

## INSTALLATION GUIDELINES FOR APPROVED SOLID SURFACE FABRICATORS

### FITTING MIROSTONE TO KITCHEN AND BATHROOM CABINETS

When fitting Mirostone to kitchen cabinets apply dabs of silicone every 200mm to the cabinet and then apply the work surface to the top of the cabinet, then press into place. Leave 1mm per metre expansion gap at each end when butting to walls or other units as the product will expand and contract with the conditions.

### MAXIMUM SPANS AND OVERHANGS FOR MIROSTONE SPANS

It is important that prior to installing a Mirostone Benchtop, all cabinets are level and that the Mirostone benchtop will be supported adequately.

All spans over 600mm must be supported at the front by ensuring that the rail is installed vertically to eliminate any flexing of the Mirostone product. If the front rail of the cabinet cannot be rotated to a vertical position, then the suggested method of support, is to insert a 20mm square tube behind the front rail, which would be routed into the top of the carcass ends.

### OVERHANGS

Applications such as breakfast bars sometimes require a certain overhang. The permitted overhang dimension must be determined by a professional cabinet maker or trades person, and is dependent on many factors relevant to the particular application. The ratio between the length and width of the Mirostone benchtop surface, will also determine what supporting fixtures will be required. Mirostone benchtop overhangs of 300mm or less are unlikely to require additional support depending on the application. All overhangs greater than 300mm will require either steel support bars/support brackets or 18mm MDF substrate to ensure adequate support of the Mirostone benchtop.

Mirostone is manufactured using modified acrylic polymer, and overtime will slightly distort to a minimum / maximum tolerance of approximately 1.5mm per meter after installation.

### DARK COLOURS

Dark colours are more prone to showing scratches and marks than lighter colours. In addition, it is **not** recommended that dark colours have a higher level of finish than 1000 grit.

It is a condition of Mirostone limited warranty that the following supplementary guidelines are followed and that you have attended an approved solid surface course and are proficient at applying solid surface fabrication and installation techniques.

It is also a condition of the Mirostone limited warranty that **before** commencing any fabrication or installation work, you first inspect the condition of your Mirostone solid surface products and in particular, ensure that you are satisfied that there are no colour matching issues.

Before working with Mirostone, please carry out a risk assessment and take all steps to minimise any risks to general health and safety.

This must include the use of dust masks, adequate dust extraction for all power tools and the provision of adequate ventilation within the area of work.

### JOINING BENCHTOPS

The product has a 1mm arras edge all round. To create a joint, cut the top to the required length sand the cut edge face and arras the edge by 1mm to match the other edges. Apply silicone to the bottom of the edge being joined and bring the tops together. For a more secure fixing, lamello both edges and apply a biscuit between the edges being joined and use silicone to seal.

Please dispose of any Mirostone off-cuts or sanded dust safely in an appropriate waste bin. Do not incinerate any waste materials from your Mirostone installation.

Mirostone work surfaces can be installed using woodworking tools. We recommend the **Festool** range of tools, for best possible finish.

### NOTICE

The following guidelines are a supplement (and not a replacement) for the solid surface knowledge obtained by attending an approved solid surface course. The guidelines refer to **Festool** tools and dust extraction, but any high quality and equivalent brand of tools and dust extraction will suffice.

You may wish to use a Vuplex solid surface cleaner/polish for polishing the finished tops.

### CONDITIONING

All materials should ideally be given 24 hours to meet room temperature prior to installation. Ensure cabinets have been installed correctly and are level as the Mirostone will follow the cabinet profile.

### AFTER INSTALLATION

Each Mirostone element is supplied with a clear protective plastic film and wrapped in cardboard for transportation; the exterior packaging has two windows cut out on the surface to allow the application of suction lifting clamps for ease of handling on and off site.

On completion of the installation, remove the protective film in one movement (i.e. do not stop and start the removal of the film as the film adhesive could leave marks on the surface).

The use of methylated spirits on a clean soft cloth should be used to 'wash' the surface and exposed edges.

### FINISHED END EDGES

Clamp a straight edge guide to the surface. Using a **Festool OF1400 Router** with a tungsten carbide or spiral router bit, rout out using four progressive passes. Each pass should be 6mm deeper than the previous cut.

Always cut into the front edge profile. Do not force the cutting process. Apply a slow even pressure to the cutting tool, letting the cutter lead the cut.

## INSTALLATION GUIDELINES FOR APPROVED SOLID SURFACE FABRICATORS

### RESURFACING MIROSTONE

Using a **Festool RO150 Rotex /random orbital sander** set the machine to Rotex mode and start with a 120 grit work in a left/right and front / back pattern 4 times, then repeat using 240 grit, and then 400 grit, then 800 grit discs, wiping the surface clean between grades to remove any grit. Finish off with a final sanding all over the surface using a 1000 grit disc and wipe with a clean damp cloth. Apply Vuplex Cleaner / Polish to the solid surface polish and buff with a microfibre cloth.

### BOWL, SINK, TAP CUT OUTS AND INSET SINKS:

Apply masking tape to the surface where the sink is to be cut out; this will allow you to see the markings and help protect the surface during the cutting. Use the bowl as your template or create a jig. Position the sink, bowl or tap cut out at least 75mm from any joint and keep as much distance as possible from the work surface edges. Drill the starting point hole carefully with your router bit or drill, using a **Festool OF1400 Router** with a tungsten carbide router blade or spiral cutter. Rout out using four progressive passes. Each pass should be 6mm deeper than the previous cut.

Always cut into the front edge profile. Do not force the cutting process. Apply a slow even pressure to the cutting tool, letting the cutter lead the cut.

**NB: Always support the off cut to prevent it breaking away as you near the completion of the cut.**

The cut out edges must be sanded smooth to remove any jagged areas and all internal corners of cut outs must have a minimum 18 mm radius to prevent stress cracking. In addition, the top and bottom edges of the cut out should be sanded to an approximate 1mm radius. Clean the cut out area with methylated spirits or similar. Fit the sink or bowl in accordance with your approved solid surface training. On completion of the sink installation, a thin bead of silicone should be applied around the sink to prevent moisture seeping into the cabinet below. Water will not affect the Mirostone surface as it is solid acrylic and is impervious to water. A packing piece may be required to increase the thickness of the material at the position where the inset sink clamps are being fitted.

**NB: All brands and styles of undermount and inset sinks can be used with Mirostone.**

### TAP HOLES:

Drill out using drill bit, speed bit or hole saw.

### DRAINER GROOVES:

Because Mirostone is a solid surface you can create a 'waterfall' effect by having your drainer groove design moving from a depth of 2mm to 5mm. Elevate the drainer groove template at one end by 3mm and use a **Festool OF1400 Router** to achieve this effect.

### COOKTOP CUT OUTS:

Mark the location of the cook top, bore all four corners using your 18mm router bit. Apply a straight edge to the pencil line between the two holes and rout out to the pencil line as described in bowl sink tap cut outs. After removing the piece turn the top over and glue in the corner reinforcing block. When these have set, turn over and run the router round the corners to match the cut out. End round the edges using a 6mm radius cutter. Apply the foil heat tape to the surface approximately 8/10mm and fold back, press the felt tape onto the foil and fold over and into the opening, repeat this for all edges. Using an MDF packer fit the cooktop and secure the cook top fixing bracket to the packer, this will act as a thermal barrier for the heat transfer from the bracket to the Mirostone and reduce the chances of cracking.

### ALL CUT OUTS: STRESS CRACKING AVOIDANCE:

Sinks, bowls, taps, hot plates, waste disposal access points, plumbing pipes: whatever type of cut outs you form, it is vital you take the following steps to avoid the risk of stress cracking. All cook top cutouts must be routed and have the corner reinforcing blocks fitted together with the thermal barrier foil and felt.

### THE CUT OUT EDGES MUST BE SANDED:

Smooth to remove any jagged areas and all internal corners of cut outs must have a minimum 18mm radius to prevent stress cracking. In addition, the top and bottom edges of the cut out should be end rounded to an approximate 6mm radius. Clean the cut out area with methylated spirit.

### PROFILE EDGES:

Mirostone elements are supplied with a 1mm arras. Alternatively, using a **Festool OF 1400 Router** with a tungsten carbide 2-flute router blade, you can create a unique look by routing a different profile edge.

### Using the 900 element as a waterfall end

The Mirostone elements are finished on one side only, when using the 1000mm x 900mm element as a waterfall end you will need to sand the inside face of the Mirostone as this is not pre finished.

**INSTALLATION GUIDELINES FOR APPROVED SOLID SURFACE FABRICATORS**

**BEFORE FIRST USE**

Be sure to give your worktops a once over with 'Selleys Sugarsoap' which will assist in eliminating any residue left by the protective sheet which is removed during the installation of your worktops. This can be purchased from all leading hardware stores.

**EVERYDAY CLEANING AND GENERAL CARE**

Mirostone® is a non-porous surface meaning that it is water and stain resistant. If you do spill something on your surface we recommend wiping the worktops with warm soapy water a damp cloth.

In addition, Selleys Sugarsoap Everyday Wall & Surface Cleaning Wipes are specially formulated to remove the most stubborn stains on your tops.

Whilst Mirostone® is tough, it is not indestructible. Use of the product outside of the guidelines referred to in the installation guide can cause unnecessary damage. We always recommend using a cutting board when preparing food and never cutting directly on the Mirostone® surface to avoid blunting kitchen knives or damaging the surface of your bench top.

**HEAT RESISTANCE**

Mirostone® is heat resistant, however like most solid surface worktop materials Mirostone® can be damaged by sudden and rapid surface temperature changes. We always recommend placing hot pots, oven trays and fry pans onto a wooden chopping board or similar object to absorb the heat. We also recommend that electric fry pans and slow cookers are also used on a similar object and not directly on the worktop as these can also produce extremely high levels of heat.

**HEALTH HAZARD INFORMATION**

**POTENTIAL HEALTH EFFECTS**

**Information:**

“Mirostone” Solid Surface Material is not hazardous as shipped. However, operations such as sawing, routing, drilling and sanding can generate dust. High concentrations of dust can irritate eyes, nose and respiratory passages and cause coughing and sneezing. Since there are no exposure limits established for dust from “Mirostone” Solid Surface Material, Amorini recommends using the exposure limits for Polyester Polymer, Hydrated Alumina, Aluminium Hydroxide, Aluminium Tri-hydroxide, Methyl Methacrylate, Butyl Acrylate.

Please see details in the **Personal Protection/Exposure Control** Section of this MSDS.

“Mirostone” Solid Surface Material does not off gas at room temperature. At higher temperatures, small amount of Polyester Polymer, Hydrated Alumina, Aluminium Hydroxide, Aluminium Tri-hydroxide, Methyl Methacrylate, Butyl Acrylate can be released, the amounts of which are dependent upon temperature, time and other variables.

Individuals with pre-existing diseases of the lungs or skin may have increased susceptibility to the effects of overexposure to Polyester Polymer, Methyl Methacrylate, Butyl Acrylate.

**HEALTH HAZARD INFORMATION**

Polyester Polymer, Hydrated Alumina, Aluminium Hydroxide, Aluminium Tri-hydroxide, Methyl Methacrylate, Butyl Acrylate

**Carcinogenicity Information:**

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IAR, NTP, OSHA or ACGIH as a carcinogen.

**FIRST AID**

**Inhalation:**

No specific intervention is indicated as the compound is not likely to be hazardous by inhalation. However, if large amounts of dust are inhaled, or if exposed to fumes from overheating or combustion, remove to fresh air. Consult a physician if breathing is difficult or if symptoms persist.

**Contact with Skin:**

The compound is not likely to be hazardous by skin contact but cleansing the skin after use is advisable.

**Eye Contact:**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

**Ingestion:**

No specific intervention is indicated as compound is not likely to be hazardous by ingestion. Consult a physician if necessary.

**MATERIAL SAFETY DATA SHEET (M.S.D.S.)**

**COMPANY DETAILS**

**Company Name:** Amorini Australia Pty Ltd (ACN 109 941 755)  
**Address:** PO Box 663  
Parkholme SA 5043  
**Telephone:** (08) 8376 7904  
**Facsimile:** (08) 8294 9239  
**Emergency Tel:** (08) 8376 7904

**IDENTIFICATION**

**Product Name:** Mirostone 20mm solid surface

**PHYSICAL & CHEMICAL PROPERTIES**

**% Volatiles:** 0% at room temperature  
**Solubility in Water:** Insoluble  
**Form:** 20mm solid sheet  
**Specific Gravity:** 1.74 +/- 0.2

**INGREDIENTS**

Material: "Acrylic Modified unsaturated polyester polymer" 35-45% Cas, Number ; Mixture  
"Hydrated Alumina, Aluminium Hydroxide, Aluminium Tri-hydroxide" 55-65 % Cas, Number 21645512

**Exposure limits may be applicable for the following:**

Methyl Methacrylate <1  
Butyl Acrylate <1  
Polyester Polymer <1  
Hydrated Alumina <1  
Aluminium Hydroxide <1  
Aluminium Tri-hydroxide <1

**Components (Remarks):**

Material is not known to contain Toxic Chemicals under Section 313 of Title III of the Superfund Amendments and Reauthorisation Act of 1986 and 40 CFR part 372

**HEALTH HAZARD INFORMATION**

**PERSONAL PROTECTION & EXPOSURE CONTROLS**

**Engineering Controls:**

Use ventilation that is adequate to keep employee exposure to airborne concentrations below recommended limits. Provide for appropriate exhaust ventilation and dust collection at machinery.

**Eye/Face Protection:**

Wear safety glasses during operations such as sawing, Sanding, drilling or routing.

**Respirators:**

During grinding, sanding or sawing operations, if airborne particulate concentrations are expected to exceed permissible exposure limits, use a half face NIOSH approved air purifying respirator with type N100 filter. Respirators should be selected based on the form and concentrations of the contaminant in air and in accordance with OSHA Respiratory Protection Standard CFR 1910.134.

**Protective Clothing:**

Wear leather or cotton gloves when handling large pieces and during operations such as sawing, routing or drilling.

**EXPOSURE GUIDLINES**

**Exposure Limits “Mirostone” Solid Surface Material:**

Polyester Polymer, Hydrated Alumina, Aluminium Hydroxide, Aluminium Tri-hydroxide, Methyl Methacrylate, Butyl Acrylate

10 mg/m3, 8 hr. TWA, total dust  
5 mg/m3, 8 hr. TWA, respirable dust

**PEL (OSHA):**

Particulates (Not Otherwise Regulated)  
15 mg/m3, 8 hr. TWA, total dust  
5 mg/m3, 8 hr. TWA, respirable dust

**TLV (ACGIH):**

Particulates (Insoluble) not otherwise classified  
10 mg/m3, inhalable particulate 8 hr. TWA  
3 mg/m3, respirable particulate 8 hr. TWA

**Methyl Methacrylate**

FEL (OSHA) 100 ppm, 410 mc/m3, 8 hr. TWA  
TLV (ACGIH) 50 ppm, 8 hr. TWA, STEL 100 ppm, A4 Sensitiser  
\*AEL (Amorini) None established

**Butyl Acrylate**

FEL (OSHA) None established  
TLV (ACGIH) 2 ppm, 8 hr. TWA, A4 sensitiser  
\* AEL (Amorini) 2 ppm, 8 & 12 hr. TWA, skin

• AEL is Amorini’s Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits that are lower than the AEL are in effect, such limits shall take precedence.

**FIRE FIGHTING MEASURES**

**Flammable Properties:**

“Mirostone” Solid Surface Material can be combusted only with difficulty.

Hazardous gases/vapours produced in a fire are carbon monoxide, methyl methacrylate, butyl acrylate and aldehydes.

**Extinguishing:**

Water, Dry Chemical, CO2, Foam.

**Fire Fighting Instructions:**

Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus.

**HEALTH HAZARD INFORMATION**

**SAFE HANDLING INFORMATION CLEAN UP**

**Safeguards:**

Note: Review **Fire Fighting Measures** and **Handling (Personnel)** sections before proceeding with clean up. Use appropriate **Personal Protective Equipment** during clean up.

**Spill Clean-up:**

Recover undamaged and minimally contaminated material for re-use and reclamation.

**Handling (Personnel):**

Avoid breathing dust.  
 Avoid breathing fumes generated during heating.  
 Temperatures reached while thermoforming Solid Surface Material are high enough to release some Polyester Polymer, Hydrated Alumina, Aluminium Hydroxide, Aluminium Tri-hydroxide, Methyl Methacrylate, Butyl Acrylate.  
 Machining operations during fabrication, such as sawing, sanding or routing, create friction and may result in temperatures high enough to release small amounts of Polyester Polymer at the cutting tool surface.

**STABILITY AND REACTIVITY**

**Chemical Stability:**

Stable at normal temperatures and storage conditions.

**Incompatibility with other Materials:**

None reasonably foreseeable.

**Decomposition:**

Thermal decomposition can release Polyester Polymer, Hydrated Alumina, Aluminium Hydroxide, Aluminium Tri-hydroxide, Methyl Methacrylate, Butyl Acrylate

**Polymerisation:**

Polymerisation will not occur.

**DISPOSAL CONSIDERATION**

Waste Disposal: Preferred options for disposal are:  
 Recycling  
 Incineration with energy recovery  
 Landfill  
 Treatment, storage, transportation and disposal must be in accordance with applicable State and Local regulations.

**TRANSPORTATION INFORMATION**

**Shipping Information:**

Not classified as hazardous goods.

**ECO TOXICOLOGICAL INFORMATION**

**Aquatic Toxicity:**

No information available.  
 Toxicity is expected to be low on insolubility in water.

**ADDITIONAL INFORMATION**

**Medical Use:**

CAUTION  
 Do not use in medical applications involving permanent implantation in the human body.

**WEIGHTS FOR MIROSTONE 20 MM**

- 2000 x 600 = 45kg
- 3000 x 600 = 67kg
- 3000 x 900 = 102kg
- 2000 x 900 = 68kg
- 1000 x 900 = 34kg

**Amorini Australia Pty Ltd**

**Contact:**

Mitch Bosley - Product Manager - Solid Surfaces, Robes & Bathrooms  
**Telephone:** 0404 706 482