LANDU 兰杜
Committed to every gram

Novastar™ Additives

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INTRODUCTION

LANDU is a leading high-tech enterprise headquartered in Shandong Province, at the forefront of cutting-edge research, development, and manufacturing in the field of construction materials. Our core expertise lies in the production and global distribution of Cellulose Ethers (HPMC, HEMC, HEC) and Redispersible Polymer Powder.

We have also strategically invested in state-of-the-art production facilities, enabling us to expand our product portfolio to encompass Concrete Fiber, Polycarboxylate Superplasticizer, Gypsum Retarder, Silicone Hydrophobic Powder, and Powder Defoamer. This comprehensive range of offerings establishes us as the premier one-stop procurement partner for our clients.

Our dedication to innovation and client-centric solutions is deeply rooted in our corporate culture. We've established a pioneering R&D center and application laboratory, providing customized production and responsive services through close collaboration with our esteemed clients. Our products now reach more than 60 countries and regions, reaffirming our steadfast commitment to becoming the foremost supplier in the realm of advanced building materials additives.

Contents

Polycarboxylate Superplasticizer（PCE）

Polycarboxylate Superplasticizer is an innovative and advanced construction material additive designed to optimize the performance of concrete and mortar mixes. It is a fine, free-flowing powder that is highly soluble in water, making it easy to handle and disperse in construction applications. This superplasticizer is specifically formulated with polycarboxylate-based polymers, which offer exceptional benefits to enhance the properties of concrete and mortar.

Benefits

1. Low dosage, high water reduction
2. Improved workability
3. Enhanced strength development
4. Maintain good slump property of concrete
5. Good dispersion
6. Reduced shrinkage and cracking
7. Good compatibility with cement




Specification and Application

	Grade	530P	540P	570P	580P	590P/ 590F	600P/ 600F
Specification	Appearance	Powder	Powder	Powder	Powder	Powder/ Flaky Crystal	
	Density	600±100g/L					
	Active Component	≥90%					
	Water Reduction Ratio	≥25%					
	Water Content	≤3%					
Application	Grouting Mortar	●●			●●		
	Duct Grouting Mortar	●●			●●		
	Bedding Mortar	●●			●●		
	Repair Mortar		●●		●		
	Waterproof Mortar	●●			●●		
	Gypsum-Based Applications			●●	●●		
	Cement Based Self Leveling		●●		●●		
	UHPC				●●	●	●
	3D Printed Concrete				●	●	●
	Microcement				●	●	●
	ECC High Ductility Concrete				●	●	●
	Ordinary Concrete					●●	●●

Selection Guide

- For ordinary Portland cement — 530P
- For gypsum-based applications — 570P
- Alternative to liquid superplasticizers; high water reduction — 590P 590F
- 540P — For sulfoaluminate cement; enhances early strength
- 580P — For cement- and gypsum-based applications
- 600P 600F — Alternative to liquid superplasticizers; high slump retention

Silicone Hydrophobic Powder (SHP)

Silicone Hydrophobic Powder is a specialized chemical additive known for its remarkable water-repellent properties. This fine powdered material is designed to modify the surface characteristics of various substrates, making them highly resistant to water and moisture. It is often used in a wide range of industrial applications to provide water-repellent or waterproofing qualities to surfaces and materials. It accomplishes this by forming a protective, hydrophobic barrier that prevents water penetration and helps maintain the integrity and durability of the treated surfaces.

Application


- Waterproof Mortar


- Self Leveling


- Tile Grout


- Wall Putty

Benefits

1. **Water Repellency**
   It reduces water absorption, preventing moisture from penetrating the material.
2. **Durability**
   The hydrophobic barrier created by the powder helps protect the concrete or cement from the effects of moisture, such as freeze-thaw damage, efflorescence, and corrosion of embedded steel reinforcements.
3. **Reduced Permeability**
   The powder reduces the permeability of concrete or cement, making it less prone to the ingress of water, salts, and other harmful substances.
4. **Improved Workability**
   It can enhance the workability of concrete mixes, making it easier to handle and place.

Technical Data

Grade	SHP75 / SHP80
Appearance	White free-flowing powder
Bulk Density	400-600 g/L
Moisture Content	≤10 %
PH Value	7 ~ 9
Dosage Recommendation	0.2~0.5%

Powder Defoamer

A Powder Defoamer is a specialized chemical additive designed to control and suppress foam formation in cement or gypsum mixtures. Foam can be an unwanted side effect of mixing, especially when water or air-entraining admixtures are involved. The presence of excessive foam can negatively impact the workability, consistency, and performance of mortar. Powder defoamers are formulated to effectively eliminate or reduce foam, allowing for better control and application of mortar in construction and masonry projects.

Application

- ✓ Self-leveling Compound
- ✓ Waterproofing Mortar
- ✓ Repair Mortar
- ✓ Grouting Mortar
- ✓ Decorative Mortar
- ✓ Injection Mortar

Benefits


With Defoamer


Without Defoamer

- **Foam Control**
  It is highly effective at controlling and eliminating foam in mortar mixtures.
- **Improved Workability**
  This results in smoother application, better consolidation, and improved finishing of the material.
- **Reduced Mixing Time**
  This can lead to increased productivity.
- **Enhanced Bonding**
  Eliminating excess foam promotes better bonding of mortar to substrates, improving the overall strength and durability of the construction.

Technical Data

Grade	P805	P806	P807
Usage Environment	Alkaline System	Neutral/Acidic System	Low Temperature Environment
Bulk Density	500±100g/L	500±100g/L	500±100g/L
Particle Size	80 mesh	80 mesh	80 mesh
Moisture Content	≤5%	≤5%	≤5%
PH Value	6-8	6-8	6-8
Dosage Recommendation	0.1~0.3%	0.1~0.3%	0.1~0.3%

Gypsum Retarder

LANDU Gypsum Retarder is a chemical additive used in the construction and building industry to control and slow down the setting time of gypsum-based materials, particularly gypsum plaster and gypsum board compounds. By retarding the setting process, it provides more time to work with the material, ensuring proper application and finishing. It enhances the workability of gypsum materials. It allows for smoother application, reducing the risk of premature setting, which can lead to uneven surfaces or imperfections.

Benefits

Extended Setting Time

It effectively extends the setting time of gypsum-based materials

Consistent Results

They help prevent issues such as uneven drying, cracking

Reduced Material Waste

It reduces the likelihood of material waste due to premature setting

Versatility

Suitable for a wide range of construction applications

Improved Workability

It enhances the workability of gypsum compounds

Ease of Application

These retarders are typically easy to incorporate into gypsum mixes

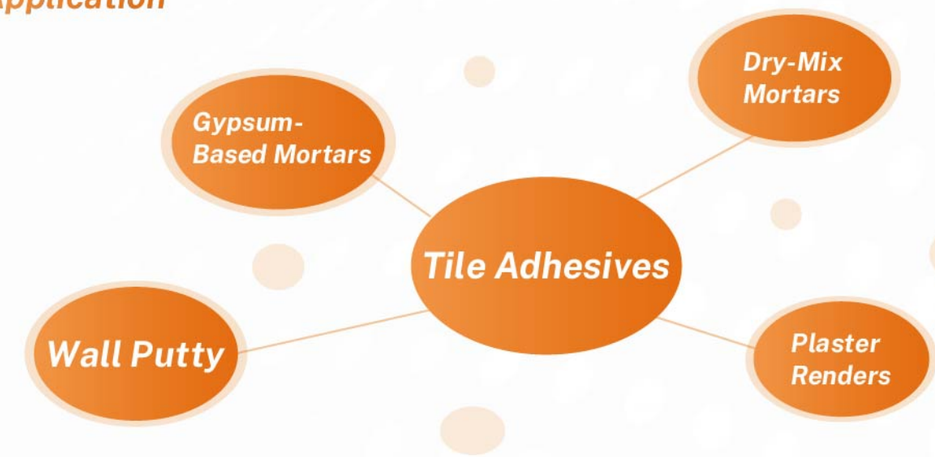
Specification and Application

	Grade	P100	P200	P300	P400
Specification	Appearance	Light yellow powder			
	Moisture Content	≤3%			
	Bulk Density (g/L)	800-1,000	800-1,000	500-800	400-700
Application	Caulking Gypsum	●●	●●	●●	●●
	Prefabricated Gypsum Components	●●	●●	●●	●●
	Gypsum Putty	●●	●●	●●	●●
	Gypsum Plaster	●●	●●	●●	●●
	Gypsum Based Self Leveling	●●	●●	●●	●●
	Other applications of Gypsum Product	●●	●●	●●	●●

Hydroxypropyl Starch Ether (HPS)

Hydroxypropyl Starch Ether (HPS) is a modified starch-based additive widely used in the construction industry to improve the performance of cement and gypsum-based materials. It enhances workability, water retention, and adhesion while reducing sagging and cracking. HPS is commonly used in tile adhesives, mortars, plasters, and self-leveling compounds, providing a cost-effective alternative or complement to cellulose ethers. Its excellent compatibility with other additives makes it an essential component in modern construction formulations.

Application



Benefits

1. Enhances water retention, reducing premature drying.
2. Improves workability and smoothness of the mix.
3. Enhances adhesion & cohesion of construction materials.
4. Reduces segregation and improves consistency.
5. Increases open time for better application efficiency.

Technical Data

Appearance	PH	Solubility	Fineness	Viscosity	Moisture	Hydroxypropyl substitution degree
Fine white powder	8.5-11	It dissolves in cold water	<350 microns	400-12000m.Pas (5% water solution)	<5%	0.2-1.2

Polyvinyl Alcohol (PVA)

Polyvinyl Alcohol (PVA) is a water-soluble synthetic polymer widely used in the construction industry as an adhesive, binder, and performance-enhancing additive. It improves the strength, flexibility, and durability of cementitious and gypsum-based materials, making it an essential component in modern construction formulations.

Benefits

01 Improves adhesion, flexibility, and cohesion of construction materials.

02 Enhances water retention, preventing premature drying and cracking.

03 Increases tensile and impact strength for long-lasting durability.

04 Improves dispersion and workability of dry-mix formulations.

05 Environmentally friendly and biodegradable.

06 Compatible with other construction additives and polymers.

Technical Data

Grade	PVA1788	PVA2488
Viscosity (mpa.s)	20.0-26.0	44.0-56.0
Alcoholysis Degree(%)	86.0-90.0	86.0-90.0
Volatile Component (%)	≤7	≤7
Ash Content(%)	≤0.7	≤0.5
PH	5.0~7.0	5.0~7.0
Purity (%)	≥95	≥96

Mortar Admixtures Kit

The Mortar Admixtures Kit is an all-in-one solution designed to simplify on-site mixing by combining cellulose ether, redispersible polymer powder (RDP), and other essential additives in a pre-blended formula. This advanced blending ensures an optimal raw material mix, reducing the need for extensive on-site mixing while maintaining uniform particle distribution. With only cement and sand required for addition, this kit streamlines the production process, lowers additional mixing costs, and enhances workability and consistency, making it an ideal choice for construction professionals seeking efficiency and performance.

Main Application

- Tile Adhesives
- Cement & Gypsum-Based Renders
- Self-Leveling Compound
- Plastering Mortars
- Masonry Mortars
- Grouts & Joint Fillers
- Repair Mortars
- Thermal Insulation Mortars