

2731 Bartram Road Bristol, PA 19007-6893 800.385.3153 www.unitedchem.com

## CERTIFICATE OF ANALYSIS

PRODUCT NAME: CHEMICAL: SILICA TYPE: LOT NUMBER: ECMS12CPSA415CT Mixture of MgSO4, CUPSA Irregular particles 40-63 micron, 60 Angstroms 039257-DE

		<b>Specification Values</b>		<b>Lot Analysis</b>
Test	Method	Min	Max	
Average Pore Size	SOP82-4.042	55Å	65Å	60Å
Surface Area (m <sup>2</sup> /g)	SOP82-4.042	470	530	$520 \text{ m}^2/\text{g}$
Pore Volume $(cm^{3}/g)$	SOP82-4.042	0.70	0.85	$0.79 \text{ cm}^{3}/\text{g}$
Appearance	Visual	White Fine Powder		White Fine Powder
<b>MgSO4</b> (lot#814160-BD)				
Assay	Ignition	99.50%	100.5%	99.90%
• Total sorbent weight per tube (1200mg)		1140	1260	Conforms
<b>CUPSA</b> (lot#811101-GC)				
Carbon Analysis by Weight (Organic Loading)	SOP82-4.024	10.50%	12.50%	11.27%
Anion Exchange	SOP82-4.028	1.00	1.50	1.270meq/g
• Total sorbent weight per tube (400mg)		380	420	Conforms

 All components of this product are individually weighed. The mass of each raw material meets method required tolerances.

The shelf life is only valid if the material is stored in the original unopened container. The specifications and lot analysis are only valid using the listed methods. The test methods and specifications were current when the product was lotted.

## **CERTIFIED BY:**

NAME: D. Shawn Ream

TITLE: QC MANAGER

Certificate issue DATE: 01-30-2019

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