TECHNICAL DATA SHEET

ZSM-5 Catalyst

Microporous molecular sieve catalyst · Column (pelletized), Φ2×2–10 mm · SiO_2/Al_2O_3 molar ratio 38 · H^+ form · calcined, ready to use · 200 g / 1 kg



ACS Material ZSM-5 Catalyst — Representative Packaging

ACS Material ZSM-5 Catalyst, 200 g (MSZ5C122). Also available in 1 kg (MSZ5C131). Image shown for reference; label and packaging may vary.

CONTENTS

01 Product Overview
02 Core Advantages
03 Specifications
04 Handling & Reactivation
05 Applications

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SECTION I

Product Overview

ZSM-5 (Zeolite Socony Mobil–5) is a microporous zeolite molecular sieve used in a range of catalytic processes. It is commonly used to convert methanol to gasoline and is applied in reactions such as toluene disproportionation, xylene isomerization and toluene alkylation. ZSM-5 catalysts are also used to decrease the freezing point of diesel fuel, maximize propylene production and improve the octane number of gasoline.

ACS Material ZSM-5 Catalyst is supplied in column (pelletized) form, Φ2×2–10 mm, with a SiO_2/Al_2O_3 molar ratio of 38, in the H^+ form, with a binder derived from pseudo-boehmite. The product is calcined and ready to use directly.

SECTION II

Core Advantages

- **Form** — Column (pelletized), Φ2×2–10 mm.
- **Surface area** — BET ≥250 m^2/g.
- **Mechanical** — attrition <1 wt.%.
- **Composition** — SiO_2/Al_2O_3 = 38; H^+ form.
- **Pore volume** — ≥0.25 cm^3/g.
- **Ready to use** — supplied calcined.

SECTION III

Specifications

Technical data

Specifications	
Product name	ZSM-5 Catalyst
Brand	ACS Material
Material type	Microporous molecular sieve (zeolite ZSM-5)
Ionic form	H^+ form
Supplied state	Calcined, ready to use
Preparation method	Hydrothermal method

Characterizations

Characterizations	Value
Appearance	Column (pelletized), solid
SiO_2/Al_2O_3 molar ratio	38
Dimension	Φ2×2–10 mm
Pore volume	≥0.25 cm^3/g
BET surface area	≥250 m^2/g
Bulk density	~0.72 kg/L
Crushing strength	≥98 N/cm^2
Attrition	<1 wt.%
Binder type	Pseudo-boehmite
Binder content	30 wt.%

Ordering information

Package	Product No.
200 g	MSZ5C122
1 kg	MSZ5C131

Please contact us at contact@acsmaterial.com for a quote if you need bulk quantities.

SECTION IV

Handling & Reactivation

The product is calcined and ready to use directly.

Reactivation: calcine in air at 550 ℃, increasing the temperature at 10 ℃/min and holding at 550 ℃ for about 5–6 hours.

The catalyst may adsorb moisture if exposed to air during prolonged storage. Keep the container tightly closed.

SECTION V

Applications

1) Diesel oil non-hydrodewaxing catalysts: decrease the freezing point of diesel fuel
2) DCC catalyst: maximize propylene production
3) FCC catalyst or additives: improve the gasoline octane number and the yields of LPG and propylene
4) Xylene isomerization catalyst
5) Methanol-to-gasoline conversion
6) Aromatization catalyst

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