

Product Data Sheet

YDN525 | High Imino Methyl Etherified Melamine Resin







Ydnresin | A Division of YDN Group

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1. Product Description

YDN525 is a **water-compatible high-imino melamine formaldehyde resin** designed for use as an amino crosslinking agent in **waterborne and solvent-based baking coating systems**. With partial water solubility, high reactivity, and low VOC release, it enables high-performance, environmentally friendly coatings for wood, metal, plastics, and paper.

2. Key Features

-  **High Imino Content** – Improves curing speed and film hardness
 -  **Solvent: Isobutanol** – Balanced reactivity and storage stability
 -  **Self-Catalyzing Curing** – Compatible with low-acid resins, no strong acid required
 -  **Low VOC Emissions** – Less weight loss and reduced exhaust during baking
 -  **Excellent Compatibility** – Works well with waterborne acrylics, polyesters, epoxies, and alkyds
 -  **Enhanced Coating Properties** – Reduces bubbling, improves salt spray and water resistance
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3. Typical Applications

- Water-based and solvent-based baking enamels

- Industrial metal coatings
- Wood furniture topcoats and clear finishes
- Paper surface coatings
- Acrylic and polyester systems for plastics and appliances

4. Technical Specifications

Property	Typical Value
Appearance	Transparent to light-yellow viscous liquid
Solvent	Isobutanol
pH (1:1 in water)	8.0–9.5
Non-Volatile Content (105°C × 3h)	75–80%
Viscosity (30°C)	1000–3000 mPa·s
Free Formaldehyde Content	≤1.0 wt%
Solubility in Water	Partially Soluble
Solubility in Xylene	Partially Soluble
Shelf Life	6 months (cool, dry storage in sealed drums)

5. Compatibility

YDN525 has strong compatibility with:

- Short- and medium-oil **alkyd resins**
- **Polyester polyols** (especially water-based)
- **Acrylic dispersions** and emulsions
- **Epoxy esters**
- **Cellulose nitrate** and cellulose acetate butyrate

6. Competitive Benchmark

Product	YDN525 (Ydnresin)	Allnex CYMEL® 325	Hexion MMA- 357	Synthomer MFR-77
Imino Functionality	High	Moderate	Moderate	Moderate
Solvent	Isobutanol	Butanol	Methanol Blend	Butanol
Non-Volatile Content	75–80%	75–80%	70–75%	~78%
Water Compatibility	Partial	Partial	Poor	Partial
Curing Without Catalyst	✔ Yes	✘ No	✘ No	✘ No
Free Formaldehyde (%)	≤1.0%	≤1.0%	≤0.8%	≤1.2%






7. Packaging

- 📦 20L Plastic Drums
- 📦 200L Steel Drums
- 📦 1000L IBC Tanks

8. Storage & Handling

- Store in **cool, dry, ventilated** areas
- Keep containers tightly sealed
- Avoid heat and sunlight exposure
- Shelf life:** 6 months in unopened drums
- Use **gloves and goggles** during handling

9. Regulatory & Environmental


-  REACH Compliant
 -  RoHS Compliant
 -  Formaldehyde $\leq 1.0\%$
 -  Low VOC emissions during baking
 -  Environmentally friendlier alternative to traditional amino resins
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10. Contact Information

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