

SOCORE

Sustained Oxidation and Controlled Oxidant Release Encapsulants



| A PASSIVE REMEDIATION SOLUTION |

SOCORE is a technological advancement in the field of In-Situ Chemical Oxidation (ISCO)

- Independently researched and published by six leading universities including Colorado School of Mines, Ohio State, UNL, Clemson, Purdue, and UNC A&T
- Specialty Earth Sciences, LLC is the exclusive SOCORE patent holder
- SOCORE technology can provide years of sustained oxidant release in saturated soils and groundwater
- Enables the oxidant to penetrate the most challenging geological features including clays, fine silts, bedrock, and other Low Permeability Media (LPM)
- Mitigates contaminant back diffusion commonly associated with traditional ISCO injections
- Passive and effective oxidant delivery throughout the subsurface via advection and concentration-gradient diffusion. Enhanced oxidant release in the presence of non-aqueous phase liquid (NAPL)
- SOCORE materials are installed via direct push techniques (DPT), permanent wells, and horizontal drilling
- NO PRESSURIZED INJECTION, NO CHEMICAL MIXING, NO DUST, NO SURFACING OF LIQUIDS

WHAT IS SOCORE?

Specialty Earth Sciences has developed techniques to coat oxidant crystalline particles with a benign, non-toxic, biodegradable, water insoluble, food-grade paraffin wax. Potassium permanganate and sodium persulfate are the most common SOCORE oxidants. These coated or “encapsulated” oxidant particles can then be manufactured into a variety of finished products to meet your needs. SOCORE materials are supplied in cylinder (aka “candle”) form, in sphere (aka “bead”) form, in pellets, or in slabs. Please contact our representatives to discuss your application.



REFERENCES

Specialty Earth Sciences IP:

US Patent No: 7,431,849-B1
US Patent No: 8,210,773-B2
US Patent No: 8,366,350
US Pat App No: 12-269,520
US Pat App No: 12-169,434
US Pat App No: 13-088,217
US Pat App No: 13-731,735

Related Publications:

Kambhu et al, *Chemosphere*, 2012, 89, 656-664.
Christenson et al, *Chemosphere*, 2012, 89, 680-687.
Woo et al, *Env Tech*, 2009, 30, 1337-1342
Luster-Teasley, *Proceedings of 2007 Natnl Conf on Env Sci and Tech*.
Lee et al, *Chemosphere*, 2007, 74, 745-750
Lee et al, *Chemosphere*, 2007, 71, 902-910
Lee and Schwartz, *Chemosphere*, 2007, 69, 247-253.
Lee and Schwartz, *Chemosphere*, 2007, 66, 2058-2066.
Ross et al *Journal of Environ. Eng.*, 2005, Vol. 131, 1203-1210.
Kang et al. *Ind. Eng. Chem. Res.*, 2004, 43, 5187-5193.



Specialty Earth Sciences, LLC

Environmental Solutions | Technology Development

4350 Security Parkway
New Albany, IN 47150

(p) 812.945.0733 | (f) 812.945.0735
www.sesciences.com