

ConduCrete Technical Specifications

Physical Properties

Property	Typical Value	Unit	Test Method	
Dry Density (Powder)	1400 1.4 87.4	kg/m ³ g/cm ³ lb/ft ³	SAE Inc. Standard 106 (dependent on compaction)	
Wet Density (Hardened State)	1730 1.73 108	kg/m ³ g/cm ³ lb/ft ³	SAE Inc. Standard 106	
Slurry Density	kg/m ³ g/cm ³	lb/ft ³		
Actual slurry density values will vary depending on water content. Contact SAE Engineering for more information.	1529	1,529	95.4	SAE Inc. Standard 106
Dry Volume (Powder)	m ³	ft ³		
55 lb bag 2200 lb supersack 1 lb bag	0.023 0.764 3.5 x 10 ⁻⁴	0.802 27.027 0.012	SAE Inc. Standard 106	
Slurry Volume	m ³	ft ³		
Actual slurry volume values will vary depending on water content. Contact SAE Engineering for more information.	0.025	0.886	SAE Inc. Standard 106	
Hygroscopic Property (Water Absorption)	30	%	SAE Inc. Standard 110	
Water Permeability	2.0 x 10 ⁻⁸	cm/sec	ASTM D5084 (2.6 psi) Mix ratio of 3 US gallons per 55 lb bag	
Electrical Corrosion Resistance		%	SAE Inc. Standard 100	
Copper	95-100			
Steel	95-100			
Galvanized Steel	95-100			

Property	Typical Value	Unit	Test Method
Compatibility Copper Steel Galvanized Steel	Yes Yes Yes		SAE Inc. Standard 100
Environmental Impact	Neutral		Ontario Regulation 558/00 (Leachate Testing) and NSF / ANSI / CAN 60
Carbon Consumption Rate	0.5	kg/ amp-year	SAE Inc. Standard 111
Physical State (Uncured)	Grey Powder		
Physical State (Cured)	Grey Solid		
Odor	None		
Working Time	Approx 30-60	minutes	
Setting Time	24	hours	
Cure Time	28	days	

Compressive Strength Properties

Property	Cure Time			Test Method
Compressive Strength (psi)	1 day	8 days	28 days	
Actual compressive strength values will vary depending on water content. Contact SAE Engineering for more information.	3713	5526	5961	CAN / CSA.A23.2-19
Compressive Strength (MPa)	1 day	8 days	28 days	
Actual compressive strength values will vary depending on water content. Contact SAE Engineering for more information.	25.6	38.1	41.1	CAN / CSA.A23.2-19

Electrical Properties

Property	Typical Value	Unit	Test Method
Resistivity	< 5.0	$\Omega \cdot \text{cm}$	Modified ASTM G187-05
Conductivity	> 0.2	S/cm	Modified ASTM G187-05

NSF / ANSI / CAN 60

ConduCrete meets NSF / ANSI / CAN 60: Drinking Water Treatment Chemicals - Health Effects.
<http://info.nsf.org/Certified/PwsChemicals/Listings.asp?Company=C0169859&>

Leachate (TCLP) and NSF / ANSI / CAN 60 Results

Leachate Data (TCLP Procedure) based on Ontario Regulation 558/00. ConduCrete was tested to NSF / ANSI / CAN 60, section 8 for backfill applications.

Constituent	ConduCrete TCLP Concentration (mg/L)	USEPA Maximum Contaminant Level (mg/L)	ConduCrete NSF 60 Concentration (mg/L)	NSF 60 Acceptance Criteria (mg/L)
Arsenic	BDL	0.010	BDL	0.001
Barium	0.384	2.000	0.000089	0.200
Boron	0.158	2.000*		
Cadmium	BDL	0.005	BDL	0.0005
Lead	BDL	0.015	BDL	0.0005
Mercury	BDL	0.002	BDL	0.0002
Selenium	BDL	0.50	BDL	0.005
Silver	BDL	0.100**	BDL	
Uranium	BDL	0.030	BDL	
Fluoride	BDL	2.000**		
Nitrate (as Nitrogen)	BDL	10.000		
Nitrite (as Nitrogen)	BDL	1.000		
Free Cyanide	BDL	0.200		

BDL means the result is "Below the Detection Level" of the analytical procedure

* No MCL established; value shown is USEPA's Lifetime Drinking Water Health Advisory

** No MCL established; value shown is USEPA's Secondary Drinking Water Standard

Soil Analysis Results

Determination of Anions in Soil Procedure was based on SW846-9056A and Determination of Free Cyanide in Soil was based on EPA OIA-1677.

Constituent	ConduCrete Pro Concentration ($\mu\text{g/g}$)
Fluoride	BDL
Nitrate (as Nitrogen)	BDL
Nitrite (as Nitrogen)	BDL
Free Cyanide	BDL

BDL means the result is "Below the Detection Level" of the analytical procedure

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