

## Product Technical Datasheet

**Product Name:** Polyaspartic Ester Resin

**Version:** V1.3

**Product Grade:** ZR5238

**Revision Date:** 2025-04-22

### Product Overview and Features

- (1) This product is a solvent-free, high-solid, low-viscosity resin that can be formulated into environmentally friendly coatings with high solid content (up to 100% solids during application);
- (2) The coating film exhibits excellent fullness, leveling properties, and gloss;
- (3) The coating film also has outstanding weather resistance, water resistance, solvent resistance, acid and alkali resistance, salt spray resistance and other properties;
- (4) It features high hardness (up to 2H) with exceptional abrasion resistance [abrasion loss  $\leq 20\text{mg}$  (500r/750g)];
- (5) It provides excellent adhesion to plastics such as ABS, PC, and PVC, as well as to various metals;
- (6) The product exhibits excellent compatibility with most hydroxyl acrylic resins, CAB, and similar materials.

### Product Applications

- (1) Widely applicable in automotive paint formulations, significantly enhancing the fullness, gloss, and hardness of the paint film while accelerating curing;
- (2) Suitable for use in high-end industrial coatings and wood coatings, particularly in applications requiring high hardness and abrasion resistance;
- (3) Applicable as topcoats for protective coatings in both heavy and light anti-corrosion applications, such as steel structures and petroleum pipelines;
- (4) Suitable for use in wind turbine blade coatings, including gel coats, putties, topcoats and other fields;
- (5) Due to its 100% solid content, low viscosity, good wetting properties, and broad compatibility, this resin is widely used for grinding high-concentration pigment pastes. It is especially suitable for automotive refinishing paints where high-concentration universal pigment pastes are required. (Pigment pastes ground with this resin can achieve up to 100% solids, with titanium dioxide content reaching approximately 70%. It is also highly suitable for grinding high-pigment carbon black, offering superior blackness compared to ordinary acrylic resins.)

### Performance Specifications

Parameter	Specification
Relative Molecular Mass	582
Appearance	Light yellow transparent liquid
Solid Content / %	95 $\pm$ 2
NH Equivalent (g/mol)	291
Amine value (mg KOH/g)	190-200
Equivalent OH Content / %	5.80~5.85



Viscosity (mPa.s / 25°C)	800-2000
Relative Density (relative to water at 25°C)	1.06±0.02
Flash Point / °C	90-95

## Packaging Specifications

**Iron Drum Packaging:** 200 KG/drum, 25 KG/drum.

## Storage and Usage Precautions

ZR5238 should be stored in a cool, dry, and well-ventilated area, away from ignition sources and heat. Prevent direct sunlight exposure, and keep the container sealed. The storage area should be equipped with emergency spill handling equipment and appropriate containment materials.

## Shelf Life

When stored under the specified conditions, the product can be kept sealed for up to 12 months from the date of manufacture.

## Notes

Coatings made with this product should ideally be cured for one week before testing their performance.

The specifications and data provided in this datasheet are based on our current technical knowledge and practical experience. They are for reference only and do not constitute a guarantee. Due to the limitations of resin functionality and the diversity of user requirements, please rigorously test the suitability and stability of this product for the intended process and use to ensure it meets the desired objectives. Our Marketing Department Technical Support and Customer Service Center are available to provide product consultation and application technical services. We welcome your inquiries by letter or phone.

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