

The invention concerns a composite solid material fixing mineral pollutants, based on metal hexacyanoferrate, comprising a solid support coated with an anion-exchanging polymer film whereon is fixed an insoluble metal hexacyanoferrate forming a thin layer. The invention is characterised in that said polymer is an uncured polymer, which comprises as anion-exchanging groups only quaternary ammonium groups, and it does not comprise primary and secondary amine groups. The invention also concerns a method for preparing said composite solid material fixing mineral pollutants based on hexacyanoferrates. Finally, the invention concerns a fixing method which can be continuously implemented in a column of at least a mineral pollutant contained in a solution, on said composite solid material fixing mineral pollutants. Said solution is in particular a liquid or an effluent derived from nuclear industry or installations.