

GEM Ground Enhancement Material

Power Utilities



Ground Enhancement Material (GEM) is a superior conductive material that solves your toughest grounding problems. It is the ideal material to use in areas of poor conductivity, such as rocky ground, mountain tops and sandy soil. GEM dramatically reduces earth resistance and impedance measurements. Furthermore, GEM may reduce the size of the grounding system where conventional methods are unsatisfactory. Once installed, GEM is maintenance-free, not requiring periodic charging or the presence of water to maintain its conductivity.

Third-party testing has been completed to verify that GEM conforms to IEC® 62561-7. This standard introduces a benchmark for electrical performance and corrosion of earth enhancement materials that has been absent from the industry to date.

nVent ERICO offers GEM Calculator software that provides resistivity values for common GEM applications and can help estimate the amount of GEM required for an installation. It operates in four languages - English, Spanish, French and German - and performs calculations in Imperial or Metric units. The GEM Calculator is available for download on our website at erico.com.

功能

Maintains constant resistance for the life of the system once in its set form

Performs in all soil conditions even during dry spells

Does not require periodic charging treatments or placement

Does not require the continuous presence of water to maintain its conductivity

Fully sets within 3 days, fully cures within 28 days

Does not dissolve, decompose, or leach out with time

Non-corrosive

Reduces vandalism and theft since conductors are hard to remove from concrete

Easy-to-handle 25 lb (11.3kg) bags or buckets

Requires only one person to install

Exceeds IEC® 62561-7 which sets the benchmark for corrosion, leaching, sulfur content, and other environmental regulations

Complies to the U.S. Environmental Protection Agency (EPA) Toxicity Characteristic Leaching Procedure (TCLP), EPA test method 1311

Can be installed using trench or ground rod backfill methods

技术参数

单位重量: 11.360 kg

Table 1/1

物料号	订货号	包装
GEM25A	163670	带手柄的袋子
GEM25ABKT		带锁盖的塑料桶

每袋 GEM 覆盖的接地导体的预计直线英尺数

开槽宽度	GEM 总厚度		
	10.2 cm	12.7 cm	15.2 cm
10 cm	1.0 m	0.8 m	0.7 m
15.2 cm	0.7 m	0.5 m	0.4 m
20.3 cm	0.5 m	0.4 m	0.3 m
25.4 cm	0.4 m'	0.3 m	0.3 m
30.5 cm	0.3 m	0.3 m	0.2 m

推荐规格		
参数	推荐值	测试方法
标准合 规性		完全符合 IEC 62561-7 EPA 毒性 特性溶出 程序 (TCLP), 测试方法 1311
溶出	砷 < 1.5 毫克/升, 钡 < 60 毫克/升, 镉 < 0.15 毫克/升, 铬 < 3.0 毫克/升, 铅 < 1.5 毫克/升, 汞 < 0.06 毫克/升, 硒 < 1.0 毫克/升	EC 62561-7 EN 12457-2
硫含量	< 2%	ISO 14869-1
电阻率	粉末 < 2 欧姆-厘米 混合及固化材料 < 20 欧姆-厘米	压粉 符合 ASTM G187-12 根据 ASTM D991-89 混合和固化
腐蚀性 能	对于镀铜接地电极, 极化电阻应 > 8 欧姆 x 平方米 (严苛环境下) 对于镀锌接地电极, 极化电阻应 > 7.6 欧姆 x 平方米 (严苛环境下)	IEC 62561-7, 第 5.5 节, 严苛环境
抗弯强 度	300-450 磅/平方英寸 [2070-3100 千帕]	ASTM C293
抗压强 度	100-200 磅/平方英寸 [690-1390 千帕] 672 小时固化时间后	ASTM C109

回填接地棒的 GEM 的预计袋数, 密度 63.5 磅/平方英尺 (1,017 千克/平方米)													
孔直径		英尺	米	英尺	米	英尺	米	英尺	米	英尺	米	英尺	米
英寸	厘米	5	1.5	6	1.8	8	2.4	10	3	15	4.6	20	6.1
4	10.2	2		2		2		3		4		5	
6	15.2	3		3		4		5		8		10	
8	20.3	5		6		8		9		14		18	
10	25.4	7		9		12		14		21		28	
12	30.5	10		12		16		20		30		40	

警告

应仅根据 nVent 的产品说明书与培训材料安装并使用 nVent 的产品。可访问 www.nvent.com 获取说明书, 或者向您的 nVent 客服代表索取。错误安装、使用不当、滥用或未能完全遵守 nVent 的说明与警告, 可能会造成产品故障、财产损失、严重的人身伤害及死亡和/或使得保修服务无效。

⚠ WARNING: This product can expose you to chemicals including silica and hexavalent chromium, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.



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