



NexSil™ Aqueous Colloidal Silica

NYACOL's NexSil™ aqueous colloidal silica products have been developed for use in a wide range of applications. The products are available with a choice of particle sizes, surface areas and pH.

TYPICAL PROPERTIES:

Sodium-Stabilized Colloidal Silica Series

| PRODUCT | TYPICAL PARTICLE SIZE, nm | TYPICAL SURFACE AREA, m ² /g | WT% SILICA AS SiO ₂ | pH @25°C | SPECIFIC GRAVITY | % Na ₂ O | PARTICLE CHARGE |
|------------|---------------------------|---|--------------------------------|----------|------------------|---------------------|-----------------|
| NexSil 5 | 6 | 450 | 15 | 11 | 1.09 | 0.8 | Negative |
| NexSil 8 | 8 | 350 | 30 | 10 | 1.2 | 0.6 | Negative |
| NexSil 12 | 12 | 227 | 30 | 10 | 1.3 | 0.5 | Negative |
| NexSil 20 | 20 | 135 | 40 | 10 | 1.3 | 0.3 | Negative |
| NexSil 85 | 50 | 55 | 40 | 10 | 1.3 | 0.2 | Negative |
| NexSil 125 | 85 | 35 | 40 | 10 | 1.3 | 0.2 | Negative |

Potassium-Stabilized Colloidal Silica Series

| PRODUCT | TYPICAL PARTICLE SIZE, nm | TYPICAL SURFACE AREA, m ² /g | WT% SILICA AS SiO ₂ | pH @25°C | SPECIFIC GRAVITY | % K ₂ O | PARTICLE CHARGE |
|-------------|---------------------------|---|--------------------------------|----------|------------------|--------------------|-----------------|
| NexSil 20K | 20 | 135 | 30 | 10 | 1.2 | 0.3 | Negative |
| NexSil 85K | 50 | 55 | 40 | 10.5 | 1.3 | 0.3 | Negative |
| NexSil 125K | 85 | 35 | 40 | 10.5 | 1.3 | 0.3 | Negative |

Acidic Colloidal Silica Series

| PRODUCT | TYPICAL PARTICLE SIZE, nm | TYPICAL SURFACE AREA, m ² /g | WT% SILICA AS SiO ₂ | pH @25°C | SPECIFIC GRAVITY | COUNTER ION | PARTICLE CHARGE |
|-------------|---------------------------|---|--------------------------------|----------|------------------|-------------|-------------------|
| NexSil 20A | 20 | 135 | 30 | 2.5-3.0 | 1.2 | NA | Slightly Negative |
| NexSil 35A | 35 | 80 | 30 | 2.5-3.0 | 1.2 | NA | Slightly Negative |
| NexSil 85A | 50 | 55 | 30 | 2.5-3.0 | 1.2 | NA | Slightly Negative |
| NexSil 125A | 85 | 35 | 30 | 2.5-3.0 | 1.2 | NA | Slightly Negative |

Ammonia-Stabilized Colloidal Silica Series

| PRODUCT | TYPICAL PARTICLE SIZE, nm | TYPICAL SURFACE AREA, m ² /g | WT% SILICA AS SiO ₂ | pH @25°C | SPECIFIC GRAVITY | COUNTER ION | PARTICLE CHARGE |
|---------------|---------------------------|---|--------------------------------|----------|------------------|-----------------|-----------------|
| NexSil 20NH4 | 20 | 135 | 40 | 9.0-10.5 | 1.3 | NH ₃ | Negative |
| NexSil 85NH4 | 50 | 55 | 40 | 9.0-10.5 | 1.3 | NH ₃ | Negative |
| NexSil 125NH4 | 85 | 35 | 40 | 9.0-10.5 | 1.3 | NH ₃ | Negative |

Silicon Wafer Polishing Slurries

| PRODUCT | PARTICLE SIZE, nm | WT% | METAL OXIDE | pH @25°C | SPECIFIC GRAVITY | |
|---------------|-------------------|-----|-------------|----------|------------------|-------------|
| NexSil 3500 | 70-100 | 40 | Silica | 11-12 | 1.3 | |
| NexSil 6000 | 40-60 | 40 | Silica | 11-12 | 1.3 | |
| NexSil 5000 | 4-6 | 15 | Silica | 11-12 | 1.1 | |
| NexSil 5000HP | 4-6 | 15 | Silica | 11-12 | 1.1 | High Purity |
| NexSil 1300 | 4-6 | 12 | Silica | 11 | 1.1 | |

NEXSIL APPLICATIONS:

NexSil™ colloidal silica was developed to be utilized in a range of applications. These materials may be used in applications related to:

- ♦ Binder formulations for precision investment casting.
- ♦ Production of vacuum formed fibrous refractory products.
- ♦ Binder formulations for the production of materials such as granulated powders.
- ♦ Surface modification for anti-slip paper and cardboard coatings.
- ♦ Anti-blocking effects for films and coatings, including steel coatings.
- ♦ Catalyst production.
- ♦ Precision polishing of silicon wafers.
- ♦ Precision polishing of semiconductor substrates.

PACKAGING:

NexSil colloidal silica is offered in pails, drums and totes. Container Net Weights available upon request.

FOR ADDITIONAL INFORMATION OR TO PLACE AN ORDER:

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