



**MIROTONE**



# **MIROBILD AC**

## **Clear & Pigmented Coatings**

Product Information Guide

*Innovative Coating Solutions*

## General Description

Mirotone's range of acid catalysed clear and pigmented coatings are ideal for use on domestic and commercial furniture, wall panelling, built-in wardrobes and caskets. Easy to use and available in a range of gloss levels, Mirotone has the right system to meet your requirements.

## Advantages

Fast drying and long pot life – ideal for automatic application equipment.

High build, achieve a full finish in the minimal number of coats.

Low odour, low formaldehyde, aromatic free products available.

## Recommended Use

Interior only: Domestic & commercial furniture, wall panelling, joinery & fixtures, built-in wardrobes, kitchens and caskets.

## Product Compliance

**MIROBILD AC 3770 – KCMA / ANSI A161.1: Performance and construction standard for kitchen and vanity cabinets.**

The MIROBILD AC 3770 coating system below passes the following KCMA finish tests:

- Section 9.1: Shrinkage and Heat Resistance
- Section 9.2: Hot and Cold Check Resistance
- Section 9.3: Chemical Resistance\*
- Section 9.4: Detergent and Water Resistance

Coating system: MIROLAC NC 3125 Universal Undercoat top coated with MIROBILD AC 3770 Satin Pigmented Topcoat (2 coats).

\*Note: During chemical resistance testing the only reagent that produced a slight mark was mustard, all other reagents passed the testing (i.e. left no mark).

## Application Methods

Suction Gun:	Use 1.5 to 2mm (59-79 thou) orifice with 350-400kpa (50-55 psi).
Pressure Pot:	Use 1.5 to 2mm (59-79 thou) orifice with pressure pot air-cap. Gun pressure 350-400kpa (50-55 psi) and a pot pressure of 45kpa (6 psi) max.
Airless Spray:	Use 0.23 to 0.33mm (9-13 thou) orifice, 15cm fan (dependent on job) with regulated pump pressure of 350-400kpa (50-55 psi).
Air Mix Guns:	Settings similar to airless spray with the air-assisted regulator pressure at 70-90kpa (10-15psi).
Curtain Coater:	40-50 seconds viscosity.

## MIROBILD AC Catalysts

MIROBILD AC 3800 Universal Catalyst	MIROBILD AC 3810 Quick Dry Catalyst
Ideal for hot temperatures.	Ideal for use in cold temperatures to speed up drying time and increase production throughput.
Ideal for use with full gloss topcoats to achieve optimum gloss.	Ideal for sealers and undercoats to speed up drying time between coats.
Superior flow especially in full gloss topcoats.	A highly reactive catalyst – faster dry.
Minimises bubbling in open grain timber.	Longer pot life.
Improves flow & levelling in draughty &/or hot environments.	Improved through cure in cold conditions to improve sanding and stacking times.

## Force Drying

Flash Off:	5 min at 20°C
Force Dry:	30-60 min at 40-50°C (dependent on airflow)
Cool Down:	15 min at 20°C

## Handy Hints

- High Humidity and Moisture: All wood will swell and discolour if allowed to come into contact with water vapour. The protection provided by a coating is dependent on the moisture transmission of the coating and on the thickness of the dry coating film applied. Coated edges are usually the most vulnerable to damage either from the coating being removed or by inadequate film builds in high wear / traffic areas. Special care should always be given to sharp edges as coatings do not build well onto them, resulting in reduced protection in high moisture environments.
- Damp Wood: Do not apply coatings over damp wood (moisture content greater than 15%) as it may result in loss of adhesion, cracking or veneer checking of the wood.
- High Humidity at Time of Application: Application of coatings at high humidity will speed up the drying process and reduce the pot life.
- Care must be taken to apply a uniform wet film thickness as gloss level is dependent upon WFT.
- Bridging / Cracking: Adding excess accelerator or hardener will lead to loss of flexibility of the coating. Do not exceed the recommended wet film thickness as excessive film weights will result in increased potential for cracking of the coating, particularly on routed MDF panels and doors.
- Inter-coat Adhesion: To ensure sound inter-coat adhesion, thoroughly sand between coats. To reduce the potential for adhesion failure in field, Mirotone strongly recommends you carry out regular and appropriate quality control testing of your production output.
- Cold Temperature: Application below 10°C will affect the drying and gloss level of the coating.
- Clear coatings do not permanently protect the substrate (in particular, wood) from the ageing / discolouration effects of temperature and sunlight. Even when UV absorbers are present in a coating they will sacrificially break down over time and eventually no longer help to protect the substrate.
- Always test the substrate before application as many timbers or veneer/glue combinations can discolour when coated with acid catalysed coatings (i.e. huon pine, myrtle, Tasmanian blackwood or beech). Use a MIROTHANE PU clear coating system to reduce the risk of discolouration.
- Take care when handling as oils or fats from the skin may transfer to the surface of the coating and leave visible finger prints.
- Due care must be taken in harsh in-service environments as coatings can be damaged by sharp objects. Use placements, coasters, table cloths and other protective covering to prevent damage.

## Application System

**Surface Preparation:** Surface must be free from dust, grease, dirt and all contaminants. MIROSOL 1231 Wax & Grease remover can be used to wash the surface to remove wax and grease. Fill all defects with a water based wood filler (i.e. cracks, holes etc.) or fill open grain woods with MIROFIL 1702 if a full high build finish is required.

**Sand:** Sand wood with 180-240 grit paper. Sand MDF with 240-320 grit paper. Remove all dust using an air gun and clean lint free cloth.

**Staining:** If required, prepare and stain substrate per the directions on the MIROSTAIN product data sheet.

**Sealer:** Apply one of the following sealers/ undercoats per the instructions on the relevant data sheet:

- MIROBILD AC 3622 Clear Sealer
- MIROBILD AC 3628 Clear or Black Sealer
- MIROBILD AC 3720 Pigmented Undercoat

*Coatings systems using multiple coats of sealer will increase the risk of the dry film appearing milky (especially when applied over dark stains or wood) and may result in white marking if the film is damaged by sharp objects.*

**Sand:** Allow to dry per the technical data sheet and sand with 280-320 grit paper just prior to top coating. Use 400-500 grit paper where a high gloss finish is being applied. Remove all sanding dust.

**Toning:** If required to provide extra colour depth, add up to 10% by volume MIROSTAIN 2010 or 2013 Dye Stain or unreduced MIROSTAIN 2616 Pigment Stain to the topcoat. Apply in light even coats over the sealed wood.

*Note: Do not use MIROSTAIN by itself between coats of clear as this may cause delamination.*

**Topcoat:** Apply two coats of one of the following topcoats per the directions on the technical data sheet:

- MIROBILD AC 3606 Clear Topcoat
- MIROBILD AC 3646 Clear Topcoat
- MIROBILD AC 3680 Clear Ultra Gloss Topcoat
- MIROBILD AC 3770 Pigmented Topcoat

The following application technique is recommended for full gloss coatings:

- Apply a light 'tack' coat (100-125 WFT)
- Allow 1 – 5 minutes to flash off (depending upon temperature)
- Apply a second even wet coat.

## Health & Safety

Before handling, refer to the Material Safety Data Sheet for health and safety information. Ensure that all personnel using this product have read and understood this data sheet and the associated MSDS and packaging label before using this product.

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