

# Catalytic Static Mixer

## Ru/Al<sub>2</sub>O<sub>3</sub> - Ruthenium on Alumina

### DESCRIPTION

Ruthenium on alumina Catalytic Static Mixer (CSM)  
316L to fit reactor tube ID of 6mm dia x 150mm long.  
Multiple CSM's can be inserted into longer reactor tubes.

This CSM is a general hydrogenation/dehydrogenation catalyst that exhibits high activity with low selectivity.  
This CSM is not stable in alkali media.

### DETAILS

**Core:** 3D printed 316L stainless steel

**Catalyst:** Ru/Al<sub>2</sub>O<sub>3</sub>

**Mixer Shape:** Cylindrical

**Dimensions:** 5.7mm diameter x 150mm length

Catalytic static mixers are a novel immobilized catalyst system, based on 3D printed mixer scaffolds containing a catalytic active layer. A variety of different active catalysts can be deposited on the metal mixer, allowing employment in many different classes of chemical reactions, such as hydrogenations, oxidations, C-C couplings and many more. Ru/Al<sub>2</sub>O<sub>3</sub> mass is ~300mg/Mixer. Mixer volume 957mm<sup>3</sup>.



### APPLICATIONS



ACTIVITY



SELECTIVITY



HYDROGENATIONS



NITRO REDUCTION



CARBONYL REDUCTION



ALKENE REDUCTION



ALKYNE REDUCTION



DEHYDROGENATIONS

### PUBLICATIONS

Continuous flow hydrogenations using novel catalytic static mixers inside a tubular reactor

The art of manufacturing molecules

Use of catalytic static mixers for continuous flow gas-liquid and transfer hydrogenations in organic synthesis

Catalytic Static Mixers for the Continuous Flow Hydrogenation of a Key Intermediate of Linezolid

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