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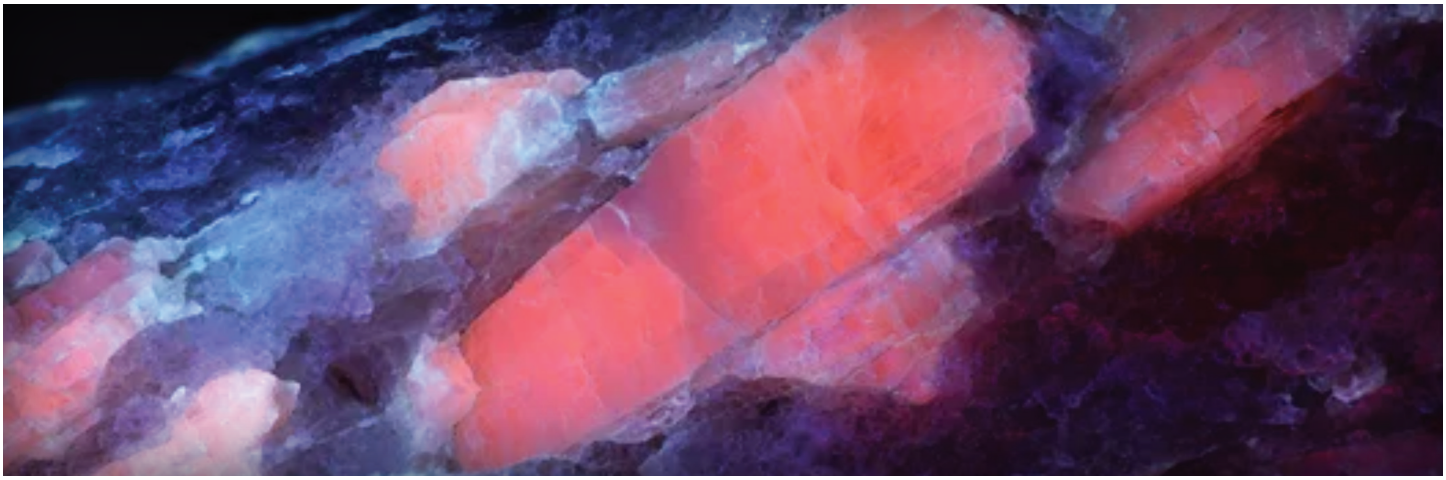

LITHIUM SALTS

ASG Chemie is primary in lithium and is involved with the supply chain all the way from the hard rock mining of lithium bearing ores such as spodumene and lepidolite to the down stream chemistries of lithium silicate, specialty binders and other specialties such as lithium chloride, lithium fluoride and lithium acetate. For more information about our unique position on lithium chemistries and product offerings visit Lithium Salts of America (Lith) a division of ASG Chemie www.lithiumsalts.com

ASG Chemical Holdings, LLC • Bulk Chemicals and Specialty Performance Materials • www.asgchemie.com
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LITHIUM SILICATES

Li2O3Si

Lithium Silicate (LS)45 Solids 23%

Lithium Silicate (LS 45 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.

Li2O3Si

Lithium Silicate (LS)45 HS Solids 28%

LITHIUM SILICATE (LS)45 HS, 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.

Li2O.K2O.SiO2

Lithium Potassium Silicate (LPS)39

Lithium Potassium Silicate (LPS/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.

LITHIUM METASILICATE

Li2SiO3

Lithium Metasilicate

Used in glass system, molten salt system and high temperature ceramic glazes, also as a binder, mainly for inorganic zinc-rich coatings and advanced electrodes.

LITHIUM HYDROXIDE

LiOH.H2O

Lithium Hydroxide, Monohydrate

Lithium Hydroxide Monohydrate is used in a variety of applications including producing lithium complex grease, carbon dioxide absorber and as a fluxing agent in inorganic pigments. ASG carries a number of grades including technical grade, battery grade as well as offspec material.

LiOH.H2O

Lithium Hydroxide, Monohydrate (Battery Grade)

Lithium Hydroxide Monohydrate Battery Grade high purity variant of lithium hydroxide monohydrate, suitable for use in cathode materials to produce lithium ion batteries, as well as other fine chemical applications where low impurities is of importance.

HLiO

Lithium Hydroxide, Anhydrous

Lithium hydroxide anhydrous is a less easily stored and transported form of lithium hydroxide, however it finds some unique applications such as in the production of lithium stearate as well as heat transfer medium for storage battery electrolyte.

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LITHIUM CARBONATE

Li2CO3

Lithium Carbonate (Ultrafine)

Lithium Carbonate Ultrafine is an odourless, white free flowing powder with a median particle size is 6-10 microns. It is the finest particle size and the highest reactivity of the lithium carbonate grades available with low impurities and a narrow particle size distribution. The smaller particle size results in a higher effective surface area and thus is more reactive. That has a wide range of applications.

Li2CO3

Lithium Carbonate (Superfine)

Lithium Carbonate Superfine Grade is an odourless, white free flowing powder with a median particle size is < 40 microns. It is a high concentration lithium carbonate with low impurities and a narrow particle size distribution. The smaller particle size results in a higher effective surface area and thus is more reactive offering more predicable rates of reactions That has a wide range of applications.

Li2CO3

Lithium Carbonate (Technical Grade)

Lithium Carbonate Technical Grade offers a much coarser particle size than the ultrafine or superfine grade, the technical grade is better suited for fritz and glazes, as well as for producing other down stream lithium chemistries.

Li2CO3

Lithium Carbonate (Battery Grade)

Lithium Carbonate Battery Grade is a high purity 99.5% fine white powder material recommended for use in Li-ion battery precursors to portable electronics applications. Average particle granularity of < 6 microns.

LITHIUM SULFATE

Li2SO4

Lithium Sulphate

Lith™ Li2SO4 Lithium Sulphate is used across a range of technical industries. It accelerates setting time in high alumina cements, is used as an additive in special glasses and photographic developing solutions, and is a catalyst in various polymer reactions. It is also the main component of electrolytes in large-scale battery formulations for grid storage applications.

Available Grades: Anhydrous Technical, Monohydrate Industrial Grade, Monohydrate Technical, Monohydrate ACS and 20% Solution is a clear aqueous solution.

LITHIUM CHLORIDE

LiCl

Lithium Chloride, Anhydrous (LiCl 98%)

Lithium Chloride Anhydrous (LiCl 98%) is used in the production of lithium metal, as well as a brazing flux in the automotive industry. Lithium chloride is also used in some nitche applications such as it's use as a tracer in water treatment plants.

LiCl

Lithium Chloride Solution (LiCl 40%)

Lithium Chloride Solution (LiCl 40%) is a ready to use aqueous solution, lithium chloride solution can be used in water treatment as well as a feedstock for making lithium metal and other lithium chemistries.

LITHIUM NITRATE

LiNO3

Lithium Nitrate Admixture (30% Solution)

Lithium Nitrate Admixture (30% solution) is a concrete admixture designed for the prevention and control of alkali-silica reactivity. A cost effective method for improving durability, as well as allowing safe ultilization of locally available aggregates and cement.

LiNO3

Lithium Nitrate ASR Mitigation Treatment (Solution)

Lithium Nitrate ASR Mitigation Treatment (Solution) is a formulated proprietary solution which is used as a topically applied treatment to help in the remediation of concrete structures and infrastructures presently affected by ASR as a cost-effective way to impregnate concrete with lithium ions to help control cracking, pop-outs and costly repairs caused by ASR.

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LITHIUM BROMIDE

LiBr

Lithium Bromide (55% Solution)

Lithium Bromide (55% solution is a high concentration aqueous lithium bromide suitable for use as a reagent, as a coolant in nuclear towers as well as in medical applications.

LiBr

Lithium Bromide, Anhydrous (LiBr 98%)

Lithium Bromide Anhydrous (LiBr 98%) is extremely hygroscopic by nature, lithium bromide anhydrous is well suited as a desiccant in air conditioning systems, as well as a humectant and fungicide in medicinal applications.

LITHIUM FLUORIDE

LiF

Lithium Fluoride (Powder)

Lithium Fluoride powder is most widely used as a flux in the production of ceramics, such as enamels, glasses and glazes. Similarly it is also used in brazing and welding flux and molten salt chemistry in metallurgy.

LITHIUM ACETATE

LiOAc

Lithium Acetate, Anhydrous

Lithium Acetate Anhydrous a white granular powder that is freely soluble in water and short chain alcohols. Anhydrous lithium acetate is obtained by heating commercial lithium acetate till the melting point of anhydrous salt, and then cooling it very slowly. Mainstream applications include: Buffer for ion exchange chromatography, in the production industrial polymers and resins, Precursor for lithium ceramic cathode materials in the manufacture of textiles and lubricant greases, Key component of solid polymer blend electrolytes, PVC stabilizer and as an antistatic additive.

LiOAc

Lithium Acetate (29% w/w solution)

Lith LiOAc (29% w/w solution) used as an additive to industrial clearers for neutralizing for carbonated floors, as a highly effective de-icer that is non-corrosive to concrete and stabilizing additive for cleaners to help reduce alkalis as well as a catalyst for oxidation and hydroformylation of organic compounds for their deprotonation and dehydration.

LITHIUM MINERALS

LiAl(SiO3)2

Spodumene

Spodumene is a pyroxene mineral and a source of lithia. It is used in glasses, ceramics, porcelain enamels, whitewares and glazes due to its powerful fluxing properties. It has low thermal expansion, reduces the melt viscosity, melting temperature and contributes to brilliancy and strength of the glass.

LiAlSi4O10

Petalite

Petalite, also known as castorite, is a lithium aluminum phyllosilicate mineral. It is used in ceramics, glass and enamels. The addition of petalite improves strength, density, acid resistance, heat resistance and gloss. It reduces melt viscosity, melting temperature and thermal expansion and promotes melt homogenization.

SPECIALTY LITHIUM CHEMISTRIES

LithMelt™

Anti-icer / De-icer

LithMelt™ is a proprietary, fully formulated deicing composition. The composition includes a potassium or sodium salt of a carboxylic acid and a lithium salt of a carboxylic acid or lithium nitrate, wherein the molar ratio of lithium to potassium or lithium to sodium is from 10 percent to 80 percent.

Micro-Dur™

Hybrid Polymer Dispersion

Micro-Dur™ Hybrid Polymer Dispersion is a specialty organic-inorganic hybrid micro-dispersion composed of nano-silica, lithium silicate and silicon in a resin matrix. The specifically engineered composition and self-cross-linking mechanism provides superior hardness, durability, adhesion, chemical and stain resistance to waterborne clear topcoats, varnishes, and stains.

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