ELECTRONIC MATERIALS
CMP TECHNOLOGIES

ACE NANOCHEM

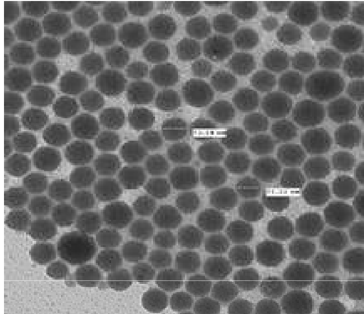
ACESOL® - series
Colloidal Silica
Oxide CMP Slurry

# ACESOL®1280

Acesol® slurries offer a complete solution for your polishing requirements based on the latest colloidal silica technology showing exceptional stability and high manufacturing reproducibility

Acesol® 1280 is a colloidal silica sol with a large particle size desingned to provide high removal rates, low uniformity.

## TEM Image



Precisely Controlled ACESOL® Particles.

## SPECIFICATION

| Abrasive | Colloidal Silica |
|---|---|
| Mean Particle | 70 nm |
| Specific Gravity (25℃) | 1.068+/-0.004 |
| Percent Silica (wt%) | 11.5+/-0.5 |
| Viscosity (25℃) | <5 |
| pH | 10.5~ 11.5 |
| Shelf life | More than 12 months |

## Typical Process Results

| Oxide | Polishing Tool | ACESOL1280 |
|---|---|---|
| R/R(aver.Å) | Auriga | TEOS 3300 Å/min<br>BPSG 3600 Å/min |
| | Mirra-mesa | TEOS 3000 Å/min<br>BPSG 3300 Å/min |
| Within Uniformity(%) | | < 5 |

**Polishing Condition (8" Fab)**

| | | |
|---|---|---|
| Polisher : | AMAT Mirra-Mesa | Auriga |
| Pad : | Perforated IC1400/ Suba IV | IC1000 |
| Speed : | TEOS 93/87 | TEOS 20/8 |
| Slurry Flow Rate : | 160 ml/min | 750 ml/min |
| Press(TEOS) : | 3.2/6.1/3.2 | 430lbs |

## Analysis of Metal Contamination after Post CMP Cleaning (Unit:ng/wf)

| Metal | ACESOL ILD | Fumed slurry |
|---|---|---|
| Cu | <0.10 | <0.10 |
| Al | <0.12 | <0.10 |
| Fe | <0.10 | <0.10 |
| Ca | <0.43 | <0.68 |
| K | <0.10 | <0.10 |
| Cr | <0.10 | <0.10 |
| Zn | <0.11 | <0.13 |
| Ni | <0.10 | <0.10 |