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Technical Article: Written by Scott Worthington

The “expected wear” or life of a sealer

When Sealers Choice Gold, one of the first, if not *the* first, premium sealer in the world with a proclaimed life of up to 15 years, many in the industry wondered how this could be substantiated. As the years rolled on and the initial Sealers Choice installations continued to perform the doubters quickly became believers. However these successes breed another type of client and competitor, those that believed or claimed a sealer would last for a predetermined amount of time, period! As this is an unrealistic expectation and claim, how is the life expectancy (expected wear) of a sealer calculated?

The first thing to understand is there are no internationally recognized test methods or standards for stone and tile sealers. There are some common test methods such as shear bond and vapour transmission, but no performance standards or standard tests a sealer *must* pass. This includes the performance characteristic of expected wear (EW). Because of this there is no independent way of evaluating one manufacturers claim regarding EW with another. However, Aqua Mix has always taken a responsible and scientific approach to all of our testing including claims regarding EW.

Aqua Mix calculates expected wear by analysing a number of different factors:

1. **Raw material analysis.** All sealers utilize a core technology that in most cases comes from a raw material supplier. The suppliers do extensive testing on the raw materials in their more pure form that includes accelerated laboratory testing to ascertain the life expectancy of the material. The testing also identifies the core characteristics of the materials such as resistance to UV, chemical resistance, abrasion resistance (where applicable) and moisture vapour transmission to name a few. All of these affect the sealers overall EW.
2. **In house and independent sealer testing.** Once the raw materials are massaged into a specific formulation it is put through another raft of tests to see how the original characteristics are affected. Other tests are carried out over and above the originals such as stain testing and COF. The Aqua Mix lab is set up for exposure testing (imperative to help calculate EW) to make sure that the formulation is still consistent with the original raw material performance.
3. **Stone and tile analysis.** One of the most important parts of the sealer performance jigsaw is the characteristic of the stone or tile. Some manufacturers maintain that some sealers have the same performance regardless of the type of stone or tile they are applied to. However, our experience tells us otherwise. We know that a sealer’s overall performance is influenced by the physical characteristics of the material to be sealed and this includes a sealers EW. We analyse and document a number of stone characteristics such as hardness (Mohs), thermal expansion, soluble content and chemical composition. From these we can analyse how a specific type of compound used in a sealer will work on a specific stone and more specifically for how long. For example most of our premium sealers use active ingredients that will last in their pure form for much longer than our published sealer life of up to 15 years. However when applied to a tile or stone the hardness of the material greatly affects how long the sealer will last. Therefore, the Mohs hardness of a stone or tile becomes a very important factor in determining the expected life of the applied sealer, as do the other physical characteristics of the stone or tile.
4. **Experience and Field References.** The last major part of the EW calculation is that of job site experience and field references. Evaluating actual jobs in pre-launch testing to see how they perform versus laboratory models is part of the process. However perhaps the most convincing data is from jobs that are well advanced in terms of their life and in the case of Aqua Mix, jobs that

already exceed the EW claims made by the company. Examples of such products are Penetrating Sealer, Sealers Choice, Grout Sealer and Grout Colorant. All of these have been used successfully on jobs for longer than the EW claims made by the company. This not only justifies the EW claims but also helps us identify the best raw materials for use in future sealers.

In summary due to the absence of any international test methods or performance standards for stone and tile sealers Aqua Mix uses a complex system of data analysis to calculate the expected wear of a sealer. Our realistic approach is reflected in two major ways:

1. **The words “Up To”.** In all our claims of EW we use the term “up to” ... 15 years for example. This means that in certain circumstances the sealer will last 15 years and in others it will last a shorter period of time. The significance of this is we recognize that the overall performance and life of a sealer is affected by many other variables such as maintenance, type of stone or tile, type of environment and its use and climate. Simply stating that a sealer will last a predetermined amount of time regardless of these many variables is not accurate or responsible.

EXPECTED WEAR:

- Will vary depending on hardness and texture of surface, type of area, surface wear, frequency, and type of maintenance products used.
- The expected wear is up to 15 years.
- Weather conditions, harsh cleaning methods, and high-alkaline, acidic, or solvent-based cleaners will affect wear.

2. **Commercial Warranty Program.** This program is different to most other warranties in the industry. When a sealer is used on a job it is impossible to give a simple “standard” warranty that covers every stone, tile, environment and use. The Aqua Mix commercial warranty works by gathering a variety of data (type of stone or tile, area of use, type and amount of traffic, climate etc), adding the extra ingredient of job history, and then calculating the expected wear and hence warranty for the specific application. This process recognises the simple fact that the EW or life of a sealer is inextricably linked with other job site-specific variables and factors as well as the physical characteristics of the tile or stone being sealed.

Introduction
 At Aqua Mix, we understand that you have a high standard for your stone and tile. Aqua Mix has long set the standard for field performance. We have a proven track record of success. Aqua Mix is the most complete provider of Sealers, Cleaners, Finishes, Polishes, Sealers and Grout Colorants for the Stone and Tile Industry. Our products have come to be known as the most professional grade sealers and maintenance products available in the United States and worldwide!

Technical Support
 Our experienced Technical Services Department is highly qualified to answer your questions regarding the use of our products. We have a team of experts who can help you with all of our products. Aqua Mix is the only company in the industry that offers this level of support. Aqua Mix is the only company in the industry that offers this level of support. Aqua Mix is the only company in the industry that offers this level of support.

Satisfaction Guarantee!
 If you're not happy, we're not happy! In other words, we will refund your money if you are not satisfied with the performance of the following Aqua Mix products that are purchased from us with a written warranty.

Commercial Product Warranty Program
 If you are consistently satisfied with a product's performance, when used in accordance with the product application instructions, Aqua Mix will either refund the purchasing price or replace the product.

Products Covered:
 ENHANCING SEALER
 GROUT COLORANT
 GROUT SEALER
 HIGH-GLOSS SEALER
 PENETRATING SEALER
 POLISHING SEALER
 SEALER'S CHOICE™ GLOSS SEALER & FINISH LOW SHEEN STONE ENHANCER
 ULTRA SOLAR™



JOB REGISTRATION FORM COMMERCIAL PROJECT WARRANTY PROGRAM

HOW TO REGISTER: The following information must be completed in full and provided to Aqua Mix Inc. prior to the issuance of an Aqua Mix Inc. Commercial Project Warranty. 1) The Job Registration Form should be completed by the responsible party and mailed to Aqua Mix Inc., 13001 Seal Beach Blvd., Seal Beach, CA 90740 or faxed to (562) 799-0943, Attn: Technical Services Manager. 2) Once received the form will be reviewed to determine the length of warranty. An actual Warranty Certificate will be issued upon approval by Aqua Mix Inc.

Name and address of project/information:

Project Name: _____ Type of Tile/Stone: _____
 Address: _____ Finish (circle) Polished Smooth Textured
 City/State: _____ Square Footage/m²: _____
 Zip/Postal Code/Country: _____ Interior/Exterior: _____
 Phone: _____ Location (circle): Floor Wall Countertop Other
 FAX: _____ New/Existing: _____
 Aqua Mix Product(s) _____ If Existing, how old: _____
 Specified on project: _____ When Installed: _____

In conclusion the expected life of a sealer is not something that can be predetermined for all materials on all types of applications. It is, like the other performance characteristics, something that must be calculated from a variety of data and sources, where possible, based on science. This calculation is the most realistic and responsible way to report sealer performance including expected wear.



Points for selling Aqua Mix Products:

My article this month is I think self-explanatory. However I cannot impress on you enough the importance of making sure our customers understand our expected wear claims. It is a very important point of difference between Aqua Mix and some of our major competitors. When the policy is fully explained and contrasted to those brands that give predetermined and blanket performance and warranty claims, it establishes us as the honest and professional brokers in our industry. This image (created by such policies) is one of the main reasons Aqua Mix is such a trusted and dominant professional brand.



Aqua Mix exclusive distributor in New Zealand and the South Pacific