

DURABILITY ASSESSMENT OF TENAX TT GEOGRIDS

During the service life of soil reinforcement, Tenax geogrids will be exposed to a wide variety of environmental conditions. These occur from external factors, such as ultraviolet light (UV) and temperature variations, as well as from burial in soil where chemical and biological conditions may be present.

To account for these environmental conditions, Tenax geogrids are tested and assessed for durability including susceptibility to hydrolysis on the basis of CE durability assessment, 'Annex D: Harmonized Standard relating to Directive of Construction Products - 89/106/ECC.

They have been predicted to be durable for a minimum of 120 years in soils with $1.6 < \text{pH} < 13$.

Chemical resistance

Tenax Geogrids have a high resistance to degradation from the types of chemicals and in-soil temperatures normally experienced in soils found in civil engineering applications.

Microbiological attack

Tenax geogrids have no nutritional value associated with the materials used for manufacture, and are therefore not attacked by micro-organisms. The geogrids are highly resistant to microbiological attack.

Resistance to oxidation

Geogrids can be affected by oxidation. Tenax geogrids are protected by the addition of appropriate antioxidant content and tested in accordance with BS EN ISO 13438 to determine their resistance to oxidation. Tenax geogrids are therefore effectively stabilised against long-term oxidative effects.

Resistance to UV light

Ultra-violet light (UV) can damage unprotected polymers rapidly, by breaking down the molecule chains. Tenax geogrids are protected by the addition of carbon black within the polymer make-up, which gives a high degree of protection by preventing UV light from penetrating beyond a thin layer at the surface. Tenax geogrids therefore have a high resistance to UV light.

TENAX
GEOSYNTHETICS



SGS ITALY Certificate n° IT93/0008.01
SGS U.K. Certificate n° IT93/2568.01



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ISTITUTO PER LE TECNOLOGIE DELLA COSTRUZIONE

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