

| Introduction

Alka 420 is A two-component high gloss white acrylic polyurethane topcoat formulated hydroxyl acrylic resin and MIO (Mica Iron Oxide) technology for direct to metal application.

Alka 420 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 and MIO (Micaceous Iron Oxide) 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. The inclusion of MIO pigments enhances barrier protection by creating overlapping plate-like layers that reduce moisture and corrosive penetration.

Alka 420 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.

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 420 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 420 on any substrates where significant vapor pressure may occur.
- Always ensure good ventilation when using Alka 420 in a confined space.
- Freshly applied Alka 420 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.

Alka 420



Two-Component Acrylic Polyurethane MIO DTM SYSTEM

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

Property	Unit	Typical Value	Test Method
Appearance	-	White, High Gloss	Visual
Gloss@60°	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	Internal
Full Cure@ 25°C	Days	7	Internal
Recommended DFT	Microns	40-60	150 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

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