

# RockBase – Corrosion Protection & Durability Overview

This document outlines the estimated service life and corrosion resistance of RockBase ground screws, based on industry-standard galvanization, advanced coating options, and global engineering practices. The recommendations are provided to assist engineers and clients in choosing the appropriate protection level based on soil conditions and pH levels.

## Global Comparison & Standards

International manufacturers (UK, EU, US) typically offer **25-year warranties** on galvanized ground screws. Life expectancy can reach **50–75 years** depending on soil type, zinc coating thickness, and added protection. RockBase products are aligned with these standards, often exceeding them.

## Galvanization Thickness & Performance

Typical industry zinc coating is 85 µm. RockBase offers **120–150 µm** hot-dip galvanization, exceeding **Israeli Standard 918** and international norms. Xenon-based accelerated corrosion tests confirmed excellent performance under UV, moisture, and acidic conditions.

## Soil Acidity & pH Impact

The corrosiveness of soil depends largely on its pH. Ground screws' durability changes dramatically based on this parameter. Clients are advised to conduct a certified soil pH test to determine exact exposure levels.

- **pH < 5.5 (acidic, clay soils):** higher corrosion rate (up to 20 µm/year)
- **pH 5.5–7.0 (moist, organic soils):** moderate corrosion (6–10 µm/year)
- **pH > 7.0 (sandy/alkaline soils):** low corrosion (3–6 µm/year)

## Estimated Service Life Table

Coating Type	pH < 5.5 (Acidic / Clay)	pH 5.5–7.0 (Moist / Organic)	pH > 7.0 (Sandy / Alkaline)
Hot-Dip Galvanized (120–150 µm)	Up to 15 years*	20–25 years	25–30 years
Galvanized + Epoxy Coating	25–30 years	30–35 years	35–40 years
Galvanized + Line-X Coating	30–35 years	35–40 years	45+ years

\*Estimated for high-acidity soils. Final durability depends on certified laboratory pH testing.

## Warranty Conditions

RockBase provides standard warranty coverage as follows:

- **Galvanized only:** up to 15 years
- **Galvanized + Epoxy:** up to 20 years
- **Galvanized + Line-X:** up to 25 years

Final warranty terms are subject to certified pH testing. The above data is a technical recommendation and does not replace site-specific engineering verification.

## Partnerships & Testing

RockBase partners with **Line-X Israel (Mevo Horon)** to provide high-performance anti-corrosion coatings. Line-X is a global leader in elastomeric industrial protection, offering proven durability in extreme conditions. Sample screws have undergone laboratory tests and field validations.