method · calcined, ready to use



ACS Material Beta Zeolite — Representative Packaging

ACS Material Beta Zeolite, Powder, 20 g (MSZB0101). Image shown for reference; label and packaging may vary.

CONTENTS

01 Product Overview
02 Core Advantages
03 Specifications
04 Applications

ACS MATERIAL, LLC

959 E Walnut St., Suite 100
Pasadena, CA 91106, USA

Phone +1 (866) 227-0656
Fax +1 (781) 518-0284

contact@acsmaterial.com

Revision Date **10/29/2026**

SECTION I

Product Overview

Beta zeolite (CAS No. 1318-02-1) is one of the first zeolites discovered and was named prior to Mobil's use of the "ZSM" naming sequence. It has a complex structure consisting of an intergrowth of two distinct structures, polymorph A and polymorph B. Both polymorphs contain a three-dimensional network of 12-ring pores. Each polymorph grows as a two-dimensional sheet, and the sheets within beta zeolite randomly alternate between the two polymorphs. The intergrowth has little effect on the pores in two of the dimensions, but in the faulting direction the pores are tortuous rather than blocked.

The current ~40 grade of ACS Material Beta Zeolite is a white powder in the H^+ form, prepared by the hydrothermal method and supplied calcined and ready to use directly. It has a SiO_2/Al_2O_3 molar ratio of about 40, a pore diameter of 0.55–0.70 nm, a specific surface area of about 500 m^2/g, Na_2O <0.1 wt% and a crystallinity >95%. Typical SEM images are included in this data sheet.

SECTION II

Core Advantages

- **3D 12-ring pores** — intergrown polymorph A/B framework.
- **Molar ratio** — ~40 SiO_2/Al_2O_3.
- **Low sodium** — H^+ form; Na_2O <0.1 wt%.
- **High surface area** — SSA ~500 m^2/g.
- **High crystallinity** — >95%.
- **Ready to use** — calcined; hydrothermal method.

SECTION III

Specifications

Technical data — current ~40 grade

Specifications	
Product name	Beta Zeolite, Powder
Brand	ACS Material
Synonyms	Zeolite beta, H-Beta zeolite, BEA-type zeolite
CAS No.	1318-02-1
Framework	Intergrowth of polymorph A and B; 3D network of 12-ring pores
Preparation method	Hydrothermal method
Supplied	Calcined, ready to use directly
Appearance	White powder
Form	H^+
Pore diameter	0.55–0.70 nm
SiO_2/Al_2O_3 (molar ratio)	~40
Specific surface area (SSA)	~500 m^2/g
Na_2O (wt%)	<0.1
Crystallinity	>95%

Ordering information

Package	Product No.
20 g	MSZB0101
100 g	MSZB0102
1 kg	MSZB0103

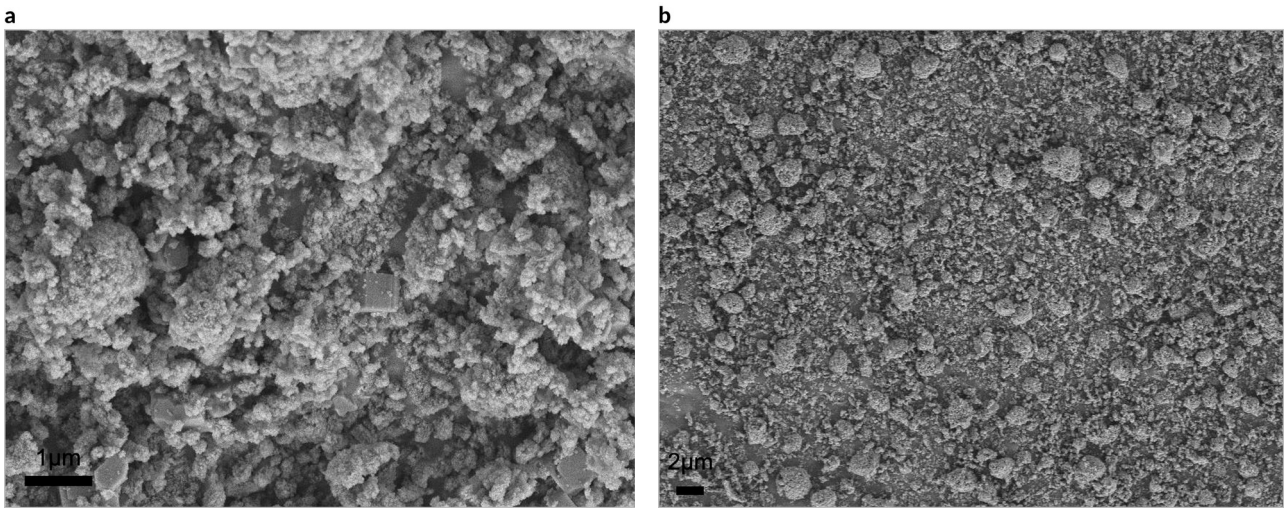
This product is calcined and ready to use directly. For larger quantities please contact us at contact@acsmaterial.com.

Discontinued grade — SiO_2/Al_2O_3 ~150 (specifications kept for reference)

Product No.	Pack	SiO_2/Al_2O_3 (molar ratio)	Pore diameter	SSA	Na_2O (wt%)	Crystallinity	Form
MSZB0201 (Discontinued)	20 g	~150	0.55–0.70 nm	~500 m^2/g	<0.1	>95%	H^+
MSZB0202 (Discontinued)	100 g	~150	0.55–0.70 nm	~500 m^2/g	<0.1	>95%	H^+
MSZB0203 (Discontinued)	1 kg	~150	0.55–0.70 nm	~500 m^2/g	<0.1	>95%	H^+

MSZB0201, MSZB0202 and MSZB0203 have been discontinued; their specifications are kept for reference.

Typical data



a SEM image of ACS Material Beta Zeolite powder, MR ~40 (scale bar 1 µm). **b** SEM image (scale bar 2 µm).

SECTION IV

Applications

Beta zeolite is used as a catalyst and as an adsorbent.

Beta zeolites are in wide use in the reduction of VOC, N_2O and NO_x, industrial gas purification and automotive emission control. They are also used for upgrading fuel, producing petrochemical intermediates and processing various chemicals. In adsorbent applications, beta zeolites are especially useful for active carbon replacement and odor removal.

Revision Date: 10/29/2026

DISCLAIMER

ACS Material, LLC believes that the information in this Technical Data Sheet is accurate and represents the best and most current information available to us. ACS Material makes no representations or warranties, either express or implied, regarding the suitability of the material for any purpose or the accuracy of the information contained within this document. Accordingly, ACS Material will not be responsible for damages resulting from use of or reliance upon this information.