# Alka 421

Two-Component Acrylic Polyurethane DTM SYSTEM

## | Introduction

Alka 421 is A two-component high gloss white acrylic polyurethane topcoat formulated hydroxyl acrylic resin technology for direct to metal application.

Alka 421 Provides excellent adhesion to properly prepared metal, superior corrosion resistance, excellent gloss, weather resistance, hardness, chemical resistance and long-term durability.

Acrylic Polyurethane Topcoat formulated with hydroxyl acrylic resin technology is a high-performance protective finish designed for long-term durability in industrial and marine environments.

The hydroxyl acrylic resin reacts with an isocyanate hardener to form a tough polyurethane coating with excellent gloss retention, weather resistance, UV stability, and chemical resistance.

Alka 421 provides excellent adhesion, abrasion resistance, and surface durability, making it suitable for structural steel, bridges, offshore platforms, pipelines, machinery, and heavy industrial equipment exposed to severe environmental conditions.

## | Where it could be used.

Alka 421 is widely used for decorative finishes, automotive coatings, machinery, commercial steelwork and general industrial applications.

| | |
|---|---|
| **Structural Steel** | Beams, columns, steel frameworks |
| **Galvanized Surface Repairs** | Touch-up and repair of damaged galvanizing |
| **Welded Areas** | Protection of weld joints and heat-affected zones |
| **Pipelines** | External steel pipeline protection |
| **Storage Tanks** | Maintenance coating for steel tanks |
| **Industrial Equipment** | Machinery, steel components, fabricated parts |
| **Marine Environments** | Coastal steel structures and marine equipment |
| **Fences & Railings** | Steel fencing, gates, guard rails |
| **Transmission Towers** | Utility poles, telecom and power towers |
| **Automotive & Transport** | Chassis parts, trailers, truck bodies |

**| Compatible Substrates**

Alka 421 generally require a separate primer such as Alka 404 (zinc rich primers) and it might be used as a topcoat for Alka 413 (MIO Epoxy System).

**Common Primers:**

- Zinc Rich Epoxy Primer
- Zinc Phosphate Epoxy Primer
- Surface Tolerant Epoxy Primer
- Epoxy MIO Primer (for moderate environments)

**Surface Preparation**

The surface should be:

- Clean
- Dry
- Free from oil, grease, rust, salts, and loose contaminants

Recommended preparation methods include:

- Abrasive blasting
- Power tool cleaning
- Mechanical wire brushing

In severe industrial, offshore, and marine environments, using a proper primer system beneath the polyurethane topcoat is essential for long-term durability and corrosion resistance.

**Recommended Application Methods**

- Conventional spray, Airless spray, Brush or roller for small areas and touch-up work
- Temperature: 10°C – 40°C
- Relative Humidity: Below 85%
- Thinner: Toluene / Xylene blend
- Equipment cleaning: Same as thinner

**Storage Conditions**

Store in a cool, dry, and well-ventilated area away from direct sunlight and sources of ignition. Recommended storage temperature: 5°C – 35°C.

**Shelf life**

12 months in unopened original containers under recommended storage conditions

**Health & Safety**

Use only in well-ventilated areas. Wear appropriate PPE during application. Keep away from heat, sparks, and open flames. Refer to SDS before use.

**Environmental Information**

- Prevent coating materials and solvents from entering waterways or drainage systems.
- Dispose of waste coatings and solvents according to local environmental regulations.
- Clean application equipment using approved handling and disposal procedures.

**| Important Notes**

- Do not add any water.
- Do not apply Alka 421 on any substrates where significant vapor pressure may occur.
- Always ensure good ventilation when using Alka 421 in a confined space.
- Freshly applied Alka 421 should be protected from damp, condensation and water for at least 24 hours.
- If in doubt about the use or application of this product, or further information please contact our Alka Technical Department.
- Avoid contact with skin and eyes.
- Wear protective gloves and eye protection during work.
- If skin contact occurs, wash skin thoroughly.
- If in eyes, hold eyes open, flood with warm water and seek medical attention without delay.
- Avoid contact with foodstuffs and utensils.

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A full Material Safety Data Sheet is available from Alka on request.

| Property | Unit | Typical Value | Test Method |
|---|---|---|---|
| Appearance | - | White, High Gloss | Visual |
| Gloss@6o• | GU | 95+ | 150 2813 |
| Solids Content | % | 58- 65 | ISO 3251 |
| Viscosity@ 25°C | cPs | 4500 - 5500 | ASTM D2196 |
| Pot Life@ 25°C | Hours | 3-4 | Internal |
| Touch Dry@ 25°C | Minutes | 30- 45 | ASTM D1640 |
| Recoat Time@ 25°C | Hours | 4-6 | Interna |
| Full Cure@ 25°C | Days | 7 | Internal |
| Recommended DFT | Microns | 40-60 | 1S0 2808 |
| Theoretical Coverage | $M^2$/Kg @ 50µm DFT | 8-9 | Calculated |
| Rash Point | °C | 27-32 | ASTM D93 |

**Performance Notes:**

- Actual spreading rate depends on surface texture, film build, and application losses.
- Increased coating thickness or adverse weather conditions may extend drying times.

All products are subject to Alka terms and conditions. Read the full version on our website prior to any purchase.

**| Contact us**

**ALKA COATINGS / ABN: 70 652 323 487**

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