



**LAMBENT**  
**NANO-CHEMICALS**

*As Never Before...*

# LAMBENT NANO-CHEMICALS

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[www.lambentnanochemicals.com](http://www.lambentnanochemicals.com)

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Established in 2014, our manufacturing facilities are located at Morbi, Gujarat, ceramic hub of India. We have a high-tech enterprise specializing in intensive research & development, precision manufacturing, and strategic sales of high-purity colloidal silica solution and innovative tiles polishing liquids.



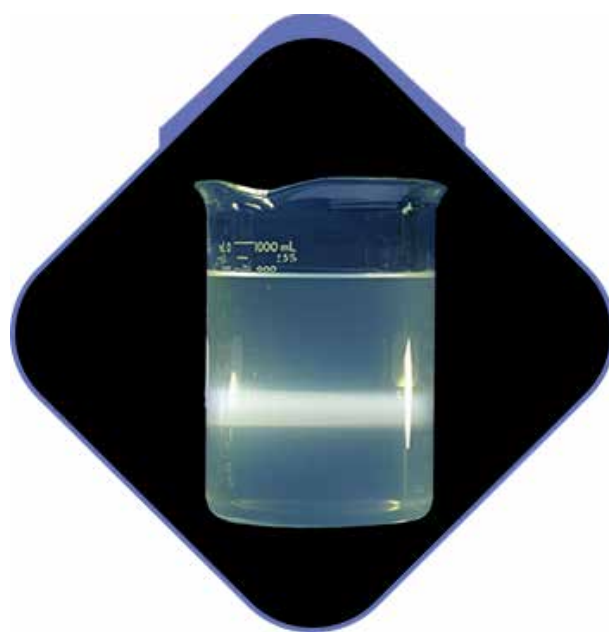
## **ABOUT US**

### **5+ years professional colloidal silica production factory**

Our main products include colloidal silica solution, tiles polishing Nano-A, High gloss Nano-A, Nano-C antifouling liquids, sodium silicate liquid, sodium silicate glass, sodium silicate powder, Orthosilicic acid. Since inception, our technical team are striving to fulfill the basic requirement of our clients. Our annual production come to more than 6000 tons". Main market includes china, usa, canada, indonesia, thailand, vietnam, south korea as well as some europien countries. Since its establishment, the company has kept close contact with central glass & ceramic research institute, central salt & marine chemicals research institute and other scientific research institutes to continually optimize products and provide personalized customization based on the differences of customer's needs. We have our own manufacturing facilities with professional workers, strict inspection department, and effective services team. Our professional team are dedicated to improve our services and qualities. We can produce customized products for our clients.

## **SILICA SOL/COLLOIDAL SILICA SOLUTION**

These are suspended in an aqueous phase, stabilized electrostatically. Colloidal silicas exhibit particle densities in the range of 2.1 to 2.3 g/cm<sup>3</sup>. Most colloidal silicas are prepared as monodisperse suspensions with particle sizes ranging from approximately 30 to 100 nm in diameter.



### **Manufacture**

Colloidal silicas are most often prepared in a multi-step process where an alkali-silicate solution is partially neutralized, leading to the formation of silica nuclei. The subunits of colloidal silica particles are typically in the range of 1 to 5 nm. These products are often called silica sols. Because of the very small size, the surface area of colloidal silica is very high. The colloidal suspension is stabilized by pH adjustment and then concentrated, usually by evaporation.

### **Technical data**

Series	Type	SiO <sub>2</sub> (%)	Na <sub>2</sub> O (%)	Density (g/cm <sup>3</sup> )	Ph value	Viscosity (mpa.s)	Size (nm)
Alkaline	<b>AK20</b>	19.0-21.0	≤ 0.5	1.11-1.13	9.0-10.5	≤ 9	≤ 10
	<b>AK30</b>	29.0-31.0	≤ 0.5	1.19-1.21	9.0-10.5	≤ 9	10-15
	<b>AK40</b>	39.0-41.0	≤ 0.4	1.29-1.31	9.0-9.5	≤ 12	10-50
Acidic	<b>AD15</b>	14.0-16.0	≤ 0.1	1.11-1.13	2.0-4.0	≤ 9	8-15
	<b>AD25</b>	24.0-26.0	≤ 0.1	1.15-1.17	2.0-4.0	≤ 9	10-20
	<b>AD30</b>	29.0-31.0	≤ 0.1	1.18-1.20	2.0-4.0	≤ 9	20-30
Neutral	<b>NT30</b>	29.0-31.0	≤ 0.2	1.19-1.21	7.5-8.0	≤ 20	8-120
NH <sub>3</sub>	<b>NH30</b>	29.0-31.0	≤ 0.1	1.19-1.21	9.0-9.5	≤ 9	8-15
	<b>NH40</b>	39.0-41.0	≤ 0.1	1.29-1.31	9.0-9.5	≤ 9	12-20

## **Packing**

Packed in 200L, 1000L polyethylene plastic barrel, transported and stored at 0-40 C.

## **Storage**

Store in sealed container, avoid direct contact with light, temperature 0-40 C.

## **Shelf life**

If stored in good condition, acidic series – 6 months, others – 12 months.

## **Applications**

- In papermaking colloidal silica is used as a drainage aid. It increases the amount of cationic starch that can be retained in the paper. Cationic starch is added as sizing agent to increase the dry strength of the paper.
- High temperature binders
- Investment casting - used as the inorganic binder in moulds
- An abrasive - for polishing silicon wafers
- Carbonless paper
- As binder or silica source in catalysts
- Desiccant
- As lubricant in the manufacture of pharmaceutical capsules and tablets.
- Stabilizing and rigidizing refractory ceramic fiber blankets  
Abrasion resistant coatings
- Increasing friction - used to coat waxed floors, textile fibers, cardboards and rail way tracks to promote traction
- Antisoiling – fills micropores to prevent take up of dirt and other particles into tiles
- Surfactant – used for flocculating, coagulating, dispersing, stabilising etc.
- Liquid silicon dioxide (colloidal silica) is used as a wine and juice fining agent.
- Absorbent
- Colloidal silica is used in concrete densifiers and polished concrete.
- In manufacturing Quantum dots, small semi-conductors used in various scientific research settings.



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## Contact Us

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