

# Pro-SealECCO TopR.O.C.® Mines (concentrate M)



Nano miso organic polymer for mix with Pro-SealECCO NanoCrete® (dry soils) and/or Pro-SealECCO XXXWCrete® (wet soils)



**Category:**  
Stabilization, toxic mine tailings binder and containment as well as Molding Soils medium; must be used with Pro-SealECCO NanoCrete® and / or Pro-SealECCO® XXXWCrete and Pro-SealECCO®. BedROC in tailings as specified.

**Description:** Pro-SealECCO TopR.O.C.® M is a Vitriform liquid surface component of the patented Pro-SealECCO's rapid setting soils stabilization, containment, and soil molding compound for the Pro-SealECCO® Soils Stabilization System. The system forms a high-density mass that is significantly structurally enhanced, anchored, and stabilized, to maintain slopes, reduce or stop mud, dusting, and allow heavy vehicular traffic. The Pro-SealECCO® mixture is designed site specific, determined by site specific needs. Pro-SealECCO TopR.O.C.® M, applied properly with Pro-SealECCO NanoCrete® M and / or Pro-SealECCO XXXWCRETE® M, Pro-SealECCO BedR.O.C.® M and soil, per guide specifications, can bind in and substantially contain toxic mine tailings leachates in containment environments.

## Specifications:

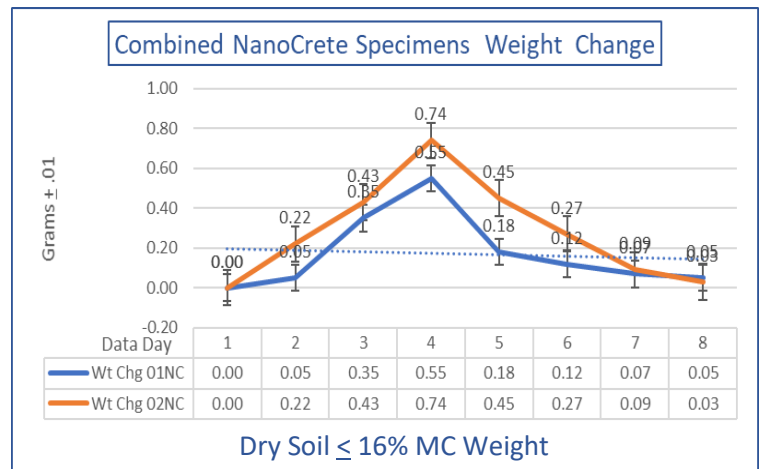
Tailings Specimens Tested as Follows: (modified tests)		
ASTM	Data	Value
C-67, Section 7	Decreased Absorption	Hydrophobic
C-67, Section 14	Decreased Suction	Anionic
C-67, Section 7	Leaching Efflorescence	initial cure
C-156	Stabilizing, avoiding hairline cracking	Significant >
C-666	Freeze thaw damage	98% improved
C-666 Using 5% NaCl	Salt attack in the presence of moisture	97% improved
ORF Method	Dusting due to abrasion	100% improved

## Technical:

Information	Value
Material	1 part
Mix Time	N/A
Appearance	Liquid
Freeze Temp	32°F/0°C
Boiling Point	212°F/ 100°C
V.O.C.	Zero
Enviro Hazard	None Known
Packaging	Bulk as Required

**Product:** Pro-SealECCO TopR.O.C.® M is a Nano Miso organic Polymer that creates strong surface cross linking and a hydrophobic/anionic mass when used with Pro-SealECCO NanoCrete® M and/or Pro-SealECCO XXXWCRETE® M and Pro-SealECCO BedR.O.C.® M.

Pro-SealECCO® TopROC M when properly incorporated into the Pro-Seal® tailings soils stabilization and toxic content binding system significantly enhances the systems ultimate performance over time. Pro-Seal has formulas that are customized to your soils and the intended needs of those soils for both normalized moisture contents and high moisture content soils as demonstrated in the following two tables (below and right).



Results: Dry tailings storage becomes Hydrophobic/Anionic when stabilized with Pro-SealECCO® stabilization systems. This event greatly disallows instability and liquefaction, dust and mud potential of Fly Ash laden structures and roadways.



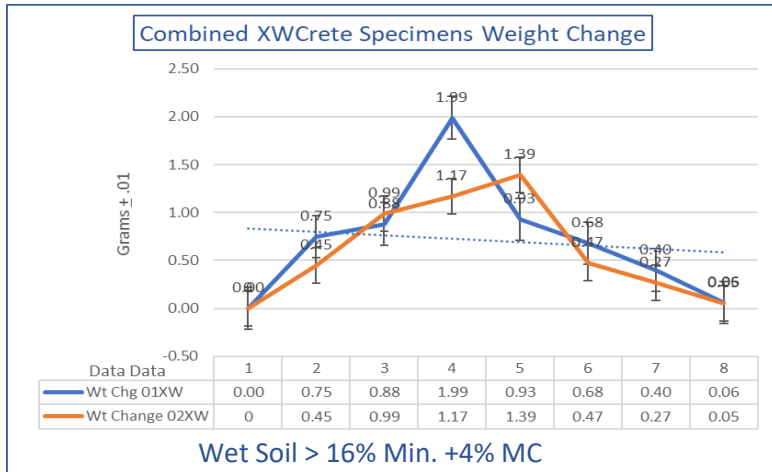
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# Pro-SealECCO TopR.O.C.® Mines (concentrate M)



Nano miso organic polymer for mix with Pro-SealECCO NanoCrete® (dry soils) and/or Pro-SealECCO XXXWCrete® (wet soils)



Results: Wet tailings becomes Hydrophobic/Anionic when stabilized with Pro-SealECCO® stabilization systems. This event greatly disallows instability and liquefaction, dust and mud potential of Fly Ash laden structures and roadways.



The following table (right) displays the leach limits of a variety of toxic materials after a thirty-day exposure to the leaching medium which far exceeds the 18 hour leaching exposure limits parameters of the standard TCLP testing. Required by the EPA. You will note the binding and containment of critical toxic leachates is extremely significant and substantial.

**Caution:** Use only with Pro-SealECCO System® materials Pro-SealECCO; NanoCrete (all forms), XXXWCRETE (all forms), BedROC (all forms) and TopROC. Wear a dust mask, see SDS, as Pro-SealECCO® materials may cause irritation to sinuses, irritate allergies, or cause pneumonia. Keep out of reach of children. Always keep lids on open pails. Call a Doctor immediately if swallowed. Do not induce vomiting. It is up to the user to determine if this product and system are appropriate for their own uses. Pro-SealCorp® makes no claim of warranty of use or performance verbal or written. Any such claim is not valid unless authorized, properly documented, procedural written format and authorization is made by appropriate officers of Pro-SealCorp®.

Leachates From Pro-SealECCO® Bound Tailings Soils	Description	Parts per Million ppm
<b>Volitile Organic Compounds</b>	<b>VOC's</b>	<b>0.0 Zero</b>
<b>Arsenic</b>	<b>AS</b>	<b>0.0005</b>
<b>Mercury</b>	<b>Hg</b>	<b>&lt;.01</b>
<b>Zinc</b>	<b>ZN</b>	<b>0.03</b>
<b>Copper</b>	<b>CU</b>	<b>0.03</b>
<b>Nickle</b>	<b>Ni</b>	<b>0.03</b>
<b>iron</b>	<b>Fe</b>	<b>0.03</b>
<b>Manganese</b>	<b>Mn</b>	<b>0.0002</b>
<b>Chromium</b>	<b>Cr</b>	<b>0.0005</b>
<b>Vanadium</b>	<b>V</b>	<b>0.01</b>
<b>Calcium</b>	<b>Ca</b>	<b>0.3</b>
<b>Potassium</b>	<b>K</b>	<b>45.3</b>
<b>Aluminum</b>	<b>Al</b>	<b>0.001</b>
<b>Magnesium</b>	<b>Mg</b>	<b>0.0002</b>
<b>Sodium</b>	<b>Na</b>	<b>0.3</b>
<b>Argentum</b>	<b>Ag</b>	<b>0.18</b>
<b>Aurum - Gold</b>	<b>Au</b>	<b>0.01</b>
<b>Barium</b>	<b>Ba</b>	<b>&lt;.01</b>
<b>Berylium</b>	<b>Be</b>	<b>&lt;.01</b>
<b>Bismuth</b>	<b>Bi</b>	<b>&lt;.01</b>
<b>Cadmium</b>	<b>Cd</b>	<b>&lt;.01</b>
<b>Cerium</b>	<b>Ce</b>	<b>&lt;.01</b>
<b>Cobalt</b>	<b>Co</b>	<b>&lt;.01</b>
<b>Dysprosium</b>	<b>Dy</b>	<b>&lt;.01</b>
<b>Erbium</b>	<b>Er</b>	<b>&lt;.01</b>
<b>Europium</b>	<b>Eu</b>	<b>&lt;.01</b>
<b>Gallium</b>	<b>Ga</b>	<b>&lt;.01</b>
<b>Gadolinium</b>	<b>Gd</b>	<b>&lt;.01</b>
<b>Hafnium</b>	<b>Hf</b>	<b>&lt;.01</b>
<b>Holmium</b>	<b>Ho</b>	<b>&lt;.01</b>
<b>Lanthanium</b>	<b>La</b>	<b>&lt;.01</b>
<b>Lutetium</b>	<b>Lu</b>	<b>&lt;.01</b>
<b>Molybdenum</b>	<b>Mo</b>	<b>&lt;.01</b>
<b>Niobium</b>	<b>Nb</b>	<b>&lt;.01</b>
<b>Neodymium</b>	<b>Nd</b>	<b>&lt;.01</b>
<b>Phosphorus</b>	<b>P</b>	<b>&lt;.05</b>
<b>Plumbum</b>	<b>Pb</b>	<b>&lt;.01</b>
<b>Praseodymium</b>	<b>Pr</b>	<b>&lt;.01</b>
<b>Rubidium</b>	<b>Rb</b>	<b>&lt;.01</b>
<b>Rhenium</b>	<b>Re</b>	<b>&lt;.01</b>
<b>Sulfate</b>	<b>S</b>	
<b>Antimony</b>	<b>Sb</b>	<b>&lt;.01</b>
<b>Selenium</b>	<b>Se</b>	<b>&lt;.01</b>
<b>Samarium</b>	<b>Sm</b>	<b>&lt;.01</b>
<b>Stanum</b>	<b>Sn</b>	<b>&lt;.01</b>
<b>Stronium</b>	<b>Sr</b>	<b>1.1</b>
<b>Terbium</b>	<b>Tb</b>	<b>&lt;.01</b>
<b>Tellurium</b>	<b>Te</b>	<b>&lt;.01</b>
<b>Titanium</b>	<b>Ti</b>	<b>&lt;.01</b>
<b>Thallium</b>	<b>Tl</b>	<b>&lt;.01</b>
<b>Thulium</b>	<b>Tm</b>	<b>&lt;.01</b>
<b>Uranium</b>	<b>U</b>	<b>&lt;.01</b>
<b>Wolfram</b>	<b>W</b>	<b>&lt;.01</b>
<b>Yttrium</b>	<b>Y</b>	<b>&lt;.01</b>
<b>Ytterbium</b>	<b>Yb</b>	<b>&lt;.01</b>
<b>Zirconium</b>	<b>Zr</b>	<b>&lt;.01</b>