

Waterborne Epoxy Flooring Formulations

Sustainability meets high performance



Waterborne flooring formulations increase the sustainability handprint whilst offering high performance and fast return to service. Some of the advantages of waterborne floor coatings include:

- low emissions
- best in class adhesion even to damp concrete
- fast curing: 4 h walk on time at 10 °C possible
- long pot life, easy handling and mixing
- excellent carbamation resistance
- high surface quality
- high UV stability

With Evonik's waterborne curing agents and coating additives, you can achieve highly efficient and sustainable floor coating formulations. During the coating production, a broad toolbox of grind aids, wetting and dispersing additives can increase the efficiency of the pigment dispersion process and enables you to save cost and energy in the formulation process. As the trend goes increasingly towards ultralow VOC coatings, waterborne formulations offer the ideal technical solution to meet the demanding requirements. Waterborne curing agents provide a high mechanical strength and robustness, making the floor coatings highly durable and needing low maintenance.

	PRODUCT	KEY FEATURES
Topcoat sealers (clear)	ANQUAMINE® 100 ANQUAMINE® 728	Excellent transparency and UV stability, high stain resistance
Topcoats (filled)	ANQUAMINE® 721 ANQUAMINE® 728	Good UV, fast, high-quality finish
Self leveling	ANQUAMINE® 735 EPILINK® 701	High build, no osmotic blistering
Epoxy cementitious	ANQUAMINE® 287	Thermal shock resistance
Primers	ANQUAMINE® 287 ANQUAMINE® 721 ANQUAMINE® 728 EPILINK® 360	Excellent adhesion, no carbamation



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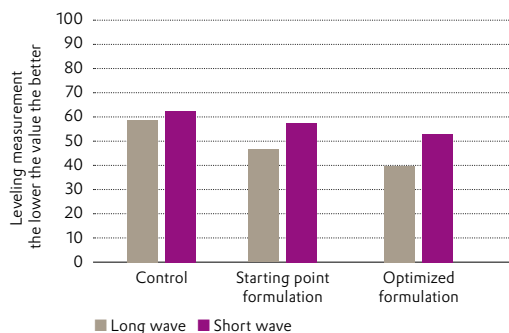
Guide Formulations

Optimize your formulation in four steps:

- Start with the dispersing agent by finding the best for stabilization of the formulation with the lowest influence on foam behavior.
- Followed by determining a defoamer which balances the efficiency and compatibility the best whilst not having a negative impact on gloss and haze.
- Next, choose a product to improve flow and leveling of the formulation. Have in mind that the flow and leveling agent should not have an impact on foam behavior, gloss or haze.
- Last but not least, enhance the stability and workability of the formulation by selecting a good thickener without negative impact on foam behavior.

To further improve our starting point formulation with **ANQUAMINE® 728** and **ANCAREZ® 4305**, we have selected **TEGO® Foamex 845**, **TEGO® Dispers 755 W**, **TEGO® Viscopplus 3030** and **TEGO® Wet 238** to optimize the formulation.

Leveling test to compare starting point formulation and optimized formulation



Test Set-up

Device:

BYK-GARDNER wave-scan plus

Measurement:

Measure leveling on dry panels at short and long wave

starting point formulation



optimized formulation



Final guide formulation

COMPONENT	Optimized formulation
Part A	Dosage [g]
ANQUAMINE® 728	29.10
TEGO® Foamex 845	0.10
TEGO® Dispers 755 W	1.10
KRONOS® 2160	25.60
TEGO® Viscopplus 3030	0.45
TEGO® Wet 238	0.65
Water	20.10
TOTAL Part A	77.10

COMPONENT	Optimized formulation
Part B	Dosage [g]
ANCAREZ® 4305	22.90
TOTAL Part B	100.00

PRODUCT	Active matter
TEGO® Foamex 845	20%
TEGO® Dispers 755 W	40%
TEGO® Viscopplus 3030	60%
TEGO® Wet 238	100%



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