

Product Data Sheet

YDNU-65 | High Solid Methylated Urea Formaldehyde Resin









Ydnresin | A Division of YDN Group

 Updated: May 2025

1. Product Description

YDNU-65 is a high solid content, solvent-free **methylated urea formaldehyde resin** designed as a crosslinking agent for hydroxyl-functional polymers in waterborne and solvent-based systems. It enables rapid curing at low temperatures without acid catalysts, making it ideal for eco-friendly, fast-curing coatings and paper finishing.

2. Key Features

-  **High Solid Content** ($\geq 85\%$)
 -  **Fast-Curing** – Up to 2× faster than traditional UF resins
 -  **Solvent-Free** – Low VOC and compliant with global environmental standards
 -  **Catalyst-Free Performance** – No acid curing agent required
 -  **Excellent Compatibility** – With alkyds, acrylics, polyesters, epoxies
 -  **Low Free Formaldehyde** ($\leq 0.5\%$)
 -  **Water Soluble** – Easy to formulate in aqueous systems
 -  **Economical & Stable** – Long shelf life and cost-effective
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3. Typical Applications

- Water-based **wood topcoats** and **clear lacquers**
- Fast-drying **alkyd baking enamels**
- **Paper coating** and surface sizing
- Low-temperature industrial metal finishes

4. Technical Specifications

Property	Test Method	Typical Value
Appearance	Visual Inspection	Transparent viscous liquid
Solid Content (105°C, 3 hrs)	ASTM D1259	≥ 85%
Viscosity (30°C)	ASTM D2196	3000–10000 mPa·s
Density (23°C)	ASTM D1475	~1200 kg/m ³
Flash Point (Closed Cup)	ASTM D93	76°C
Free Formaldehyde Content	Internal Method	≤ 0.5% by weight
Solubility in Water	Visual/Practical Test	Fully Soluble
Solubility in Xylene	Visual/Practical Test	Partially Soluble
Storage Stability	Visual, 23°C sealed drum	≥ 6 months




5. Solubility & Compatibility

YDNU-65 blends well with:

- **Alkyd Resins**
- **Acrylic Emulsions**
- **Polyester Polyols**
- **Epoxy Esters**

Note: When using aliphatic hydrocarbon solvents, inclusion of oxidative co-solvents is recommended to maintain clear solution stability.





6. Packaging

-  20L Plastic Drum
-  200L Steel Drum
-  1000L IBC Tank



7. Storage & Handling

- Store in a **cool, dry place**, away from direct sunlight.
- Avoid freezing or excessive heat.
- Use with proper **ventilation and PPE** (gloves, goggles).
- Shelf life: **6 months** in unopened packaging under ambient conditions.

8. Regulatory Compliance

-  REACH Compliant
-  RoHS Compliant
-  Low VOC Formulation
-  Formaldehyde content <0.5%

9. Competitive Benchmark

Product	Solid Content	Solvent-Free	Free Formaldehyde	Cure Catalyst Required
YDNU-65 (Ydnresin)	≥85%	 Yes	≤0.5%	 No

Product	Solid Content	Solvent-Free	Free Formaldehyde	Cure Catalyst Required
Allnex CYMEL® UF 303	~82%	✗ Mixed Solvent	≤1.0%	✓ Yes
Hexion ULF-90	80–85%	✓ Yes	≤0.7%	✓ Yes
Synthomer UFR 85	82–84%	✗ Solvent Blend	≤1.2%	✓ Yes

10. Contact Information

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