

Product Information

LUDOX® AM-FS

Colloidal Silica

Product Description

LUDOX® AM-FS Colloidal Silica contains synthetic amorphous silica of nominal 12 nanometer particle size. The aqueous colloidal dispersion contains 28% silica and is formulated to give broader pH stability than standard alkali stabilized grades. This grade also contains ethylene glycol for added freeze stability.

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)		1.194 - 1.212	L6550.310.02.EC
Silicon Dioxide (SiO ₂)	% m/m	27.2 - 29.8	L6550.083.01.EC
pH (25°C)		8.6 - 9.3	L6550.280.01.EC
% Transmission	%	62 min.	L6550.523.01.EC
Specific Surface Area	m ² /g	198 – 258	L6550.005.02.EC
Aluminum Oxide (Al ₂ O ₃)	% m/m	0.15 - 0.20	L6550.020.01.EC
Ethylene Glycol	% m/m	4.0 - 6.0	L6550.005.03.EC

Typical Properties and Recommended Applications

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

Property	UOM	Value
Density	kg/l, lb/gal	1.2, 10.0
Boiling Point (760 mm Hg))	°C / °F	100 / 212
Melting Point	°C / °F	0 / 32
Vapor Pressure (25°C/77°F)	mm Hg	24
Vapor Pressure (38°C/100°F)	mm Hg	48
Stabilizing Counter Ion		Sodium
Particle Charge		Negative
Biocide	ppm	500

LUDOX® AM-FS Colloidal Silica can be incorporated at neutral or slightly acid pH to yield stable formulations, making it suitable in many coating applications. Key features are:

- Broad pH stability from about pH 4 to 10
- High binding strength and excellent stability in most applications
- Ethylene glycol inhibits gelation of product when accidentally frozen such that, once thawed, the material can be remixed without change in properties

Packaging Information

The standard packaging for LUDOX® AM-FS Colloidal Silica is:

- 55 gallon drums (Net 550 lb/249.43 kg)
- 275 gallon bulk drums (Net 2646 lb/1200 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 12 months of manufacture.
- Additional information can be found in the Safety Data Sheet (SDS).

Health & Safety Information

LUDOX® AM-FS 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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