

asg chemie



SILICON

Specializing in silicates, siliconates, colloidal silica / nano-sols, silanes, and other specialty dispersions, and emulsions, additives, binders, surfactants and rheology modifiers.

Lithium silicates are aqueous solutions resulting from combinations of lithium oxide (Li_2O) and colloidal silica (SiO_2) in varying proportions. The characteristics of these soluble silicates and colloidal silica combinations is that alkalinity levels are higher than colloidal silica, but much lower than sodium- and potassium silicates. In addition, they possess extremely good film forming, hardening and binding properties enhancing abrasion, gloss, adhesion and improved durability (weather resistance and anti-soiling properties). Ideally suited for concrete surface coatings, penetrating stains, specialty paints, primers as they are less alkaline and less soluble once they are dried, especially when modified with silane coupling agents. We offer various grades based on molar ratios and chemistries for formulating chemistries.

LITHIUM SILICATES

LiSO₂ / SiO₂**LITHIUM SILICATE (LS)45, Solids 23%**

Lithium Silicate (LS)45 (Solids 23%) is an aqueous polysilicate solution with a molar ratio of 4.5 (ranging 4.35-5.0) that has a high concentration of lithium produced with Lithium Hydroxide. The reactive silicate forms a stable, high ratio, low viscosity solution that results in lower levels of water in coatings and can dramatically improve film formation, water resistance, abrasion, hardness and bonding properties for many applications, including concrete surface treatments, specialty paints and coatings. Adhesion: Addition of Lithium Silicate to Sodium or Potassium Silicates improves the adhesion to a wide variety of substrates.

LITHIUM SILICATE (LS)45 HS, Solids 28%

Lithium Silicate (LS)45 HS (Solids 28%) is a high solids aqueous polysilicate solution with a molar ratio of 4.5 (4.2-4.8) allows for improved interaction and compounding when used as a reactive binder and/or hardener in coatings, treatments, and sealers. The reactive silicate has a higher concentration of lithium and is preferred to sodium and/or potassium silicates for many applications, including concrete surface treatments, specialty paints and coatings. Especially suitable for high performance zinc coatings for marine and industrial applications in which high pigment loading and water and wear resistance are desired.

LiO₂ / K₂O / SiO₂ /**LITHIUM POTASSIUM SILICATE (LPS)39, 29% Solids**

Lithium Potassium Silicate (LPS)39 (Solids 29%) is an aqueous polysilicate hybrid blended solution with a molar ratio of 3.9 (ranging 3.8-4.0). Ideal for many applications including; concrete surface treatments, specialty paints and coatings, welding rod binders, refractory materials, ceramics and glazes.

Sodium Metasilicate (Pentahydrate and Anhydrous)

Sodium Metasilicate, Pentahydrate is a free-flowing beaded powder that is water soluble. This product has a silica to soda ratio of 1. Sodium metasilicates are manufactured from sodium silicate glass, which is produced from melting high purity sand and soda ash in a furnace. Sodium silicates are non-toxic and thus sodium silicate waste is easy to treat or dispose of. Sodium metasilicate reduces the slurry density, prevents solids segregation, promotes early strength accelerates set times and reduces free water in cement. Used in oilfield applications including as a shale stabilizer in water-based drilling fluids and as a set accelerator in cementing systems. It can also be used in fireproofing mixtures, detergents, adhesives and boiler compound, among other applications.

Sodium Metasilicate, Anhydrous is a free-flowing beaded powder that is water soluble. Anhydrous is both hygroscopic and deliquescent in nature and is soluble in water, but not in alcohols. It acts as an adhesive and binder, corrosion inhibitor, penetrating sealant, coagulant in waste water treatment. When used with surfactants, Sodium Metasilicate Anhydrous enhances the suspension of removed soils such as grease and dirt deposits and prevents reaccumulation.

Commonly used in manufacturing high-efficiency soaps, detergents, and metal cleaners; Penetrating Sealant; Coagulant in Waste Water Treatment; Fixative for Hand Dyeing and Reactive Dye.

COLLOIDAL SILICAS / NANOSOL

Colloidal Silica

Adding Colloidal Silica into your silicate paint formulation allows you to improve durability, weather resistance, coloring and anti-soiling properties as a binder. Potassium silicate in combination with colloidal silica is the main binder in sol silicate paint, industrial and decorative coatings as well as elastomeric cool roof coatings. Formulating with colloidal silicas helps minimize internal stress, enhance abrasion resistance, improve film properties and adhesion, otherwise a potential problem in inorganic coatings. The anti-soiling properties of the sol-silicate paints are a result of colloidal silica making it very hard for dirt to adhere to the painted stone or masonry. All this gives your inorganic coatings qualities that secure longer lasting protection and color, decorative paint, and silicate paints. We offer COLLOIDAL-SILTM in a variety of grades ranging in nano-particle size, solids, pH and biocide-free or low biocide solutions.

Available Grades: (NS6)15%, (NS6)15%
(NS7)15%, (NS7)15% C, (NS8)20%, (NS8)20%,
(NS20)40%, (NS20)40%

SILICONATES

Potassium Methylsiliconate

Potassium Methyl Siliconate (PMS) is a water-dilutable solution developed to impart water repellency for a wide variety of porous masonry and natural stone surfaces such as sandstone, limestone, and red brick, gray brick, granite, ceramics etc.

Available in 40% and 50% concentrations.

SILANES

Triethoxyoctylsilane

Triethoxyoctylsilane also known as n-octyltriethoxysilane is an alkyl silane used as a waterproofing agent in paints, coatings and surface treatments. It is ideal for use as a water repellent on masonry and concrete surfaces.

Available in 97% solution.

Silane-560**(Gamma-Glycidoxypropyltrimethoxysilane)**

Silane-560 is an epoxy functional silane coupling agent composed of Gamma-Glycidoxypropyltrimethoxysilane. Silane-560 is used to improve adhesion, strength and water repellency of glass-reinforced and mineral-filled thermosetting and thermoplastic coatings. It is suitable for epoxy, acrylic and polyurethane resins. We have a wide variety in grades available.

Silane-570**(Gamma-Methacryloxypropyltrimethoxysilane)**

Silane-570 is a silane coupling agent composed of Gamma-Methacryloxypropyltrimethoxysilane. Silane-570 is used to improve adhesion, strength and water repellency of glass-reinforced and mineral-filled thermosetting coatings. It is suitable for acrylic, polyester and polyurethane resins.

FUMED SILICAS

Fumed silica is also widely used in sealants, paints & coatings, cement & other binders as well as personal care thixotropic rheology modifiers universal thickening agent and an anticaking agent (free-flow agent) in powders. Fumed silica is generated from burning volatile silanes in an oxygen-hydrogen flame at high temperatures. The chain-like particle structure that bonds together to trap liquid, thereby increasing the viscosity. Add to thicken and increase the transparency of paint. Provides viscosity-increasing, thixotropic behavior when used as a thickener or reinforcing filler. Available in a range of different surface area materials, as well as coated (hydrophobic) & uncoated (hydrophilic).

Fumed Silica Coated (Hydrophobic)

Fumed Silica Hydrophobic (Coated) is produced by the chemical reaction of hydrophilic silica with reactive silanes, e.g. chlorosilanes or hexamethyldisilazane. It has water-repellent properties and is no longer dispersible in water. The treatment with DDS provides this product with hydrophobicity, reduced water absorption, increased abrasion and corrosion resistance. It is used in high-technology fields or as an ingredient in paints, coatings, electronics, and optical fibers industries. We offer a variety of grades based on specific surface area.

Fumed Silica Uncoated (Hydrophilic)

Fumed Silica Hydrophilic Uncoated is wetted by water and can be dispersed in water. Applications: Hydrophobic Fumed Silica is used in a variety of applications but not limited to adhesives, elastomers, composite materials, powder coatings, inks, glassy metals, greases, flask resins, sealants and toners. We offer a variety of grades based on specific surface area.

SILICONE ADDITIVES

Defoamers / Antifoams

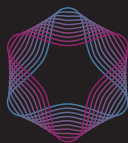
Silicone defoamers are defoamer fluids with a particularly low surface tension, which contain polysiloxanes as the primary active substance for improved slip, mar resistance, leveling and foam control, and enhanced oil & water repellency.

Fluorosurfactants Hydrophobic / Oleophobic

Fluorinated surfactants range from perfluorinated alkylated substances or PFASs are synthetic organofluorine chemical compounds that have multiple fluorine atoms. They can be polyfluorinated or fluorocarbon-based (perfluorinated).

Fluorosurfactants can deliver superior wetting and leveling for industrial applications, including acrylic/wax floor polish, cleaning products and more, as compared to hydrocarbon- and silicone-based surfactants.

Low foam, anionic fluorosurfactant with exceptional wetting properties and excellent chemical and thermal stability.



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Bulk Chemicals and Specialty Performance Materials

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