

A background image of a waterfall with white, frothy water cascading over dark rocks. The text is overlaid on the right side of the image.

# TEC STAR NANOFLUIDS CATALOGUE

Copyright © 2005 FreePixels.com



[www.tec-star.it](http://www.tec-star.it)

# Tec Star Nanofluids Catalogue

TEC Star is able to provide different types of liquid suspensions and dispersions of nanoparticles, custom tailored on the customer's needs, starting from nanoparticles and liquids of different nature.

In the following are reported some of the already available stable solutions, but TEC Star is able to customize many other types of nanofluids based upon customer's requests. In particular the customer can tune: the type of nanoparticle, the type of the liquid matrix, and the concentration of the solid part.

Also for the materials already available, it is possible to tune the nanoparticle concentration, on the basis of the customer requests (up to certain limits depending on the type of nanoparticles).

**Click on the Image to go to the Technical Sheet**



[WaAlOx](#)

[WaSiOx](#)

[WaZrOx](#)

# $\gamma$ -Al<sub>2</sub>O<sub>3</sub> water dispersion

## Specification Sheet

Product Name	WaAlOx
Product Description	nanoparticle dispersion in water
CAS Number	7732-18-5 (water) ; 1344-28-1 (gamma Al2O3)
Particle Molar Mass [g/mol]	101.96

## Images of product



## Chemical and physical properties

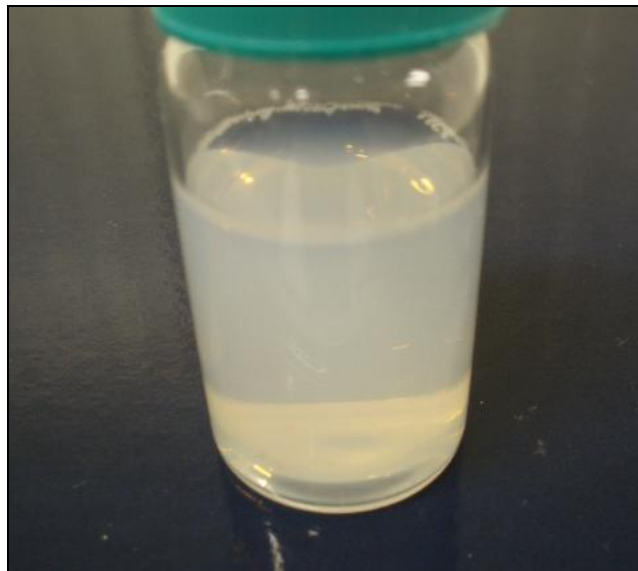
<b>TEST</b>	<b>SPECIFICATION</b>
Appearance (Form; Color)	Liquid; white
Average Particle Size (XRD) [nm]	7
Particle Crystal Phase (XRD)	Gamma
Viscosity (10 wt.% solid content) [cP]	18.9 (21°C)
Density (10 wt.% solid content) [g/cm <sup>3</sup> ]	1.068
pH	5
Zeta potential [mV] (DLS)	+ 41.8

# SiO<sub>2</sub> water dispersion

## Specification Sheet

Product Name	WaSiOx
Product Description	nanoparticle dispersion in water
CAS Number	7732-18-5 (water) ; 7631-86-9 (SiO <sub>2</sub> )
Particle Molar Mass [g/mol]	60.08

## Images of product



## Chemical and physical properties

<b>TEST</b>	<b>SPECIFICATION</b>
Appearance (Form; Color)	Liquid; opaque
Average Particle Size (SEM) [nm]	20
Particle Crystal Phase (XRD)	amorphous
Viscosity (10 wt.% solid content) [cP]	10.0 (23°C)
Density (10 wt.% solid content) [g/cm <sup>3</sup> ]	1.049
pH	9
Zeta potential [mV]	- 31

# ZrO<sub>2</sub> water dispersion

## Specification Sheet

Product Name	WaZrOx
Product Description	nanoparticle dispersion in water
CAS Number	7732-18-5 (water) ; 1314-23-4 (ZrO <sub>2</sub> )
Particle Molar Mass [g/mol]	123.218

## Images of product



## Chemical and physical properties

TEST	SPECIFICATION
Appearance (Form; Color)	Liquid; white
Average Particle Size (XRD) [nm]	84
Particle Crystal Phase (XRD)	β - phase
Viscosity (10 wt.% solid content) [cP]	1.32 (21°C)
Density (10 wt.% solid content) [g/cm <sup>3</sup> ]	1.088
pH	4
Zeta potential [mV] (DLS)	+ 52.3