Technical Data Sheet (TDS)

YDN5158 | High Imino n-Butyl Etherified Melamine-Formaldehyde Resin

Ydnresin | A Division of YDN Group

💷 Last Updated: May 2025

Product Description

YDN5158 is a high-performance **n-butyl etherified melamine-formaldehyde resin** with **high imino content**, offering excellent reactivity and fast curing under low to medium temperature conditions. It is specifically designed for **automotive OEM and refinish coatings**, **appliance enamels**, **industrial metal coatings**, and **protective finishes** where high crosslinking density, gloss retention, and weatherability are critical.

Its n-butyl etherification enhances resin flexibility and compatibility, while its high imino structure accelerates curing and improves adhesion on metal and coated substrates.

Typical Properties

Property	Typical Value	Test Method / Notes
Appearance	Clear to slightly yellow liquid	Visual
Solid Content (%)	98–100	DIN EN ISO 3251
Free Formaldehyde (%)	≤ 0.3	ISO 11402
Viscosity (25°C, mPa·s)	80–200	Brookfield LV, Spindle 1, 60 rpm
pH (20% aqueous solution)	7.5–8.5	DIN ISO 976
Solubility	Soluble in alcohols and ketones	-
Specific Gravity (25°C)	~1.21 g/cm ³	ASTM D1475

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Property	Typical Value	Test Method / Notes
Shelf Life	12 months (sealed container)	Store at 5–30°C

Application Areas

- Automotive Coatings (OEM & refinishing)
- Appliance & Consumer Product Finishes
- Protective & Industrial Coatings for Metals
- Baking Enamels & Fast-Curing Systems
- General Industrial Spray & Dip Finishes

Processing Guidelines

Curing Conditions	120–150°C / 15–30 minutes
Recommended Usage Level	10–30% (based on total binder solids)
Compatible Resins	Polyester, acrylic, alkyd, epoxy
Application Methods	Spray, flow coat, roller, dip
Cleaning	Alcohol or ketone-based solvents before curing

🍀 Key Features & Benefits

- **V** High Imino Functionality \rightarrow Rapid crosslinking and high film hardness
- **rac{1}{2} n-Butyl Etherified** \rightarrow Enhanced flexibility, compatibility, and flow
- **Excellent Substrate Adhesion** \rightarrow Effective on metal and plastic surfaces
- **Outstanding Gloss & Weatherability** → High durability in outdoor use

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- ✓ Chemical & Solvent Resistance → Stable against fuels, oils, and industrial agents
- **Z** Low VOC & Low Free Formaldehyde → Safer for use in regulated markets

Compliance & Regulatory Standards

Standard / Certification	Status
REACH (EU)	Compliant
RoHS (EU)	Compliant
ISO 9001 / ISO 14001	Certified production environment
Formaldehyde Emission	≤ 0.3%
Food Contact & Toy Safety	Not intended for direct contact use

🌾 Packaging & Storage

- Available in: 200 kg steel drums / 1000 kg IBC tanks
- Store in original sealed containers at 5–30°C
- Avoid freezing and direct exposure to sunlight
- Shelf life: **12 months** under recommended conditions

Contact Us for Technical Assistance or Samples

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