

MISTRAL INSTALLATION ADVICE

(1) GETTING STARTED

Important Notices

Before working with any Karonia products you must:

- Read all the processing and installation literature relating to those products.
- Watch the relative training videos available either on the Karonia website or on the MISTRAL DVD included in the Karonia Installation Kit.
- Check the Karonia website for any literature or training video updates at www.karonia.com.

Ensure that you have made full consideration of and are working in compliance with all health and safety legislation.

You are responsible for your working environment and those in it. ALWAYS carry out a full risk assessment on that environment and the operations to be carried out.



Introduction to MISTRAL

What is MISTRAL by Karonia?

The MISTRAL product range is a combination of the enhancement of the technology behind solid surface worktops, and the development of a product format that best suits the required applications. The result is a 25mm thick luxury solid surface worktop range with features and benefits that offer advantages to all parties from designer to stockist to studio to installer to end user.

Product Features

The MISTRAL product range is designed to be able to be easy to install and yet offer more opportunities for the installer to add value to the services they offer with straight-forward processes that enhance the end result of the installed product;

Pure SOLID Solid Surface:

- No MDF or particleboard substrate, a 100% true solid surface worktop!
- Non-porous, so even in bathrooms there is no moisture ingress!
- 25mm thick product format means that even Belfast sinks are compatible!

Strong, Seamless Joints:

- 100% solid surface to solid surface jointing face provides great joint strength!
- The resultant joints are inconspicuous leaving a beautiful, seamless finish!

Limitless Design Options:

- Cut-outs for appliances can be cut anywhere, no special modules needed!
- Imaginative curves and shapes can be created with ease and no end-capping is required!

Simple to Install:

- Installation can be done with standard tooling, just like wood worktops!
- No special tools, no templating, you save the time and keep the profit!

Material Benefits

Solid surface technology offers a wide range of characteristics which are the result of the particular composition of the solid surface mix. By understanding the final application of the solid surface product the specific characteristics that are most advantageous can be selected. The MISTRAL product has been designed, not only to incorporate the usual features of solid surface products, but to enhance the effectiveness of these qualities;

Durable and Hygienic:

- The 25mm thickness of MISTRAL maximizes the natural strength and durability of solid surface.
- The seamless jointing capabilities in addition the fact that the MISTRAL surfaces are non-porous means that they do not harbour bacteria.

Chemical, Stain and UV Resistant:

- The design of MISTRAL's composition ensured great resistant strength giving the ability to repel a large majority of the usual household chemicals and stains.
- Even if highly concentrated chemicals are spilled onto the surface it may well only require a little attention with a light abrasive pad or paper.
- MISTRAL has great UV stability making it resistant to discolouration or fading.

Inspirational Colours:

- Using the inherent abilities of solid surface technology we have developed colours to achieve luxurious aesthetics with real depth and lustre.
- Our range of colours is designed to offer decors to match all manner of design schemes.

Easy to Maintain and Replenish:

- MISTRAL worktops are easy to care for and clean as part of the normal domestic routine with no hard to clean joints.
- Any general wear or scuff marks can be abraded away using our Karonia Care and Maintenance Kit leaving the worktops looking as though they had just been installed.

Product Information

Worksurfaces and Support Products

All our worksurfaces and support products are supplied square-edged all the way round with a linear 400 grit surface finish.

<u>Product</u>	<u>Length (mm)</u>	<u>Width (mm)</u>	<u>Thickness (mm)</u>	<u>Weight (kg)</u>
MISTRAL Standard Worktop	3010	625	25	73 - 92
MISTRAL Standard Worktop	2800	670	25	73 - 92
MISTRAL Breakfast Bar	2000	900	25	70 - 88
MISTRAL Sheet	3010	625	12	35 - 44
MISTRAL Sheet	2000	900	12	34 - 42
MISTRAL Plinth	3010	200	12	11 - 14
MISTRAL Upstand	3010	75	12	4 - 5

Please note that due to the particular composition of each colour there are variations in the finished product's weight dependant on the colour used, hence the product weights are shown as a range.

Accessories

All that you will need to help you install and live with MISTRAL worksurfaces. Consumable items within the kits are also available individually.

MISTRAL Adhesive Pack (150ml)

Contents: Adhesive Cartridge (150ml), Plastic Adapter for Mastic Gun, 3 No. Mixer Nozzles.

Karonia Installation Kit

Contents: Plastic Carry Case, MISTRAL Installation DVD, 4 No. Multi-Purpose Cloths, Alcohol Wipes (approx. 200), 10 Pairs of Disposable Gloves (XL), 2 No. Plastic Spatulas, Heat Reflective Tape (45m), 10 No. Sanding Pad (P240), 10 No. Sanding Pad (P320), 10 No. Sanding Pad (P400), 3 No. Abrasive Finishing Pad, Countertop Magic (414ml), Polish Applicator Pad.

Karonia Seaming Tool Pack

Contents: Seaming Tools (2 No), Aluminium Carry Case.

Karonia Care and Maintenance Kit

Contents: Plastic Carry Case, Care and Maintenance Instructions, 2 No. Multi-Purpose Cloths, Ergonomic Hand Sanding Block, 2 No. Abrasive Paper (P320), 3 No. Abrasive Paper (P400), 3 No. Abrasive Paper (P600), Abrasive Finishing Pad (grey), Countertop Magic (414ml).

Colour Availability

All the MISTRAL worksurfaces, support products and adhesive pack are manufactured in the following colours:

- Arctic Frost, Biscuit, Calypso, Galaxy, Glacier, Mist, Snowstorm, Strata, Tongaro, Vanilla Sky, and Winter Drift.
- Please contact your stockist for up to date availability of individual items.

Technical Notes

Please note that darker colours will show signs of general wear and tear more readily and are not recommended for high traffic areas.

All our cast products are manufactured to the following tolerance levels:

Overall Length Variation	± 3mm
Overall Width Variation	± 3mm
Overall Thickness Variation	± 0.75mm
Variation on Diagonals	≤3mm
Surface Level	± 1.25mm
Squareness	± 0.75mm
Edge straightness	≤1.5mm

For MSDS information relating to MISTRAL by Karonia products please visit www.karonia.com.

Health and Safety Information

General Information

Please conform to all necessary and relevant safety requirements including health and safety guidelines in accordance with all relevant health and safety legislation.

Karonia Solid Surface material is non-toxic and there are no known hazards associated with it however, the processes involved during fabrication and installation produce dust from the material which is classed as nuisance dust. Methylmethacrylate vapour is also released from the material during machining which has a detectable odour. Consideration must be given to the following points to abate any adverse affects that are possible as a result of excessive exposure.

It is important to ensure that the area in which work is to take place is well ventilated to allow the methylmethacrylate vapour to dissipate, and it is also essential that you employ a dust extraction system to remove the material debris created during processing.

Emergency First Aid

If an individual is exposed to excessive vapour, remove them from the area and get them to fresh air. Monitor their condition and if problems persist consult a medical professional. If any adhesive, catalyst or resin comes into contact with your skin, wash for 15 minutes with soap and water. If the contact is with your eyes, immediately wash thoroughly for 15 minutes and seek medical assistance.

For more information please contact your distributor, or visit www.karonia.com for Material Safety Data Sheets.



Handling and Storage

Handling Advice

When carrying Karonia worktops use good lifting practices and ensure to take notice of the product weights. All worktop and sheet products should be carried singularly and kept vertical (up on its long edge) so as to avoid any damage and to best maintain control while carrying them.

MISTRAL worktops are heavy and should always be carried by a minimum of two people.

As with all solid surface products, MISTRAL worktops and sheets are more susceptible to damage in cold temperatures so please ensure to handle them with care.

If you perform any cut-out operations prior to transporting the worktops to site, clamp plywood board to either side of the worktop to support the cut-out area.

Storage Guidance

It is important that MISTRAL by Karonia products are stored in the prescribed manner to ensure that they are kept in the best condition for the benefit of both the installer and the end-user.

Storing Worktops - Ensure that Karonia worktops are stored flat and that the weight is supported along its full length. When stacking, check for any particles that may get between the worktops to prevent any abrasion that may cause damage to the worksurfaces. Always store worktops indoors and ensure the area is dry and well ventilated. The storage area must also be free from extreme temperature variation.

Storing Adhesive - Keep level in storage and employ a first in first out (FIFO) stock management policy. The adhesive should be ideally stored at a temperature of approximately 5 degrees Celsius. This can extend the shelf life of the product to 12 months from the date of manufacture.

Tooling and Equipment

It is always best practice to ensure that you review all necessary procedures and the tooling required to perform them as well as all the necessary protective equipment that proper health and safety practice prescribes.

Safety Equipment

It is your responsibility to consider all the tasks that you will be required to perform as part of the installation process and to assess the specific risks for each of these processes.

- Always use a dust mask and eye protection while performing any processing tasks on the material.
- When using adhesive, resin, or catalyst always wear gloves and eye protection as these components may cause irritation to the skin. Always wash your hands after use and dispose of all waste responsibly including gloves, spent cartridges, unused adhesive.
- Ensure that the working environment is well ventilated.

Essential Tooling

MISTRAL by Karonia has the practicality of hardwood in that tooling that will work with hardwood is adequate for use with our solid surface. While the material used for the worktops is harder than wood, it does not require the specialist tools as materials such as granite and marble do. However, consideration should always be given to any special requirements of the particular installation site or appliances that may require more specialized tooling.

Circular Saw

Used for sizing worksurface and support products on site, but should not used to create a finished edge.

- 1200 watt minimum power
- Only use high quality TCT triple chip blades; some manufacturers have blades specified for solid surface material which will have greater longevity.
- Cut depth minimum of 30mm

Extraction

Used to effectively remove dust and material debris during processing tasks to ensure a clean and comfortable working environment.

Panel Saw

Used for sizing worksurface and support products in a workshop prior to installation, but should not be used to create a finished edge.

- Only use high quality TCT triple chip blades; some manufacturers have blades specified for solid surface material which will have greater longevity.
- As a result of not having a chipboard, particleboard or MDF substrate our worktops can also be used with water-cooled cutting equipment and even waterjet cutters.

Router

Used to perform trimming operations, cut-outs, shaping, edge profiling, and other detailing tasks such as adding drainer grooves.

- 2 ½ HP / 1850 watt minimum power.
- Only use high quality tungsten carbide cutters.
- We recommend the use of a spiral up-cutter router bit as they employ the router's power more evenly, creating a smoother result, and its upcut action aids effective debris extraction.
- However, a twin-fluted router is adequate.

Jig Saw

Used to perform overmount cut-outs for appliances such as hobs, and drop-on sinks, but is not recommended for sizing worksurface and support products.

- 700 watt minimum power
- Only use high quality TCT triple chip blades; some manufacturers have blades specified for solid surface material which will have greater longevity.

Adhesive/Mastic Gun

Used with the plastic adapter to express the adhesive from the adhesive cartridge through the mixer nozzle at a 10:1 ratio.

Random Orbital Sander

Used with abrasive papers, abrasive pads, and sponge polishing disc to smooth joints, perform finishing operations, and apply Countertop Magic.

- 600 watt minimum power (for 150mm sander), 400 watt minimum power (for 125mm sander)
- Speed requirement of 6,000–10,000rpm
- Ideally the sander should have a 3-5mm orbit.

Seaming Tool

Used to pull jointing faces together, level the top surfaces, and hold the worktops in place during the jointing procedure.

- It is recommended that you use the Karonia Seaming Tool Kit.
- Alternatively, wood blocks can be hot melt glued to the surfaces and then the tops pulled together with sash clamps. In this case you would need to use biscuits to level the tops

Clamps

Used to hold items in place while they are being jointed such as built up edges or downstands. Examples include spring and F-clamps.

Jigs

Used to guide the router when performing operations such as undermount and overmount cut-outs, joint smoothing, and adding drainer grooves.

Consumables

Items such as the abrasive papers used during finishing or heat reflective tape that is used to line hob cut outs. All the consumables that are required on most typical installation projects are contained in the Karonia Installation Kit.



Design and Layout Considerations

Planning

When designing a worksurface project, consideration must be given to the product quantities required and also to the positioning of worktop joints and cut-outs. This will ensure optimisation of product use, reducing waste and the related costs. There are also certain guidelines, as detailed below, that must be followed so as to install the worktops and all appliances and accessories in the correct manner. As long as these parameters are observed, designers and architects are free to utilise the potential that the flexibility of the Karonia worktop ranges offer.

Be sure to consider all layout optimisation options to ensure best product use and the simplest installation method.

Joint Layouts and Positioning

It is good practice to plan the location of all joints and cut-outs to obtain an appreciation of the requisite work needed to install the worktops, and any factors that may hinder the completion of this work. This may be due to positioning of other furniture within the room, or specific features that may affect design or layout decisions.

To ensure that the integrity of both joints and the worksurface itself, ensure that the following points are observed:

- Never extend joints across any cut-outs such as hobs and sinks, or over unsupported areas.
- Allow a minimum offset of 100mm from any cut-outs.

Thermal Expansion

A gap of 3mm should be left at each end of the worktop so as to allow for expansion. Testing data indicates that the coefficient of linear thermal expansion for Karonia Solid Surface is 1mm for every metre. The gap should be filled with a silicone based sealant. If any materials are attached to the solid surface material then appreciation should be given to the differences in expansion rates and an elastic adhesive should be used.

Appliance Considerations

Any heat generating appliances, such as an AGA, that are adjacent to the worktop should be positioned a minimum of 50mm from the end.

There are no restrictions on the positioning of dishwashers as there is no danger of moisture ingress due to the fact that MISTRAL has no MDF or particleboard substrate.

Pre-Installation Advice

Material Acclimatisation

All material should be given time to meet room temperature prior to installation (24 hours). This is especially important for adhesives as environmental temperature affects the curing time for the adhesive and room temperature allows for consistent performance. For the installation of Karonia products the ambient temperature should ideally be between 17°C (62°F) and 26°C (80°F). Ensure that worktops are stored flat during this acclimatization process and are not stored vertically on one edge.

Time Management

When planning each installation, give full consideration to the effect of adhesive curing times on the project. Ensure that you have tasks that can be completed while the adhesive is curing so that you maximize the efficiency of your installation programme.

Another key point to consider is that all tops are supplied with a 400 grit linear finish so when performing tasks such as joint smoothing, only finish below this level around the immediate area not the whole of the worksurface. This economy of finishing will ensure that the job is successfully completed in a shorter time.

Measurements and Quantities

Prior to commencing installation, make sure that you have the necessary products to complete the job including all support products and accessories. Check that any pre-fabricated elements, such as hob or sink cut-out are dimensionally accurate, and if any cut-outs are to be done on site, ensure that measurements are correct against the related appliances.

Working Environment Conditions

Ensure that the site is dry and secure, that is to say that windows, doors etc are fitted. Also consider the room temperature, so as to appreciate the possible effects on adhesive curing times. Remember that the colder the environmental temperature, the longer the curing times. The ambient temperature should be at least 16°C to ensure a successful cure process and no greater than 26°C as the adhesive would cure too rapidly to use.

Furniture Preparation

Ensure that the fitting location is as expected and that there are no additional factors present that may affect the worktop installation. This includes factors such as the site dimensions, wall alignment and levels or any additional furniture.

Check that all appliances and furniture that need to be in place prior to worktop installation are positioned adequately. It is essential that the carcasses on which the worktops are to be fitted have been properly levelled on both axis and attached to the wall.

It is also good practice to fit wall-hung worktop support battens across the full length of the worktop. This is a necessity between widely spaced base cabinets.

All the cabinets onto which the worktops are to be installed should be fitted on a horizontal plane and should be leveled to a tolerance of no more than 3mm for every 3m run of cabinetry. This prescribed variance can be corrected by shimming the cabinets. However, if the level of the cabinets is outside this tolerance, they should be reset and then realigned.

Ensure that there is sufficient clearance between base cabinet and any wall cabinets for the installation of the worktops and any support products such as splashback panelling.

Check all service pipes, power cables and sockets are installed and that all appliances fit in their allocated positions.

Accessibility

Check the access to the working environment in advance to ensure no delays to the installation time.

Make sure that consideration is given to the following:

- Check the distance between the delivery vehicle and the installation area to inform whether any handling equipment is necessary.
- Ensure there are no obstacles on your route from the delivery vehicle to the installation area.
- Check the entrance size and internal ceiling heights to ensure there will be no handling issues.

Unpacking the Worktops

Turn them face down and run a knife down the tape to open. Take care to only use a small bladed knife and hold away from the top where possible while cutting so as not to scratch the underside of the worktop just in case the reverse is visible in the finished application.

Ensure to make a note of the batch numbers on each of the worktops for later reference as they are required as part of the warranty registration details.

Each individual worktop surface is covered with a protective plastic film. Before using the worktop, this plastic film must be removed. Upon removal of the film there will be residual adhesive on the surface. To remove this, use a household cleaner, such as Cif Powercream. Apply the cleaner to the surface with a cloth, leave it for a short period and then wipe off the residue and dry the surface thoroughly. By doing this there will be no hindrance of tooling travel during the installation processes.

Retain the packaging if you will be required to cover the worktops once you have completed the installation. This may occur when other tradesman are required for tasks.

Always dispose of all packaging responsibly in accordance with local and national guidelines.

Colour Consistency and Damage Check

Karonia Solid Surface products are rigorously checked to ensure colour consistency, however it is always best practice when using two or more products together to check colour consistency prior to installation. To do this put the worksurfaces together and lightly sand across them with an abrasive pad and then wipe with denatured alcohol. This will give the most accurate basis for comparison. If any disparity is apparent please contact your supplier immediately.

When you receive your product always check the packaging for any signs of damage first, and then unpack and check it thoroughly. This enables you to identify any damage caused during transport. If there is any damage, contact your distributor before using the product.

Any claims relating to colour consistency or damage in transit that are made after the products have been processed, whether for pre-site fabrication or installation, are not covered by the Karonia Product Warranty.