

# deffner & Johann

Supplies for RESTORATION | CONSERVATION | ART HANDLING – SINCE 1880

## TECHNICAL DATA SHEET

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## Product Information

# LUDOX<sup>®</sup> P X-30 FS

## Colloidal Silica

### Product Description

LUDOX<sup>®</sup> P X-30 FS Colloidal Silica contains synthetic amorphous silica with high specific surface area. The alkaline aqueous colloidal dispersion contains 29% silica.

### Product Characteristics

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

Property	Unit	Value	Test Method
Density (20°C)	g/cm <sup>3</sup>	1.196 - 1.206	GRACE Q 726
Residue	% m/m	28.5 - 29.2	GRACE Q 720
pH (25°C)		9.8 - 10.4	GRACE Q 716
Viscosity (20°C)	mPa.s	8 max.	GRACE Q 719
Specific Surface Area	m <sup>2</sup> /g	230 - 290	GRACE Q 702
Alkalinity as Na <sub>2</sub> O	% m/m	0.26 - 0.37	GRACE Q 701

### 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. To receive further product and handling information please contact our local sales office.

Property	Unit	Value
Boiling Point (101 kPa)	°C	100
Melting Point	°C	0
Vapor Pressure (25°C)	kPa	3.2
Vapor Pressure (38°C)	kPa	6.4
Stabilizing Counter Ion		Natrium
Particle Charge		Negative
Biocide	ppm	200 - 300
Bacteria	CFU/mL	1000 max.
Ethylene Glycol	% m/m	5

LUDOX<sup>®</sup> P X-30 FS Colloidal Silica is especially useful as a high temperature binder for precision investment casting, refractory fibers, stool coatings, etc.. It is broadly used in the formulation of coatings and anti-soil treatments.

Key features are:

- Small particle size and polydisperse particle distribution
- Excellent binding strength
- Ethylene glycol inhibits gelation of product when accidentally frozen such that, once thawed, the material can be remixed without change in properties

## LUDOX® P X-30 FS Colloidal Silica

### 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 Material Safety Data Sheet (MSDS).

### Health & Safety Information

LUDOX® P X-30 FS Colloidal Silica is a synthetic amorphous silica dispersed in a stable form in water. Additional information can be found in our Material Safety Data Sheet (MSDS). 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.