

Product Information

LUDOX® TM-50

Colloidal Silica

Product Description

LUDOX® TM-50 Colloidal Silica contains synthetic amorphous silica of nominal 22 nanometer particle size. The alkaline aqueous colloidal dispersion contains 50% silica.

Product Characteristics

The following specification parameters will be stated in our Certificate of Analysis.

Property	UOM	Value	Test Method
Specific Gravity (15.6°C/60°F)		1.388 – 1.407	L6550.310.02.EC
Silicon Dioxide (SiO ₂)	% m/m	49.0 – 51.0	L6550.083.01.EC
Ratio SiO ₂ /Na ₂ O		200 – 250	L6550.043.01.EC
pH (25°C)		8.5 – 9.5	L6550.280.01.EC
% Transmission	%	20 min.	L6550.523.01.EC
Viscosity (25°C / 77°F)	cPs	55 max.	L6550.545.01.EC
Specific Surface Area	m ² /g	110 – 150	L6550.005.02.EC
Sulfates as Na ₂ SO ₄	% m/m	0.135 max.	L6550.277.01.EC

Typical Properties and Recommended Applications

The following typical properties data are given for informational purposes only and are not to be interpreted as product or in-process specifications.

Property	UOM	Value
Density	g/cm ³ , lb/gal	1.4, 11.6
Boiling Point (760 mm Hg)	°C/°F	100/212
Melting Point	°C/°F	0/32
Vapor Pressure (25°C)	mm Hg	24
Vapor Pressure (38°C)	mm Hg	48
Stabilizing Counter Ion		Sodium
Particle Charge		Negative
Biocide	ppm	500

LUDOX® TM-50 Colloidal Silica is used as an anti-slip or frictionizing agent in paper, textiles and other materials. It may also be used to deluster textiles and to avoid seam slippage during fabric cutting and sewing. Key features are:

- Good binding strength and stability in most applications
- High silica content

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LUDOX® TM-50 Colloidal Silica

Packaging Information

The standard packaging for LUDOX® TM-50 Colloidal Silica is:

- 55 gallon drums (Net 625 lb/284 kg)
- 275 gallon bulk drums (Net 2998 lb/1360 kg)
- tank truck

Handling & Storage Recommendations

- Store at temperatures above 2°C/35°F and below 43°C/110°F to avoid irreversible gel formation or silica precipitation. Bulk storage tanks or drum storage areas should be located in temperature-controlled buildings. Outdoor storage can be used if suitably insulated, heated and protected from the weather. Outside storage should be in a shaded location or a sunscreen should be erected over the tanks or drums.
- Keep the container tightly closed after use. All equipment should be cleaned and sanitized regularly to avoid bacterial contamination.
- Product should be used within 24 months of manufacture.
- Additional information can be found in the Safety Data Sheet (SDS).

Health & Safety Information

LUDOX® TM-50 Colloidal Silica is a synthetic amorphous silica dispersed in a stable form in water. Additional information can be found in our Safety Data Sheet (SDS). Please refer also to national laws and regulations.

ISO Certification

ISO 9001 Registered

Other Information

The information contained herein is based on our testing and experience and is offered for the user's consideration, investigation and verification. Since operating and use conditions vary and since we do not control such conditions, we must **DISCLAIM ANY WARRANTY, EXPRESSED OR IMPLIED**, with regard to results to be obtained from the use of this product. Test methods are available on request.

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