

Developing together. Building with each other.

We create chemistry for
advanced construction.

Construction Additives



BASF Construction Additives and Formulation Know-How for Construction Materials

To achieve groundbreaking formulations providing outstanding workability and physical properties, your system needs advanced raw materials.

The properties of construction materials, such as dry mortars or mastic systems, are influenced by the quality of local raw materials. Therefore, interactions between organic and inorganic binders, fillers and a range of chemical additives need to be controlled to ensure the best performance of the system.

We create chemistry for advanced formulations: a broad range of powder and liquid additives which enable you to formulate innovative products.

Our application-focused technical experts in our laboratories support you in optimizing your formulations and choosing the right raw materials.

Additionally, we provide you with the right solution for your specific raw materials and special local requirements.

We especially support you in:

Repair Systems and Infrastructure

Flowable Systems

- Self-levelling underlayments
- Cementitious and calcium sulphate-based screeds
- Non-shrink grouts

Non-sag Applications






- Mastic and cement-based ceramic tile adhesives
- Exterior insulation and finishing systems (EIFS/ETICS)
- Plasters and renders





Creating chemistry for more sustainable Construction Materials

To drive sustainable development, we reviewed our entire portfolio under sustainability aspects by using the standardized “Sustainable Solution Steering Method*”. Looking at economic, environmental and social needs, we have identified key issues along the entire value chain for the Construction Materials segment. On this basis, we are able to assess the sustainability contribution of each product in its specific application.

-  Material Efficiency
-  Fast Construction
-  Easy Application
-  Low VOC
-  Drinking Water Approval

Flowable Systems

Product	Chemistry/ Appearance	Applications / Type of Formulation										Properties	Sustainability contribution*
		Cementitious mortars					Calcium sulphate based mortars						
		Self-leveling underlayments	Flowing floor screeds	Self-leveling overlayments/ Industrial floors	Conventional floor screeds (non flowable)	Non-Shrink grouts/ Machinery grouts	Hemihydrate based (CaSO ₄ • 1/2 H ₂ O)		Anhydrite based (CaSO ₄)				
Self-leveling underlayments	Flowing floor screeds						Flowing floor screeds (natural anhydrite)	Flowing floor screeds (synthetic anhydrite)	Flowing floor screeds (thermal anhydrite/FGD anhydrite)				
Superplasticizers													
Melflux® 1022 F	Polycarboxylic Ether/Powder							■	■	■	■	Optimised for gypsum based flowing floor screeds, low VOC (useful for EMICODE® EC-1)	
Melflux® 2641 F	Polycarboxylic Ether/Powder	□	□	□		□						Long flow retention (open time), high early strength development, German drinking water approval (DVGW W270 & W347)	
Melflux® 2651 F	Polycarboxylic Ether/Powder	■	■	■		■						Allround product, high early strength development, German drinking water approval (DVGW W270 & W347)	
Melflux® 4930 F	Polycarboxylic Ether/Powder	■	■	■		■						Fast dispersing effect, benefit for machine application (short mixing), French drinking water approval (compliance with positive list No. 2000/232, Apr. 27, 2000)	
Melflux® 5581 F	Polycarboxylic Ether/Powder	■	■	■		■	■					High early strength development, very useful for hemihydrate based SLUs	
Melflux® 6681 F	Polycarboxylic Ether/Powder	■		■								Very fast dispersing effect, benefit for machine application (very short mixing)	
Melflux® AP 101 F	Polycarboxylic Ether/Powder		□	□		■						Without defoamer, very useful for cementitious grouts with low viscosity	
Melflux® BF 11 F	Polycarboxylic Ether/Powder		■			■						Very good slump retainer without retardation of cement hydration	
Melflux® PP 100 F	Polycarboxylic Ether/Powder	□		□								Strong retardation, prolonged workability, preferably for fast setting cements	
Melflux® SELECT 5691 F	Polycarboxylic Ether/Powder						■	■				Optimized for binary binder systems (HH-rich/OPC)	
Melflux® SELECT 5731 F	Polycarboxylic Ether/Powder	■	■	■		□						Optimized for calcium sulphoaluminate cement (CSA) based systems	
Melment® F 10	Melamine-Condensate/Powder	□	□	□		□		□	□	□	□	Allround product	
Melment® F 10 G	Melamine-Condensate/Powder							□	□	□	□	Optimised for gypsum	
Melment® F 10 M	Melamine-Condensate/Powder	□	□	□		■						Enhanced dispersing effect (dosage efficiency & water reduction)	
Melment® F 15	Melamine-Condensate/Powder	■	■	■		□						Low formaldehyde content (reduced emission)	
Melment® F 15 G	Melamine-Condensate/Powder							■	■	□	■	Optimised for gypsum, long open time, low formaldehyde content	
Melment® F 17 G	Melamine-Condensate/Powder							■	□	■	■	Optimised for gypsum, lower formaldehyde content	
Melment® F 245	Melamine-Condensate/Powder	■	■	■		■				■		Strongest dispersing effect (dosage efficiency and water reduction)	
Melment® F 4000	Melamine-Condensate/Powder	□	□	□		■						Enhanced dispersing effect (dosage efficiency & water reduction), German drinking water approval (DVGW W270 & W347)	
Stabilizers													
Starvis® 3003 F	High molecular weight polymer/Powder	■	□	□		□	□					Prevents bleeding and segregation, optimised for thin layer systems	

Product	Chemistry/ Appearance	Applications / Type of Formulation										Properties	Sustainability contribution*
		Cementitious mortars					Calcium sulphate based mortars						
		Self-leveling underlayments	Flowing floor screeds	Self-leveling overlayments/ Industrial floors	Conventional floor screeds (non flowable)	Non-Shrink grouts/ Machinery grouts	Hemihydrate based (CaSO ₄ • 1/2 H ₂ O)		Anhydrite based (CaSO ₄)				
Self-leveling underlayments	Flowing floor screeds						Flowing floor screeds (natural anhydrite)	Flowing floor screeds (synthetic anhydrite)	Flowing floor screeds (thermal anhydrite/FGD anhydrite)				
Starvis® 3040 F	High molecular weight polymer/ Powder	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Prevents bleeding and segregation, optimised for thick layer systems	
Starvis® 3050 F	High molecular weight polymer/ Powder	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						Prevents bleeding and segregation, optimised for medium and thick layer systems	
Starvis® 3070 F	High molecular weight polymer/ Powder	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						Prevents bleeding and segregation, optimised for thin layer systems	
Viscosity-enhancing Biopolymers													
KELCO-CRETE® DG	Diutan Gum/ Powder (coarse grade)		<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prevents sedimentation of mineral particles, optimised for thick layer systems	
KELCO-CRETE® DG-F	Diutan Gum/ Powder (fine grade)	<input type="checkbox"/>	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Prevents sedimentation of mineral particles, optimised for thick layer systems	
Defoamers													
Vinapor® DF 2922 F (former FoamStar® PB 2922)	Silicon free defoamer blend/ Powder	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>					General purpose defoamer, RAL-UZ 113 conform, suitable for formulations complying with BFR XIV (drinking water approval for Germany)	
Vinapor® DF 2938 F (former FoamStar® PB 2938)	Polyether derivative of fatty acid on inert carrier/ Powder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>					General purpose defoamer	
Vinapor® DF 2941 F (former FoamStar® PB 2941)	Mineral oil on inorganic carrier/ Powder	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>					General purpose defoamer, RAL-UZ 113 conform	
Vinapor® DF 9010 F	Fatty alcohol alkoxylates and polysiloxanes on inorganic carrier/ Powder	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Very efficient defoaming effect, prevents air bubbles, provides smooth surface, low VOC (useful for EMICODE® EC-1, RAL-UZ 113 conform)	
Additives for conventional cementitious floor screeds													
Melvis® C 4632 F	Wetting Agent/ Powder				<input checked="" type="checkbox"/>							Improves finishing process with trowel (smooth surface)	
Melvis® C 1143 F	Water Reducing Agent/Powder				<input checked="" type="checkbox"/>							Water reduction, shrinkage reduction, faster drying	
Melvis® C 4212 F	Water Reducing Agent/Powder				<input checked="" type="checkbox"/>							Strong water reduction, strong shrinkage reduction, faster drying	
Melvis® C 9100 F	Water Reducing Agent/Powder				<input checked="" type="checkbox"/>							Very strong water reduction, strong shrinkage reduction, very fast drying	
Hydration Control Additives													
HyCon® R 3100 F	Modified polymer/Powder	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>				Selective retardation of hemihydrate in binary (OPC-rich/HH) systems	
HyCon® R 7200 F	Modified polymer/Powder						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				Retardation of setting of hemihydrate systems and binary (HH-rich/OPC) systems	
HyCon® S 3200 F	C-S-H seeding/ Powder	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>						Acceleration of systems based on OPC and increase of early strength development by C-S-H seeding technology	
HyCon® S 7100 L	Aqueous suspension of C-S-H seeds/ Liquid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>						Acceleration of systems based on OPC and increase of early strength development by C-S-H seeding technology	

■ = recommended □ = suitable

Material Efficiency Fast Construction Easy Application Low VOC Drinking Water Approval

* The respective product has been evaluated with BASF's Sustainable Solution Steering Method and provides substantial sustainability contribution in the specific application.

Non-sag Applications
















Product	Chemistry/ Appearance	Applications / Type of Formulation											Properties	Sustainability contribution*
		Ceramic Tile Adhesives				Tile Grouts	EIFS/ETICS		Plasters & Renders			Masonry Mortars		
		Cementitious		MASTIC/RTU			Cementitious	Mastic	Cementitious	Gypsum based	Skim coats/Mono-couche Systems			
1C Cem	2C Cem	D2-CTA	D1-CTA	Cementitious	Mastic	Cementitious						Gypsum based	Skim coats/Mono-couche Systems	
Wetting Agents/Water Reducers														
Melflux® 5581 F	Polycarboxylic Ether/Powder	☐				☐	☐		☐	■		☐	Improved mixing; Optimised for gypsum based systems	
Melment® F 10	Melamine-Condensate/Powder	■				■	■		■	■		■	Improved mixing	
Melvis® WA GYP 1000 F	Synthetical Block-Copolymer									■			High wetting properties without sag-loss	
Vinapor® WA 3918 F (former Hydropalat® WE 3918)	Oleo-alkyleneoxide-block copolymer, coated on silica					■						☐	Excellent dispersing and wetting properties; Marked viscosity reduction; Increases color development and stability in pigmented systems	
Workability Agents														
Starvis® SE 25 F	Starch Ether/Powder	☐				☐	☐		■	■	■	■	Stickness reduction; Little influence on consistency/ no retardation	
Rheology Modifying Agents														
Starvis® 308 F	Synthetical Polymer/Powder	☐				☐	☐		■	■			Rheology improvement, water retention, no retardation	
Starvis® S 3911 F	Synthetical Polymer/Powder	■	■				■		☐		■	☐	Swellable polymer for open time and sag resistance improvement, workability improvement	
Starvis® S 5514 F	Synthetical Polymer/Powder	☐				■	■		☐		■	☐	Swellable polymer for water storage and improved pore structure	
Starvis® SE 35 F	Starch Ether/Powder	■	☐				■		■	■	■	■	Sag resistance introduction, workability improvement	
Starvis® SE 45 F	Starch Ether/Powder	■	■										Efficient sag resistance introduction, low retardation	
Starvis® RS 421/01 F	Synthetical Polymer/Powder	■	■										Efficient thickening compound for basic CTA; Open time and sag resistance improvement	
Starvis® T 50 F	Synthetical Polymer/Powder	■	■	☐	☐		☐		☐	☐			Very efficient sag resistance introduction	
Starvis® T 51 F	Synthetical Polymer/Powder	■	■	☐	☐		☐		☐	☐			Very efficient sag resistance introduction, quick and easy mixing	
Air entraining Agents														
Vinapor® AE 3912 F (former Hydropalat® WE 3912)	Sodium lauryl sulphate								■	■	■	■	High performing foaming agent, produces particularly fine, stable air bubbles	
Defoamers														
Vinapor® DF 2941 F (former FoamStar® PB 2941)	Mineral oil on inorganic carrier/Powder					■							General purpose defoamer, RAL-UZ 113 conform	
Vinapor® DF 9010 F	Fatty alcohol alkoxylates and polysiloxanes on inorganic carrier/Powder					■							Very efficient defoaming effect, easy dosing, low VOC (useful for EMICODE® EC-1, RAL-UZ 113 conform)	
Hydration Control Additives														
HyCon® S 3200 F	C-S-H seeding/Powder	■				■	☐		☐				Acceleration of systems based on OPC and increase of early strength development by C-S-H seeding technology, slight dispersing effect	
HyCon® S 6100 F	C-S-H seeding/Powder	■				■	☐		☐		☐		Acceleration of systems based on OPC and increase of early strength development by C-S-H seeding technology, higher viscosity for sag resistance	
HyCon® S 7100 L	Aqueous suspension of C-S-H seeds/Liquid		■										Acceleration of systems based on OPC and increase of early strength development by C-S-H seeding technology	

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Repair Systems and Infrastructure

Product	Chemistry / Appearance /	Applications / Type of Formulation					Properties	Sustainability contribution*
		Reinforcement Protection	Repair Mortar PCC	Repair Mortar CC	Smoothing Compounds/ Fine Filler	Mortar Bonding Emulsion		
Superplasticizers/Wetting Agents								
Melflux® 4930 F	Polycarboxylic Ether/Powder	■	□	□	■		Waterreducer; Higher System Strength; Improved mixing	
Melment® F 10	Melamine-Condensate/ Powder	□	■	■	□		Wetting Aid; Improved Bonding; Improved mixing	
Rheology Modifying Agents								
Starvis® S 3911 F	Waterswellable Polymer		■	■	■		Internal curing and reduction of crack formation; Improved freeze/thaw resistance and durability; high sag resistance	
Starvis® S 5514 F	Waterswellable Polymer		■	■	■		Internal curing and reduction of crack formation; Improved freeze/thaw resistance and durability	
Starvis® T 50 F	Synthetical Polymer/Powder			□			Strong thickening of system	
Starvis® T 51 F	Synthetical Polymer/Powder			■			Strong thickening of system with improved mixing properties	
Defoamers								
Vinapor® DF 2922 F (former FoamStar® PB 2922)	Silicone free defoamer blend/ Powder	■	■	□			Excellent defoaming, easy dosing, suitable for formulations complying with BFR XIV (drinking water approval for Germany)	 
Vinapor® DF 2941 F (former FoamStar® PB 2941)	Mineral oil on inorganic carrier/Powder	■	■	□			General purpose defoamer, RAL-UZ 113 conform	
Vinapor® DF 9010 F	Fatty alcohol alkoxyates and polysiloxanes on inorganic carrier/Powder	■	■	□			Excellent defoaming and deaerating properties, easy dosing	
Hydration Control Additives								
HyCon® S 3200 F	C-S-H seeding/Powder		■	■	■		Acceleration of systems based on OPC and increase of early strength development by C-S-H seeding technology, slight dispersing effect	  
HyCon® S 6100 F	C-S-H seeding/Powder		■	■	□		Acceleration of systems based on OPC and increase of early strength development by C-S-H seeding technology, higher viscosity for sag resistance	  
HyCon® S 7100 L	Aqueous suspension of C-S-H seeds/Liquid					■	Acceleration of systems based on OPC and increase of early strength development by C-S-H seeding technology	  

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 Material Efficiency  Fast Construction  Low VOC  Durability  Drinking Water Approval

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Abbreviations

HH = Hemi-Hydrate
PCC = Polymer Cement Concrete
CC = Cement Concrete
SLU = Self-Levelling Underlayment
VOC = Volatile Organic Compounds

Center of Competence and Brands

BASF Construction Solutions GmbH, Trostberg, Germany

Construction Additives

- HyCon®
- Melflux®
- Melment®
- Melvis®
- Starvis®
- Vinapor®

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