

Vinapor® DF 9010 F

Defoamer in powder form for cementitious drymix mortars

Introduction

Defoamers are essential additives in many types of grouts and mortars. Foam or air bubbles are created during the mixing process of the mortar with water and become entrapped. Without addition of defoamer and elimination of the foam the air voids reduce density, reduce strength and produce surface defects. Most defoamers are developed and produced for application in paints and coatings. BASF Construction Additives GmbH researched and developed a defoamer that is optimized for use in construction products based on mineral binders.

Mode of Action of Defoamers

Vinapor® DF 9010 F prevents the formation of foam by destabilizing the air bubble so that it collapses inside the mortar or rises to the surface and easily pops. Because materials based on mineral binders set and harden fast the defoaming action must occur rapidly otherwise voids will remain below or on the surface.

Vinapor® DF 9010 F removes the foam completely and provides a hard and smooth surface.

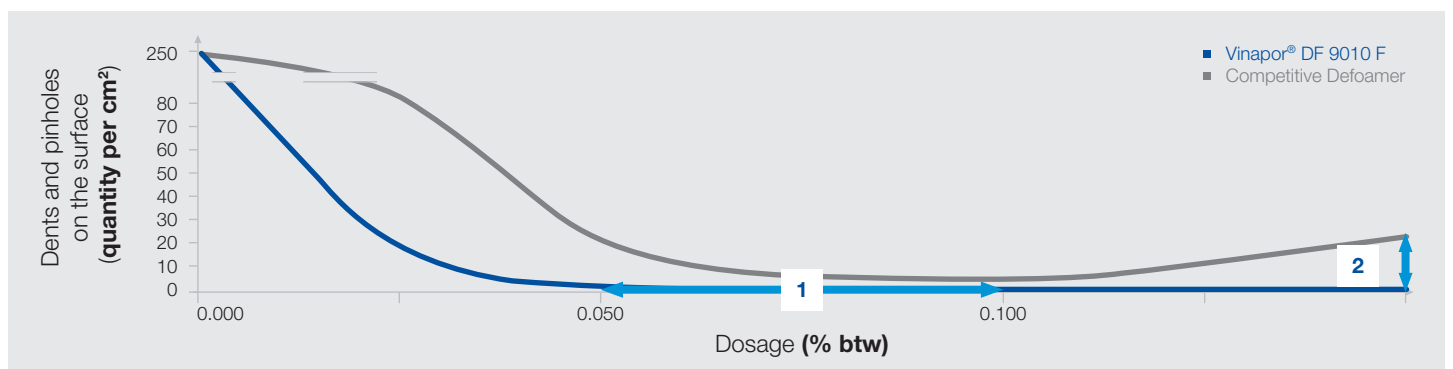
Typical applications

Product	Applications									Properties	Dosage
	Flowable Systems					Repair Systems					
	Self-leveling Underlayments		Cementitious Flowing Floor Screeds	Self-leveling Overlayments / Industrial Floors	Non-shrink Grouts / Machinery Grouts	Reinforcement Protection	Bonding Aid / Primer	Repair Mortars			
cementitious	calcium sulphate	PCC						CC			
Vinapor® DF 9010 F	■	■	■	□	■	■	■	□	□	high efficient defoaming for improved strength and bonding, prevents air bubbles, provides smooth surface (RAL ZU 113 conform)	0.03 – 0.25

■ excellent □ suitable

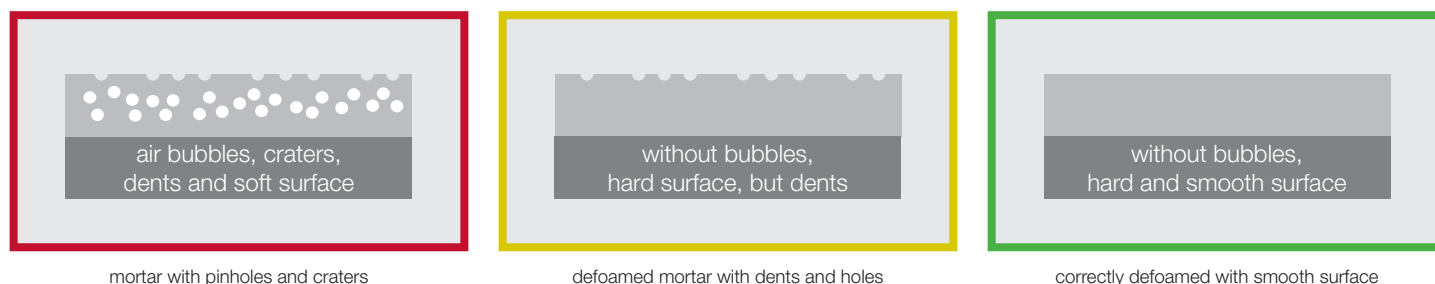
Comparison of dosage efficiency and mortar / surface quality

In comparison to commonly available defoamers **Vinapor® DF 9010 F** produces the desired defoaming effect at low dosages (**1**). The typical dosage rate for **Vinapor® DF 9010 F** starts at approx. 0.03% (btw). Typical competitive defoamers require 0.10% – 0.15% (btw). High dosage rate defoamers tend to decrease the surface quality of the hardened mortar (**2**) and can be erratic as the dosage rate is adjusted.



Hardened mortars – surfaces and below

The mode and efficiency of defoamers is reflected by the quality of the surface and the body of the mortar below the surface. Desirable is a mortar with a smooth surface as well as a completely defoamed body providing high compressive strength values.



Comparison of surfaces of hardened mortars

The advantage of **Vinapor® DF 9010 F** in a Self Levelling Underlayment or Screed can be assessed by visual comparison of the surface with and without defoamer and at increasing dosage rates besides measuring air-void-contents.

Dosage	0.00 %	0.05 %	0.10 %	0.15 %
Vinapor® DF 9010 F				
Competitive defoamer				

Features	Benefits
▶ High dosage efficiency (reduced up to 50% less than commonly available defoamers)	▶ Reduced material cost
▶ Very high surface quality at low dosages (reduced dents and pinholes)	▶ Reduced or eliminated repairs to surface
▶ No foam formation on the surface	▶ High surface quality
▶ Produces desired results when dosage rate is adjusted	▶ Robust performance
▶ Not temperature sensitive	▶ No seasonal limitations
▶ Suitable for mortars fulfilling EMICODE® EC1 requirements and low dust explosion values – depending on other raw materials and additives	▶ Applicable in health- and safety-sensitive applications and conditions

Further information (test formulations and further test results) is available on demand. Please feel free to contact our local sales representatives.

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