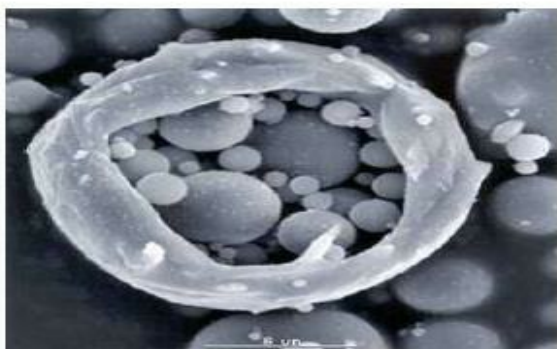


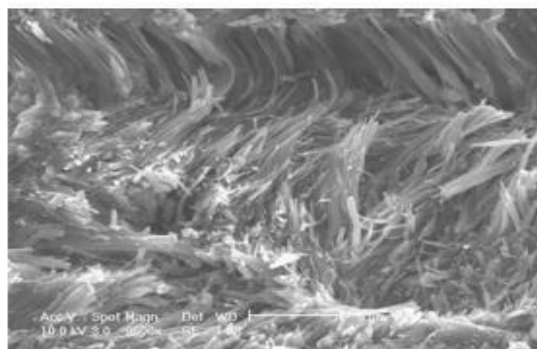
The Mineralogical effect of adding RoadCem to the process of cement stabilisation of soil

Traditional Stabilisation:



Cement glues the particles together
Gluing is “Brittle”!

With RoadCem Additive:



Formation of long strings,
interlocking the particles
Wrapping is “Flexible”!

The above photos of the morphology of Nano modified soil concrete were taken using AFM (atomic force microscopy) to show the elements that are formed which contribute to the special characteristics that RoadCem brings to soil stabilisation.

High tensile strength and breaking strain without any thermal cracking

When RoadCem is added to cement, it rapidly increases the reactivity of the cement creating a high energetic value, which during hydration results in extensive Crystallisation, filling all voids and forming a dense, flexural mass.

RoadCem a mixture of noble-metals (e.g. Aluminium), non-noble metals (e.g. Magnesium) and synthetic Zeolites which combine to give a synergetic reaction to the formation of stable crystalline structures. These bond together and are homogeneously distributed throughout the stabilisation, with cement alone a more open structure can be seen.

Unevenly distributed crystalline agglomerations, can lead to brittleness, the homogeneous distribution created by RoadCem is stable and strong with maximum reaction of the of the cement a crack and leach free monolith is formed. Any available water is bound in and to this crystalline structures. With no free water all potential weak spots are eliminated and the mass becomes impermeable and frost safe.

The resulting mechanical properties of RoadCem soil concrete stabilisation are therefore far more predictable and measurable. Using multi-linear elastic modelling our design engineers Rodgers Leask can calculate final strength and loading capacity with confidence. Allowing the thickness of RoadCem stabilised layers to be safely reduced, saving cost and construction time.

RoadCem soil concrete stabilisation has a high bearing and impact strength providing a safe working platform for heavy plant, with low shear and wider distribution of forces towards the sub soils.