

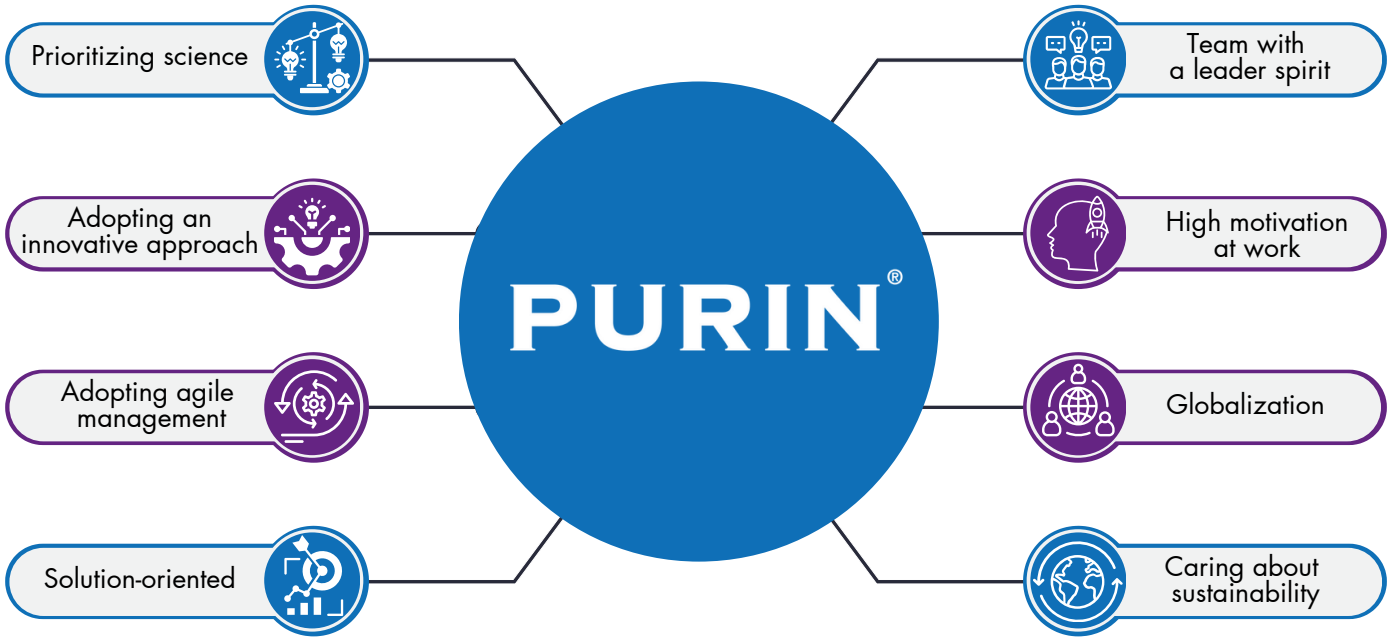


# Polyurethane Dispersions (PUD)

**PURIN<sup>®</sup>**



## About Us



### Our Understanding Of Work

- To prioritize the scientific approach in studies,
- To ensure continuity in innovative products,
- To be an excellent team with high communication power,
- To provide values that will make a difference to the sector,
- To be focused on continuous learning and continuous improvement.



### Our Mission

To increase our product range in this field by focusing on innovative and environmentally friendly product designs and to leave a better world to future generations while making our living spaces more comfortable.

### Briefly About Us

PURIN is a brand that responds quickly to the requests of its customers, offers direct technical support with its experience and expertise, and has a "win to win" relationship with all its partners.



### Our Vision

For any environment that affects human life, we work with you and for you to prepare a bright future for generations to come by offering innovative, environmentally friendly, and safe products manufactured with utmost attention and care by Purin working relentlessly.

+20 Export to Country

+50.000 tons/year Production Capacity

+20 Large Scale Project

Engineering and Equipment Services

# PURIN<sup>®</sup>Aqua

When water-based polyurethane dispersions are compared with polyurethanes prepared with solvents; It has superior performance properties such as suitable viscosity, flexibility, non-toxicity, non-flammability, high mechanical resistance, stability over a wide temperature range. Different coatings and glues are used in many areas such as textile, technical textile, shoes, leather, sponge, sandpaper, EVA, furniture, floor coating, insulation membranes etc. The chemical structures of the products are important for the selection of these dispersions.

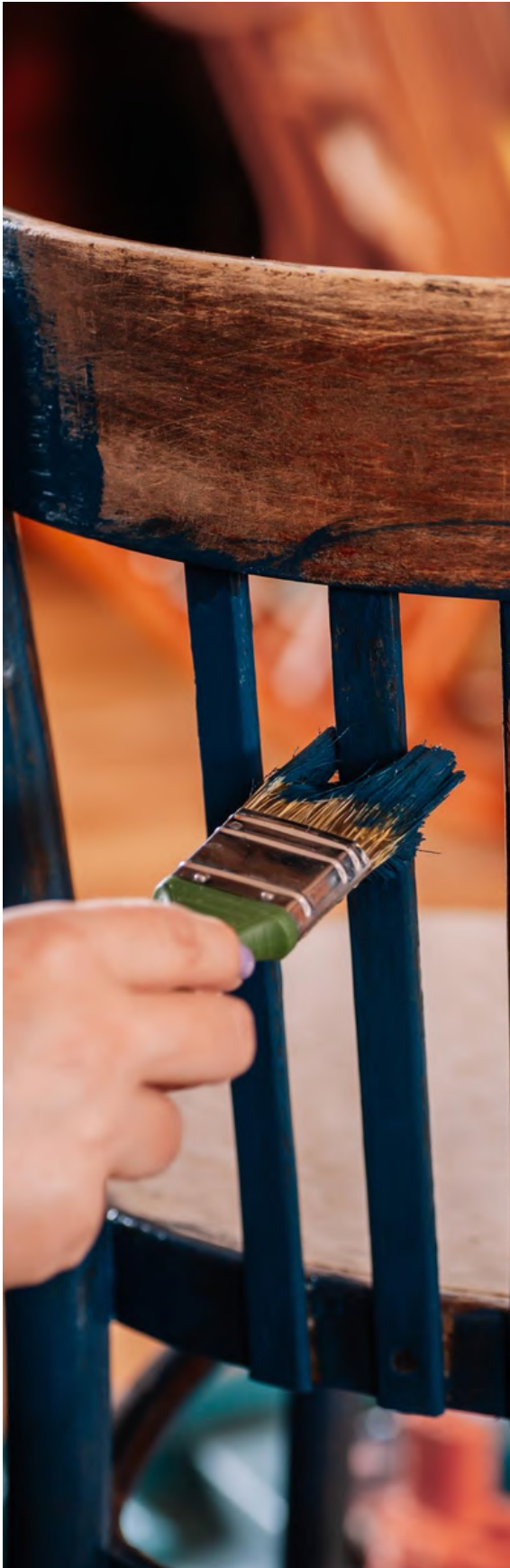


PURIN<sup>®</sup>Aqua

PURIN<sup>®</sup>ATE

PURIN<sup>®</sup>COAT PURIN<sup>®</sup>ADHE PURIN<sup>®</sup>SEAL PURIN<sup>®</sup>ELAS

## Polyurethane dispersions (PUD)



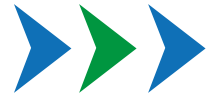
As important as water is for our survival, it is also dangerous. We must provide all the necessary conditions for a sustainable life by using science and technology. On the one hand, we should pay attention to the careful and proper use of water, and on the other hand, we should prevent its harm to us. The lifespan of our buildings, where we and our loved ones are the safest, is shortened as a result of contact with water.



### ◆ Eco - Friendly, User - Friendly

- ⇒ Water-based
- ⇒ Low Viscosity
- ⇒ Isocyanate free polyurethane

## Advantages of water-based polyurethane dispersions



Concrete structures will allow water to pass into the interior. The irons that act as skeletons in concrete structures are subjected to rusting and loss of performance as a result of water contact. This makes it difficult for our buildings to stand. Therefore, waterproofing in buildings protects our lives and the lives of our loved ones.



High Mechanical  
Performance



High Chemical  
Performance



Easy to  
Apply



UV Non  
Yellowing



## Polyurethane dispersions (PUD) - Areas



- ◆ Water-based polyurethane dispersions (PUD) are used as adhesives and coatings in the following areas;



Furniture



textile



Marble / Ceramic



Wooden



Automotive



Leather



Construction



Shoes



Plastics /  
Composite





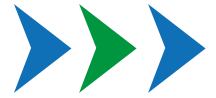
### ◆ Application areas;

- » Wood Flooring
- » Kitchen Cabinets
- » Furniture
- » Interior Doors and Windows
- » Exterior Wood



There are a variety of water-based polyurethane resin options for wood coating applications in wood and furniture end-use market. Finding the optimal technology requires a thorough understanding of not only resin properties, but also the applications in which the wood coatings will ultimately be used, such as flooring, cabinetry, furniture, interior windows and doors, and exterior wood.





### ◆ Roof Coatings

Polyurethane dispersion is used in the production of waterproofing membranes in the construction industry with its strong hydrolysis resistance and high elasticity.



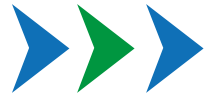
### ◆ Ceramic Coatings

They are transparent, semi-flexible, ready-to-use, resistant to sunlight, long-lasting waterproofing material that is not affected by external weather conditions.

Ceramic, glass, mosaic, faience and porcelain surfaces  
Granite, marble, brick, PVC surfaces  
Balcony, terrace, bathroom and kitchen floors and walls







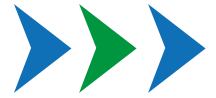
Textile coatings are applied to a material to modify, enhance or improve its properties. Polyurethane coatings are preferred in many areas such as artificial leather, real leather, raincoats, work clothes, tents and tarpaulins, sportswear and shoe textiles.



### ◆ Application areas;

- » Real Leather
- » Artificial Leather
- » Textile Printing





### ◆ Application Technique;

Membrane press adhesive is an adhesive system with some special additives added to the waterbased polyurethane dispersion used in the bonding process of MDF materials and PVC foils with the help of balloon and vacuum membrane press machines.



### ⚙️ How to Apply



Initially, the glue is sprayed onto the MDF material, and once the surface dries, the MDF plates are positioned on the vacuum machine. These plates are then allowed to sit, permitting the water in the glue to evaporate. Next, the desired design is positioned on the PVC foil, and the machine heats the PVC foil until it becomes flexible from its rigid state. Once the PVC foil reaches the desired temperature, the vacuum is activated, pulling the foil onto the MDF.

As the PVC foil heats up, the dried glue on the MDF surface melts, facilitating adhesion between the MDF and PVC foil due to the adhesive properties of the molten glue. Subsequently, the vacuum is deactivated, and the coated MDF boards are obtained.





### ◆ Fuspel Glues

It is the lamination of textile or leather with the fuspel sponge on the sole of the shoe, which we call fuspel glue. Thanks to water-based polyurethane glues, you can achieve fast drying in these product groups. These glues, which are called environmentally friendly products because they do not contain solvents, will provide you with great advantages both during production and after laminate processes.



### ◆ Shoe Glues

These products are used for sticking the shoe upper to the sole; applied separately to the upper and sole.





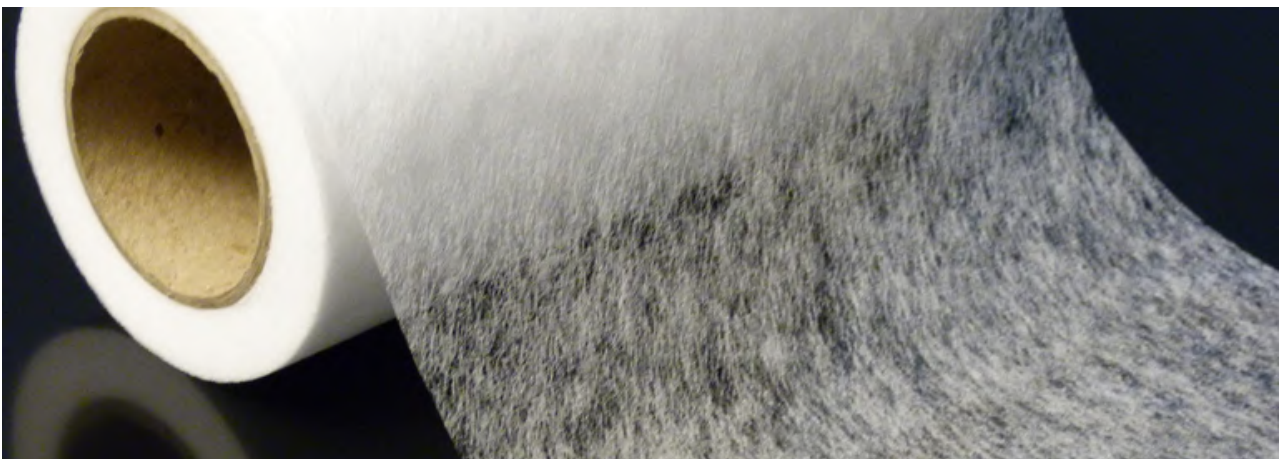
### ◆ Application Technique;

Lamination process, which is one of the most important applications in the textile industry, is the most critical quality element of the final product. For this quality, superior adhesion strength and washing resistance are the two priority parameters required in lamination processes.

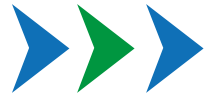


### ⚙️ How to Apply

- » Water-based polyurethane glue is applied to the relevant surface (textile or other materials) in a certain amount by spray, roller or doctor blade method.
- » By passing the glued surface through an oven, the water in the glue is removed and the polyurethane resin dissolved in the water is revealed.
- » The resulting polyurethane resin will be in a soft and sticky form due to the temperature. The second material to be laminated is applied with the help of a roller.
- » Then, the materials that are laminated to each other are passed through the cooling rollers, and the polyurethane resin is cooled to a form that will show its original performance.





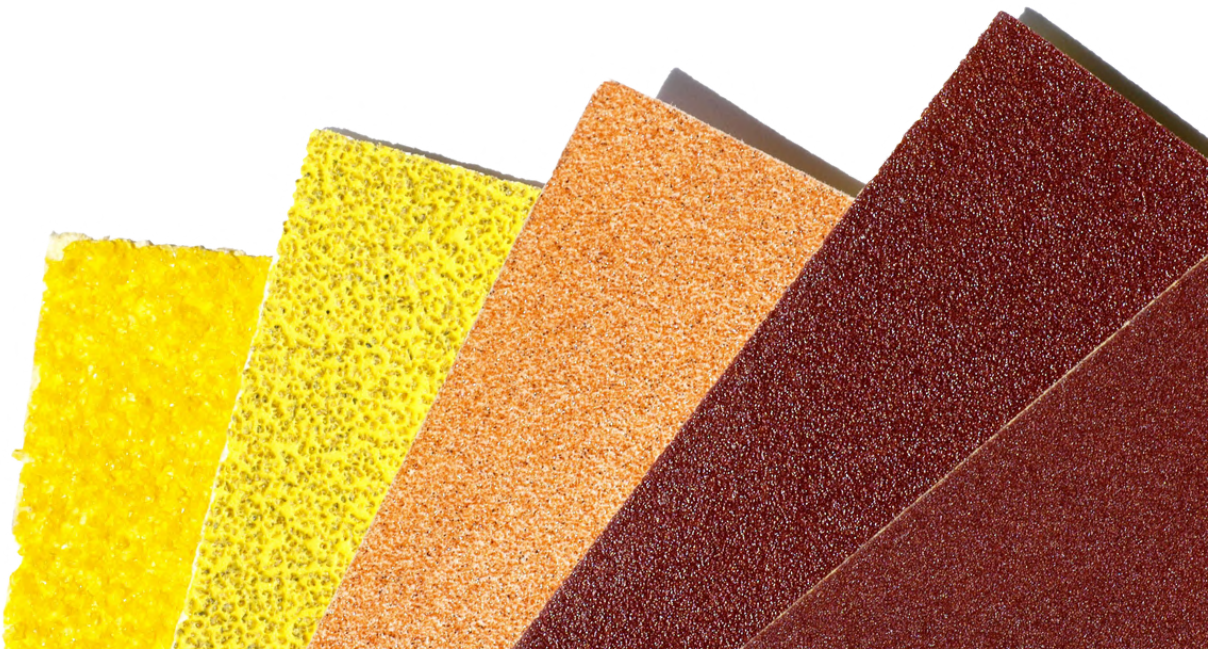


### ◆ Sanding Lamination

These glues, which have very strong adhesion performance, form a soft film by providing excellent adhesion of the textile fabric to the sandpaper. Since the fabric is elastic, it provides permanent adhesion without deforming when the fabric is stretched after the lamination process. There are aromatic and water-based product groups offered to this sector.



Sandpaper and glasspaper are names used for a type of coated abrasive that consists of sheets of paper or cloth with abrasive material glued to one face.



## PURINAQUA Product Table



PURINAQUA Product Table				
Products	Type	Elongation (%)	Viscosity (cP,23C)	Explanation
PURINAQUA FW 101	PES	70-140	<100	Low elastic PUD
PURINAQUA FW 102	PES	250-300	<100	Semi-elastic PUD
PURINAQUA FW 103	PES	600-700	<100	High-elastic PUD
PURINAQUA FW 201	PES	600-700	<100	OH-function PUD
PURINAQUA HA 101	PES	600-800	50 - 600	Polyester based anionic PUD
PURINAQUA IC 104	PES	300-400	<100	PUD resin for glue
PURINAQUA MP 301	PES	600-800	<100	Membrane press glue resin
PURINAQUA PP 101	PES	600-800	<100	PUD resin
PURINAQUA PUD 301	PES	600-800	50 - 600	Polyester based anionic PUD
PURINAQUA PUD 302	PES	600-800	50 - 600	Polyester based anionic PUD
PURINAQUA RM 702	PES	500-700	<100	Top coating
PURINAQUA PUD 201	PE	700-900	50 - 300	Polyester based anionic PUD
PURINAQUA RM 701	PE	700-900	<100	Top coating
PURINAQUA DC 101	PCD	400-500	900	Polycarbonate polyol based anionic PUD
PURINAQUA IC 103	PCD	300 - 400	2.500 - 3.500	Polycarbonate polyol based anionic PUD
PURINAQUA PUD 101	PCD	300 - 400	50 - 300	Polycarbonate polyol based anionic PUD
PURINAQUA XR 101	Cross-linking	-	1.400 - 2.200	Gloss effect hardener
PURINAQUA XR 102	Cross-linking	-	570 - 730	Matte effect hardener
PURINAQUA XR 103	Cross-linking	-	700 - 1.500	Semi-matte hardener

**PURIN**<sup>®</sup>*Aqua*












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