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CERTIFICATE OF ANALYSIS

PRODUCT NAME: ECUNI549

CHEMICAL: OCTYL ENDCAPPED BONDED SILICA

SILICA TYPE: Irregular particles 40-63 micron, 60 Angstrom pores

042354-FK LOT NUMBER:

| | | Specification Values | | Lot Analysis |
|----------------------------------|-------------|-----------------------------|--------|--------------------------------|
| <u>Test</u> | Method | Min | Max | |
| Average Pore Size | SOP82-4.042 | 55Å | 65Å | 60Å |
| Surface Area (m ² /g) | SOP82-4.042 | 470 | 530 | $508 \text{ m}^2/\text{g}$ |
| Pore Volume (cm^{3}/g) | SOP82-4.042 | 0.70 | 0.85 | $0.79 \text{ cm}^{3}/\text{g}$ |
| pH | Supplier | 6.5 | 7.5 | 7.0 |
| CEC08 | | | | |
| Appearance | Visual | White Fine Powder | | White Fine Powder |
| Carbon Analysis by Weight | SOP82-4.024 | 10.0% | 12.0% | 11.35% |
| (Organic Loading) | | | | |
| Endcapping | SOP82-4.027 | 1.0abs | 3.0abs | 2.97abs |

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: L. Bender

TITLE: QC ANALYST

Certificate issue DATE: 05/20/2019

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