

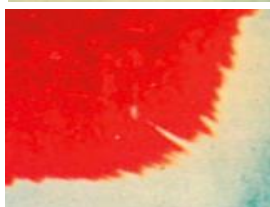


TASK™ Sweep Efficiency

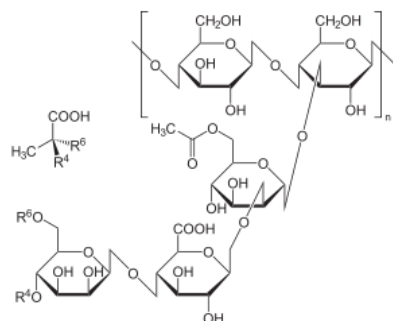
Surfactant-Enhanced Aquifer Remediation

- Avoid fingering of injected fluid and bypassing of lower permeability zones
- Maximize contact between surfactant and NAPL
- Uniform extraction of NAPL
- Improve mobility ratio when recovering viscous NAPLs
- Can be used as a shear-thinning carrier fluid to inject solid particles

Improved Sweep Efficiency



Extraction samples Showing Good Sweep Efficiency



Xanthan Gum Structure

Principle

TASK Sweep Efficiency is a viscous, pseudoplastic fluid that provides mobility control when displacing NAPL in the subsurface during surfactant enhanced aquifer remediation (SEAR).

TASK Sweep Efficiency can also help suspend solid particles such as sand, iron or carbon powders that need to be distributed in the subsurface hydraulically. TASK Sweep Efficiency's excellent viscoelastic properties provide both high viscosity and ease to pump. For example, at high flow rates TASK Sweep Efficiency's viscosity is minimized but its viscosity is increased at low flow rates and under static conditions. This unique property prevents settling of particles. TASK Sweep Efficiency rapidly decomposes in the subsurface once the solids are in place without negatively affecting local permeability.

Advantages

Using TASK Sweep Efficiency makes surfactant flooding more effective by allowing injectates to enter and cleanup lower permeability zones. By improving sweep efficiency, you minimize the number of pore volumes required to clean up the zone.

This product is 100% biodegradable and pre-hydrated into a concentrated solution to simplify field operations.

Use TASK Sweep Efficiency to easily suspend and pump ZVI or adsorbents without contracting

Field Application Design

Inject intermittent batches of TASK Surfactant and TASK Sweep Efficiency products when conducting SEAR. A total of 0.1 to 0.5 pore volumes of TASK Sweep Efficiency diluted 10 to 50 times. Stop adding TASK Sweep Efficiency if injection pressures exceed design rates. Continue with a more diluted solution or go to the next stage in the injection sequence.

For Direct push injection of solids, slowly add solids to a pure TASK Sweep Efficiency solution circulating at high rates in a mixing vessel. This will create a ready to inject suspension.

Product Content

Chemical Name	CAS Number	Composition (% wt)
Xanthan Gum	11138-66-2	~1
Additives	Proprietary	<0.5
Water	7732-18-5	98

Product Characteristics

Parameter	Specification
Specific Gravity	~1
Solubility in water	Miscible
Viscosity	1200-1800 cps
Appearance	Viscous translucent gel

Packaging Options

- 55-gallon poly drums
- 275-gallon IBC containers
- 3,000 - 5,000-gallon tankers

Safety

No protective equipment is necessary under normal use conditions. All ingredients consist of food or food grade additives.