MIROTONE

MIROTEC WB

Clear & Pigmented Coatings

Product Information Guide

Innovative Coating Solutions

General Description

Mirotone's range of water based coatings are ideal for use on domestic furniture, internal doors and children's toys and furniture. Easy to use and available in a range of gloss levels, Mirotone has the right system to meet your requirements.

Advantages

- Easy to use
- Single pack, no pot life issues to manage
- Low VOC (solvent content)

Recommended Use

Interior use only. Ideal for domestic furniture, children's toys and furniture, picture frames, musical instruments and antique restoration.

MIROTEC WB 8052 is also ideal for use on bar and table tops, bathroom vanities and commercial work.

MIROTEC WB 8126 is ideal for use on automatic spray lines.

Health & Safety

Formaldehyde Free: Safer for the applicator. Zero formaldehyde emissions in rooms in which coated articles are installed or used results in improved internal air quality.

Phthalate Free: Ideal for children's toys. There are concerns regarding the potential adverse health effects of phthalates, particularly reproductive and developmental health effects. In the European Community (EC) three common phthalates are now subject to a near total ban in all toys and childcare articles.

Isocyanate Free: No cumbersome air assisted face masks or other respiratory personal protective equipment (provided it is applied in a compliant spray booth).

Alkylphenol Ethoxylate (APE) Free: APEs have been banned in many European countries. APEs are very toxic to aquatic organisms and may cause long-term adverse effects to the aquatic environment. APEs are relatively slow to biodegrade and they breakdown to form toxic intermediates that are generally more toxic than the original compounds. Research has confirmed in a number of animal studies that APEs are oestrogenic (i.e. mimic the activity of female sex hormones).

Product Compliance

Volatile Organic Compounds (VOC) Level

MIROTEC WB 8022 & 8060 Clear Water Based Sealer & Topcoat & MIROTEC WB 8126 Pigmented Undercoat comply with the following standards (VOC calculated in accordance with APAS Document D181):

Green Building Council Australia: Green Star - Office Design v3 & Office As Built v3, Table IEQ-13.1;

Maximum TVOC Content Limits for Paints, Varnishes and Protective Coatings (Maximum limit for Trim - gloss, semi-gloss, satin, varnishes and wood stains - 75 g/L).

Note: The criteria for VOC content of paint in Green Star IEQ-13 "Volatile Organic Compounds' refers only to paint applied on site (e.g. excludes paint applied at a factory).

MIROTEC WB 8022, 8060 & 8052 Clear Water Based Sealer & Topcoats & MIROTEC WB 8126 Pigmented Undercoat comply with the following standards (VOC calculated in accordance with APAS Document D181):

- Australian Paint Approval Scheme (APAS): APAS Document D181 "Volatile Organic Compounds (VOC) Limits", APAS Specification 0114 "One pack interior varnish (general purpose) 500 g/L.
- The New Zealand Ecolabelling Trust (Environmental Choice New Zealand): PAINTS EC-07-08 (1 February 2008) 5.3.1 Volatile Organic Compounds, Stains & varnishes - 100 g/L wet paint.

Children's Toys (Heavy Metal Content) – All MIROTEC WB Coatings

Mirotone's "Chemicals of Concern Policy" requires that all of its wood coatings comply with the following standards that specify stringent limits on the permitted amount of toxic heavy metals:

- AS/NZS ISO 8124.3:2003 (Children's Toy Safety Requirements)

- BS/EN 71-3:1995 (Safety of Toys) Part 3. Specification for migration of certain elements.

The test results above apply to the coating only and it is therefore the user's responsibility to have their complete system tested for compliance.

Note: The information in this technical bulletin is current at the time of issue. It is up to the user to check that the product complies with the fire rating standard that they are required to comply with. The information contained in this document is not intended to replace analysis and calculations associated with the design and specification of buildings or their components.

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).
	Ensure tips, guns and lines are suitable for use with water based coatings.

Force Drying

Clear Coatings		Pigmented Coatings	
Flash Off:	10 min at 20°C	Flash Off:	5 min at 70°C
Force Dry:	15-25 min at 40-50°C (dep on airflow)	Force Dry:	90 sec at 120°C
Cool Down:	10 min at 20°C	Cool Down:	Until tack free

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.
- Care must be taken to apply a uniform wet film thickness as gloss level is dependent upon WFT.
- 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.
- Coating systems with multiple coats of any 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.
- Cold Temperature: Application below 10°C is not recommended due to increased grain raising of the first coat, extended drying times and the potential for incomplete film formation which will adversely affect the coatings overall performance.
- Clear coatings do not permanently protect the substrate 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 protect the substrate.
- Due care must be taken in harsh in-service environments as coatings can be damaged by sharp objects & high heat. Use placements, coasters, table cloths and other protective covering to prevent damage.
- Tannin Bleed: Certain timbers may suffer from tannin bleeding when a water based coating is applied onto the timber surface. To reduce the risk of tannin bleed seal the bare wood with MIROTHANE PU 5500 Clear Isolator mixed 10A:1B with MIROTHANE PU 5789 Part B Hardener.

Application System

Clear 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, stain substrate. Apply MIROSTAIN per the relevant product data sheet.

Isolator Coat: MIROTHANE PU 5500 Clear Isolator Coat is recommended for use in MIROTEC WB coating systems as a first non-sanding primer coat on wood to minimise sink back, minimise the risk of tannin bleed and achieve the best possible water and chemical resistance. For best results apply MIROTHANE PU 5500 as a two pack system mixed 10A:1B by volume with MIROTHANE PU 5789 Part B Hardener.

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

- MIROTEC WB 8022 Clear Sealer
- MIROTEC WB 8052 Clear Polyurethane Topcoat (as its own sealer)
- MIROTEC WB 8060 Clear Water Based Topcoat (as its own sealer)

Sand: Allow to dry for a minimum of 1.5 to 2 hours and then sand with 220-320 grit fre-cut paper. Remove all sanding dust using an air gun and clean lint fee cloth.

Toning: If required to provide extra depth of colour, add up to 10% by volume MIROSTAIN 2101 Water Based Dye Stain or MIROSTAIN 2050 Solvent Based Dye stain or MIROSTAIN 2703 Water Based Pigment Stain. Apply in light even coats over sealed wood to obtain the depth of colour. If a toner coat has been applied, apply at least one further coat of clear (untoned) topcoat to seal and protect the toned coat.

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

- MIROTEC WB 8052 Clear Polyurethane Topcoat
- MIROTEC WB 8060 Clear Water Based Topcoat

Pigmented 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.

Undercoat: Apply MIROTEC WB 8126.

Sand: Allow to dry thoroughly and then sand with 220-320 grit fre-cut paper. Remove all sanding dust using an air gun and clean lint fee cloth.

Topcoat: Most solvent and water based topcoats may be used.

Prepare a test patch to ensure suitability prior to top coating the full article.

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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