

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

CERTIFICATE OF ANALYSIS

PRODUCT NAME:

CHEMICAL: SILICA TYPE: LOT NUMBER:

ECQUSF54CT

Specification Values

Mixture of MgSO4, CUPSA, EEC18, Chloro Filtr® Irregular particles 40-63 micron, 60 Angstroms 041685-AB

Lot Analysis

| | | | | · |
|--|------------------------------|-------------------|-------------------|------------------------------|
| <u>Test</u> Average Pore Size | <u>Method</u> SOP82-4.042 | <u>Min</u> 55Å | <u>Max</u> 65Å | 60Å |
| Surface Area (m^2/g) | SOP82-4.042 | 470 | 530 | $520 \text{ m}^2/\text{g}$ |
| Pore Volume (cm^3/g) | SOP82-4.042 | 0.70 | 0.85 | $0.78 \text{ cm}^3/\text{g}$ |
| Appearance | Visual | | Fine Powder | White Fine Powder |
| MgSO4 (lot#919010-BE) | | | | |
| Assay | Ignition | 99.50% | 100.5% | 100.0% |
| • Total sorbent weight per tube (150mg) | U | 143 | 158 | Conforms |
| CUPSA (lot#817221-GE) | | | | |
| Carbon Analysis by Weight (Organic Loading) | SOP82-4.024 | 10.00% | 11.50% | 11.40% |
| Anion Exchange | SOP82-4.028 | 1.00 | 1.20 | 1.041meq/g |
| • Total sorbent weight per tube (50mg) | | 48 | 53 | Conforms |
| EEC18 (lot#911310-BL) | | | | |
| Carbon Analysis by Weight (Organic Loading) | SOP82-4.024 | 20.50% | 22.70% | 21.11% |
| Endcapping | SOP82-4.027 | 0.00abs | 2.00abs | 1.061 abs |
| • Total sorbent weight per tube (50mg) | | 48 | 53 | Conforms |
| Chloro Filtr® (lot#20180397) Total sorbent weight per tube (50mg) | | Confori 48 | ms 53 | Conforms Conforms |
| • Total solbent weight per tube (50hg) | | +0 | 55 | Comornis |

• 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. Kearns

TITLE: QC ANALYST

Certificate issue DATE: 06/21/2019

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