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PRODUCT MANUAL

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MDi |  TOP

The creation of a countertop involves a multitude of different variables, possible designs and other factors, and it is impossible to take all of them into account in this manual.

Inalco guarantees the quality of MDi products and the compliance of the manufacturing process with Spanish and international standards. However, the integrity of MDi materials must be safeguarded by the fabricator through correct handling and use and by the end user through suitable care and cleaning.

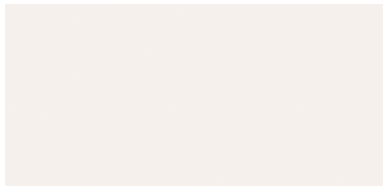
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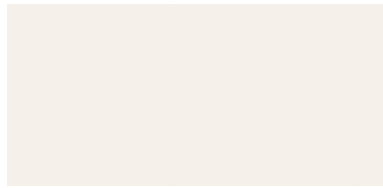
## COLOUR PALETTE

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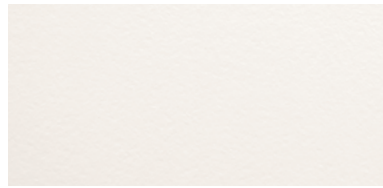
COLOUR PALETTE



ICE  
Super Blanco  
Natural



SILK  
Blanco  
Natural



SILK  
Blanco  
Bush-hammered



SYROS  
Super Blanco-Gris  
Natural



SYROS  
Super Blanco-Gris  
Honed Polished



TOUCHÉ  
Super Blanco-Gris  
Natural



TOUCHÉ  
Super Blanco-Gris  
Honed Polished



LARSEN  
Super Blanco-Gris  
Natural



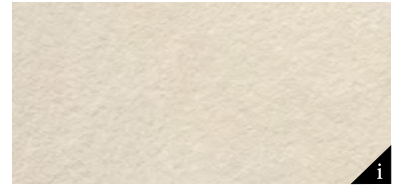
LARSEN  
Super Blanco-Gris  
Honed Polished



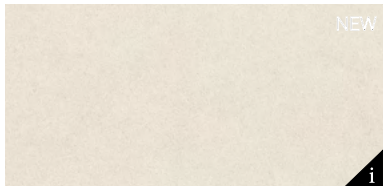
SELENE  
Super Blanco-Gris  
Honed Polished



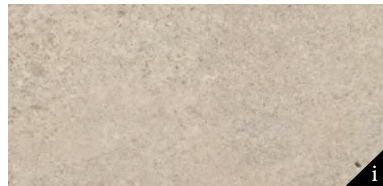
MASAI  
Blanco Plus  
Bush-hammered



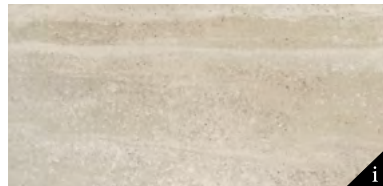
PACIFIC  
Blanco Plus  
Bush-hammered



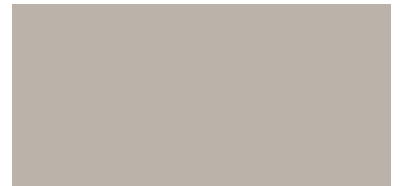
ANANDA  
Blanco  
DT (Digital Texture)



PETRA\*  
Crema  
Bush-hammered



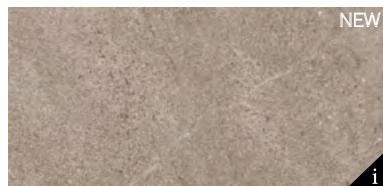
GEO  
Crema  
Bush-hammered



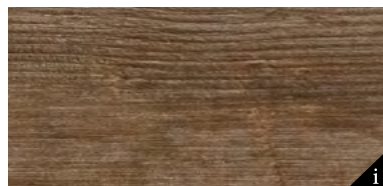
SILK  
Camel  
Natural



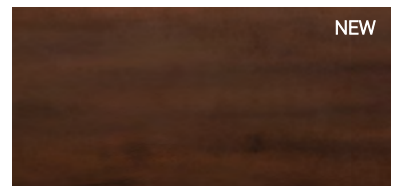
SILK  
Visón  
Natural



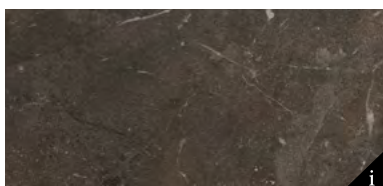
JASPER  
Moka  
Bush-hammered



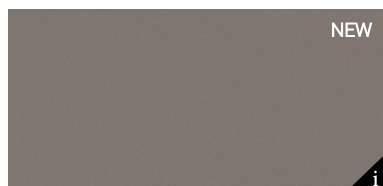
ARIZONA  
Fresno  
Natural




KORTEN  
Corten  
DT (Digital Texture)



UMBRA  
Marrón  
Bush-hammered

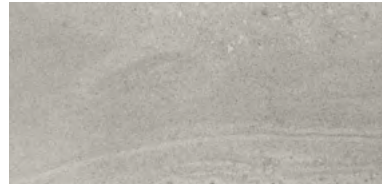


MATTERIA  
Taupe  
Bush-hammered

 Exclusive finishing for Industry.  
 \* 4mm-thick iTOP Fronts model available worldwide except for the European furniture sector. Check with Inalco's Sales Department.  
 \*\* 12 and 6mm-thick iTOP Countertops and 4mm-thick iTOP Fronts models available worldwide except for the European furniture sector. Check with Inalco's Sales Department.



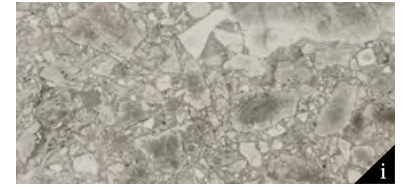
ALEA  
Piedra  
Natural



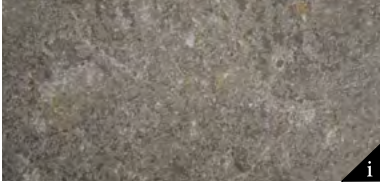
BOREAL  
Piedra  
Natural



MASAJ\*\*  
Piedra  
Bush-hammered



ISEO  
Gris  
Bush-hammered



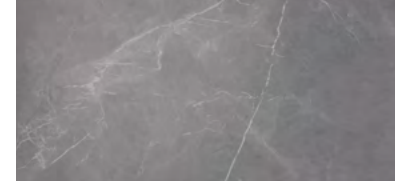
METEORA  
Gris  
Abujardado /



VINT  
Gris  
Natural



GEO  
Gris  
Bush-hammered



STORM  
Gris  
Natural



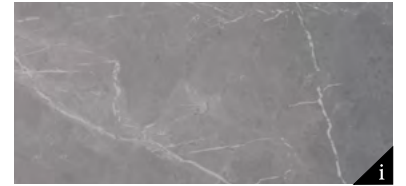
ASTRAL  
Gris  
Natural



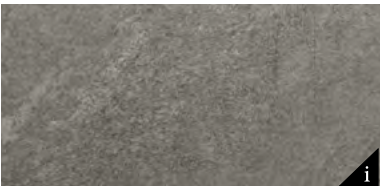
TOTEM  
Gris  
Bush-hammered



MOON  
Gris  
Bush-hammered



SENDA  
Gris  
Natural



PACIFIC  
Gris  
Bush-hammered



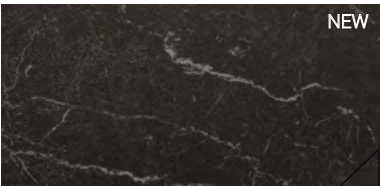
SILK  
Gris  
Natural



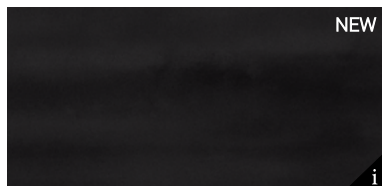
MATERIA  
Gris  
Bush-hammered



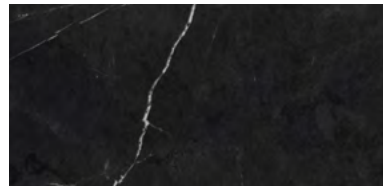
MATERIA  
Antracita  
Bush-hammered



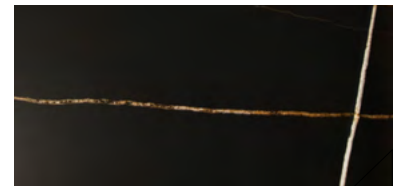
BALKAN  
Negro  
DT (Digital Texture)



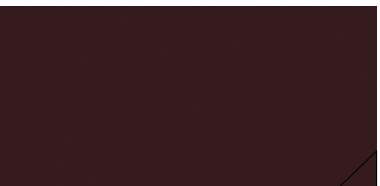
METALLO  
Negro  
Natural



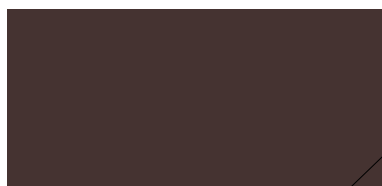
STORM  
Negro  
Natural



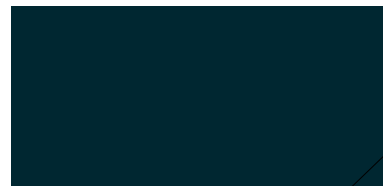
AZALAI  
Negro  
Natural



THE NEW BLACKS  
Amaranto  
Natural



THE NEW BLACKS  
Castagna  
Natural



THE NEW BLACKS  
Prugna  
Natural



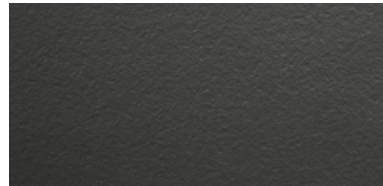
THE NEW BLACKS  
Muschio  
Natural



MATERIA  
Muschio  
Bush-hammered



SILK  
Negro  
Natural



SILK  
Negro  
Bush-hammered

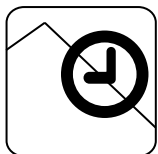
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## THE ADVANTAGES OF iTOP AND A COMPARISON WITH OTHER MATERIALS

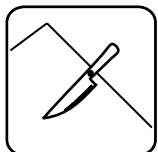
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## 1. THE ADVANTAGES OF iTOP

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**Resistant to wear and tear:** Thanks to iTOP'S technical characteristics, this is the most highly resistant countertop on the market, ideal for use indoors and out.



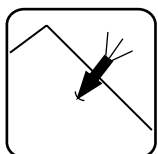
**Highly scratch resistant:** Food can be cut directly on its surface, without any damage to it. Even so, chopping boards such as iGASTRO by INALCO or boards made of other materials should be used.



**Frost resistant:** Its low water absorption rate of less than 0.1% makes it ideal for outdoor environments subject to frost and ice.



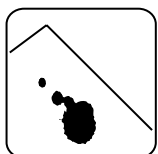
**Heat resistant:** It does not burn or give off smoke or toxic substances when exposed to high temperatures. Hot cooking utensils like frying pans or saucepans can be rested on the surface without it being damaged



**Impact resistant:** iTOP is highly resistant to knocks and impacts by everyday objects or utensils (i.e. everyday objects found in kitchens, restaurants, laboratories etc.).



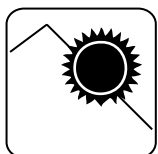
**Easy to clean and care for:** No extra care or special products are needed to clean it. Stains can be removed with water or normal cleaning products.



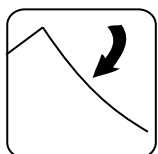
**Stain resistant:** It is not affected by products like solvents, detergents, bleach, oil, vinegar or citrus juice, provided that the stains are cleaned away within 24 hours.



**Hygienic:** Because it has a non-porous surface, this prevents the build-up of bacteria or mould, allowing food to be placed in direct contact with it.



**Resistant to ultraviolet rays:** The surface of iTOP is colourfast even when used outdoors.



**High bending strength:** It can withstand a high weight without bending or becoming deformed, maintaining its entire surface flatness.



A COMPARISON BETWEEN MDi & OTHER MATERIALS:		MDi Natural Bush-hammered DT	MDi Honed Polished	Solid Surface	Ceramic Porcelain Tiles	Quartz	Wood & laminate	Natural stone	Steel	Vinyl	Carpet
Hygienic	Water absorption rate Stain resistance Chemical resistance Prevention of build-up of bacteria	●	●	●	●	●	●	●	●	●	●
Non-porous	Water absorption rate	●	●	●	●	●	●	●	●	●	●
Usable both indoors and out	Water absorption rate Frost resistance Colour fastness test	●	●	●	●	●	●	●	●	●	●
Resistance to high temperatures	Thermal shock Heat resistance	●	●	●	●	●	●	●	●	●	●
Stain resistance	Stain resistance	●	●	●	●	●	●	●	●	●	●
Resistance to detergents	Chemical resistance	●	●	●	●	●	●	●	●	●	●
Thermal shock resistance	Thermal shock	●	●	●	●	●	●	●	●	●	●
Frost resistance	Frost resistance	●	●	●	●	●	●	●	●	●	●
UV resistance	Colour fastness test	●	●	●	●	●	●	●	●	●	●
Scratch resistance	Mohs surface hardness	●	●	●	●	●	●	●	●	●	●
Easy to clean and care for	Water absorption rate Stain resistance Chemical resistance	●	●	●	●	●	●	●	●	●	●
Resistance to wear and tear	Stain resistance Colour fastness test Thermal shock Scratch resistance	●	●	●	●	●	●	●	●	●	●
Impact resistance	-----	●	●	●	●	●	●	●	●	●	●

**WHY MDi MAKES SENSE?**

Surfaces	Full Digital technology Smoother-feeling textures 100% control over the design	●	●	●	●	●	●	●	●	●	●
Endless design 360° design	In / Out Full Design A broad choice of formats, finishes and colours A variety of thicknesses	●	●	●	●	●	●	●	●	●	●
Environmental benefits	H <sub>2</sub> O Full Digital: - 70% savings on water consumption - 90% reduction in atmospheric emissions - 50% of the materials are recycled and re-used in the production process	●	●	●	●	●	●	●	●	●	●
Fabrication	Easy to cut Easy to handle Easy to machine and assemble	●	●	●	●	●	●	●	●	●	●
Flexibility	Malleable. for 4 and 6-mm thicknesses	●	●	●	●	●	●	●	●	●	●

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## HANDLING AND LOADING

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## 1. iTOP PACKAGING DETAILS

iTOP are compact heavy slabs that need to be properly handled, taking all necessary safety precautions including the use of safety gloves at all times. The following table shows their weight per slab, per A-frame and the number of slabs per frame.

PACKING					
Format	Thickness	Weight of whole slab	Weight per m <sup>2</sup>	Slabs per A-frame	Weight per A-frame
150x320 cm	20 mm	250 kg	52,10 kg	12	3.185 kg
160x320 cm	12 mm	160 kg	31,25 kg	20	3.355 kg
160x320 cm	6 mm R	70,66 kg	13,80 kg	40	2..986 kg
160x320 cm	4 mm	47,50 kg	9,30 kg	60	3.004 kg

The slabs are loaded vertically onto pallets, fastened to an iron A-frame, to ensure their safe transportation and storage.

This new iron A-frame is more resistant, stable and long-lasting, as well as being eco-friendlier since it can be recycled and processed as many times as necessary.



## 1. iTOP PACKAGING DETAILS

Once the slabs have been loaded onto an A-frame, they are protected with four polystyrene corner protectors. The slabs are also secured to the pallet with three straps positioned so that they run across black edge protectors, as shown in the photos, to avoid direct contact with the slabs. Then it is all plasticized to protect it from the rain and from the action of the elements.

Each A-frame bears a label with the name of the series, colour, finish and shade of the product, together with the batch number and quality rating to ensure its full identification. The label also lists packing details such as the weight, m<sup>2</sup> per A-frame and number of slabs per A-frame.

20 / 12 mm



6 mm



4 mm



## 2. HANDLING & LOADING

---

To load, unload and transport the slabs, use a fork-lift truck, overhead crane or other similar lifting equipment, following the manufacturer's instructions at all times, complying with the maximum permitted loads, and making sure that the equipment is kept in good working order.

During the handling and transportation processes, the slabs should be kept in a balanced position, bearing in mind their centre of gravity, to prevent them from bending or breaking.

Before proceeding to load the pallets, check that the fork-lift truck meets the following requirements:

1. The highest point of the fork-lift truck must be less than 2,250 mm, because the entrance to the container is 2,270 mm high.
2. It must have a triplex mast, with a retracted height of less than 2,200 mm. The forks must be able to lift the load 1,440 mm without the extended mast reaching a height of over 2,270 mm.
3. Inalco recommends the use of fork-lift trucks with a loading capacity of 5,000 kg (a 600mm load centre).

When proceeding to unload the A-frames, secure the slabs with vulcanized rubber alligator hoisting clamps or conventional ones to prevent them from moving or falling off, and never exceed the maximum permitted load. Then remove the slabs one by one from alternate sides of the A-frame so as to keep it balanced and prevent it from tipping over.

If slings are used or any other handling equipment with metallic parts, make sure that the metal does not come into contact with the surface of the slabs, particularly in the case of those with a polished finish.



## 2. HANDLING & LOADING

### LOADING TRUCKS



Make sure that no device used by the freight company to secure the load exerts any pressure on the iTOP slabs.

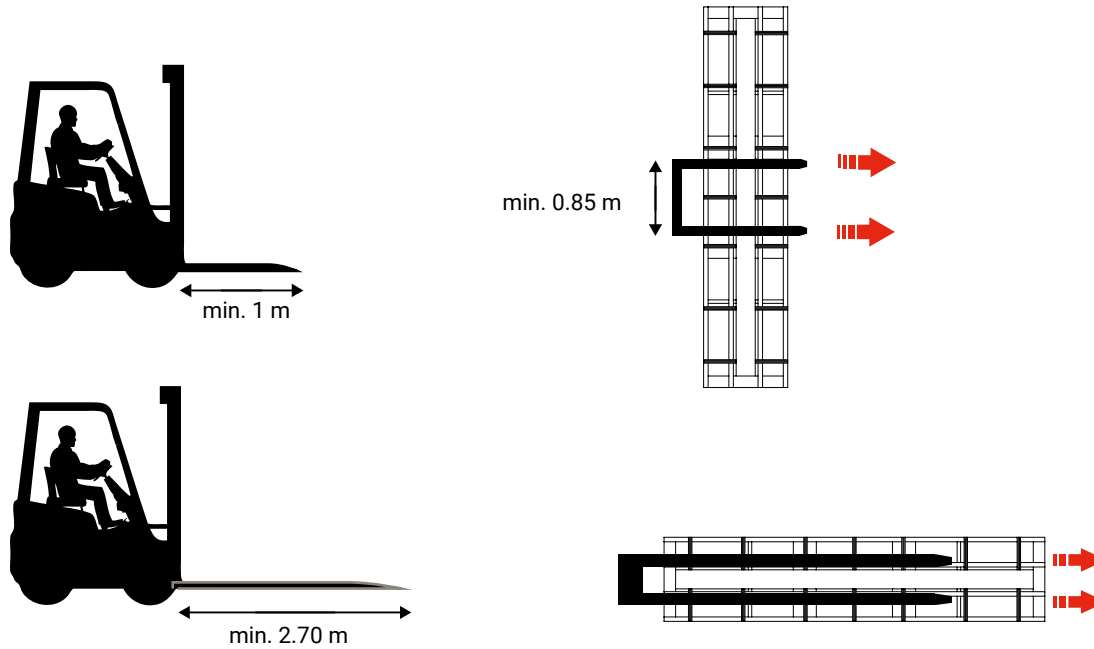
## 2. HANDLING & LOADING

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### LOADING CONTAINERS



## 2. HANDLING & LOADING



## 3. LOADING CAPACITY

### iTOP 150 x 320 / 160 x 320 cm

#### LOADING TRUCKS (13.5 m) 4, 6 R, 12 and 20mm-thick iTOP

Format	Thickness	PACKING			
		Weight of whole slab	Weight per m <sup>2</sup>	Slabs per A-frame	Weight per A-frame
150x320 cm	20 mm	250 kg	52,10 kg	12	3.185 kg
160x320 cm	12 mm	160 kg	31,25 kg	20	3.355 kg
160x320 cm	6 mm R	70,66 kg	13,80 kg	40	2..986 kg
160x320 cm	4 mm	47,50 kg	9,30 kg	60	3.004 kg

TRUCK CAPACITY 13.5 m			
Thickness	Number of A-frames	Total kg	Total m <sup>2</sup>
20 mm	7 1/2	23.888 kg	432
12 mm	7	23.485 kg	716,80
6 mm R	7 1/2	22.395 kg	1.536
4 mm	7 1/2	22.530 kg	2.304





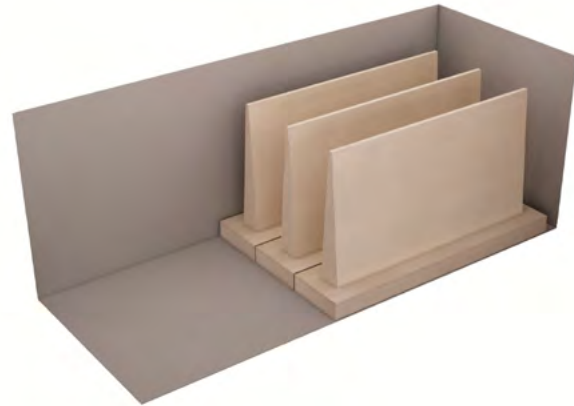
### 3. LOADING CAPACITY

#### iTOP 150 x 320 / 160 x 320 cm

PACKING					
Format	Thickness	Weight of whole slab	Weight per m <sup>2</sup>	Slabs per A-frame	Weight per A-frame
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160x320 cm	12 mm	160 kg	31,25 kg	20	3.355 kg
160x320 cm	6 mm R	70,66 kg	13,80 kg	40	2..986 kg
160x320 cm	4 mm	47,50 kg	9,30 kg	60	3.004 kg

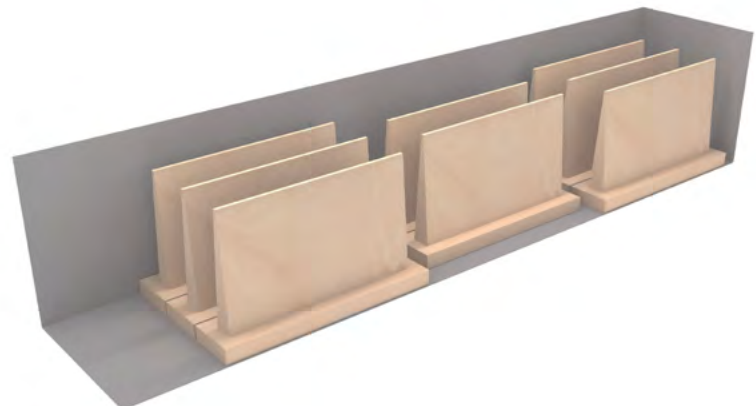
#### LOADING 20' CONTAINERS (235 x 589 x 239 cm) 4, 6 R, 12 and 20mm-thick iTOP

20' CONTAINER			
Thickness	Number of A-frames	Total kg	Total m <sup>2</sup>
20 mm	3	9.555 kg	172,8
12 mm	3	10.065 kg	307,2
6 mm R	3	8.958 kg	614,4
4 mm	3	9.012 kg	921,6



#### LOADING 40' CONTAINERS (235 x 1203 x 239 cm) 4, 6 R, 12 and 20mm-thick iTOP

40' CONTAINER			
Thickness	Number of A-frames	Total kg	Total m <sup>2</sup>
20 mm	7 1/2	23.888 kg	432
12 mm	7	23.485 kg	716,8
6 mm R	7 1/2	22.395 kg	1.536
4 mm	7 1/2	22.530 kg	2.304

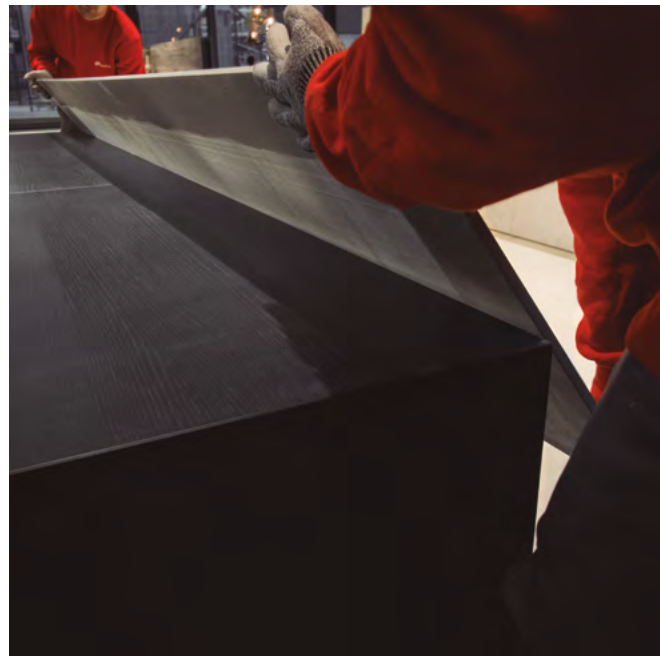


## 4. CARRYING iTOP SLABS BY HAND

Carrying iTOP slabs by hand.



Lifting an iTOP slab onto the cutting table.



#### 4. CARRYING iTOP SLABS BY HAND

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Long thin slabs (for instance skirting panels) should be clamped to an aluminium bar when carried to prevent them from sagging in the middle.



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## VISUAL INSPECTION OF THE SLABS

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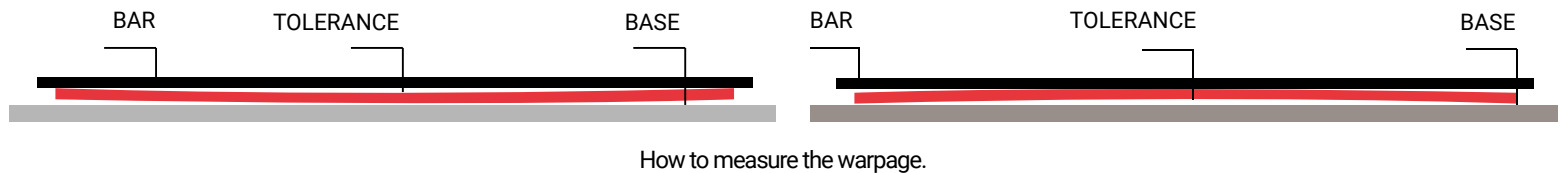
Before starting work on a slab, it should be cleaned and carefully inspected to make sure that it meets all the necessary quality requirements. Examine it in detail, first vertically on the A-frame and then horizontally before going any further.

In this way, checks can be made to ensure that the slab has no surface flaws and that it has a uniform finish and flatness within the permitted limits. Other factors to bear in mind are the slab's thickness, shade and shine when compared with the rest of the batch.

No claims will be accepted for fitted or fabricated materials if the flaw existed when they were supplied. The fabricator is responsible for deciding whether the slabs are suitable for use. In the event of uncertainty, the fabricator should contact the supplier before cutting or modifying the slabs in any way.

**\* Curvature:**

The maximum permitted curvature is < 2 mm. This must be measured by resting the slab on a totally flat horizontal surface and measuring the maximum curvature point with a feeler gauge.



**Surface appearance:**

To check for flaws in iTOP slabs, place them perpendicular to you and observe them from a distance of one metre in natural light.

ST	Usable area of slab: 1.500 x 3.200 mm / 1.600 x 3.200 mm  Irregularity in similar colour < 3 mm Irregularity in different colour < 1 mm
CO	Usable area of slab: 750 x 3.200 mm / 800 x 3.200 mm
RD	Slabs for supporting countertops

**Quality specifications:**

Slabs of the characteristics shown below are not considered to be first-choice products (ST):

- With an irregularity in similar colours of over 3 mm.
- With an irregularity in different colours of over 1 mm

The above irregularities may vary from one batch to another.

Their concentration on a slab should not affect its visual appeal.

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## CUTTING

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## 1. INTRODUCTION

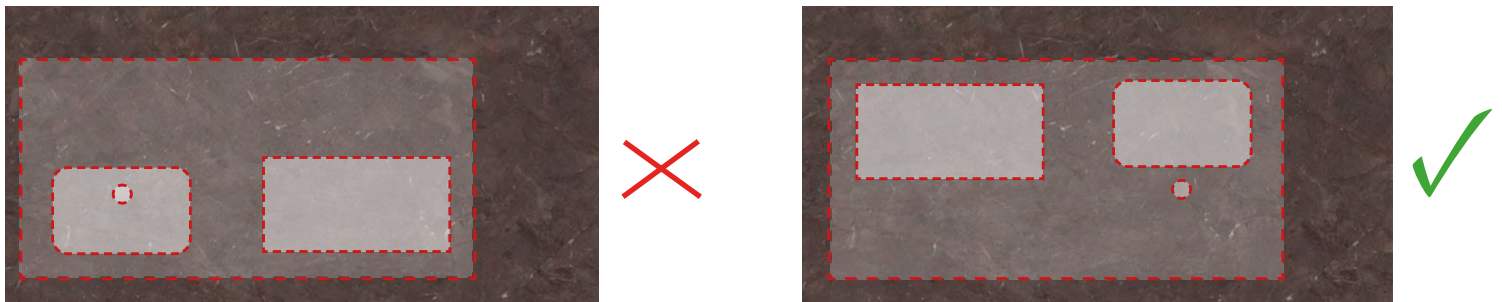
iTOP slabs are conspicuous for their outstanding technical properties. Their salient benefits include a very high resistance to scratches, impacts, high and low temperatures, staining and wear and tear. This makes them perfect for use as countertops. Because the surface is non-porous, it prevents the spread of bacteria and mould, while also ensuring food grade properties.

iTOP slabs must be cut and handled using top-quality specific tools at all times. If the right tools are not used, problems might occur and the slabs, tools or machinery might even get damaged.

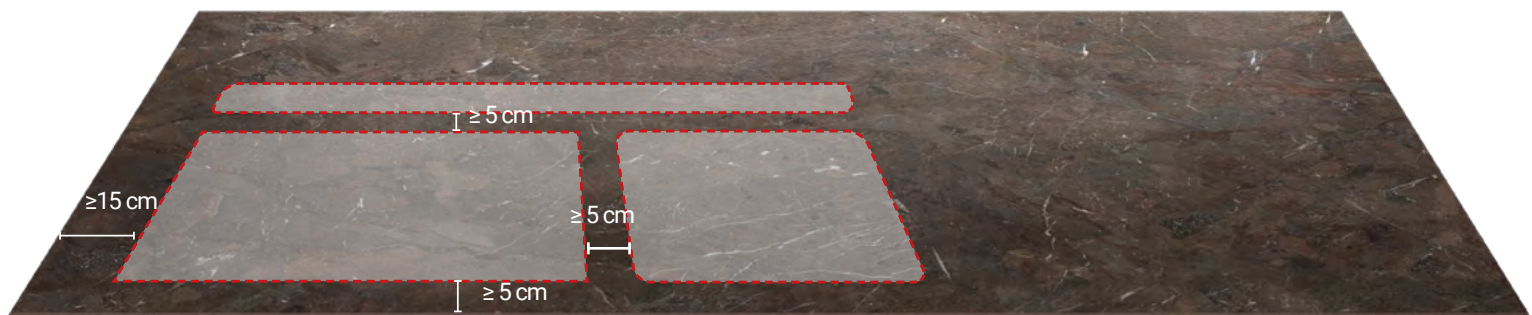
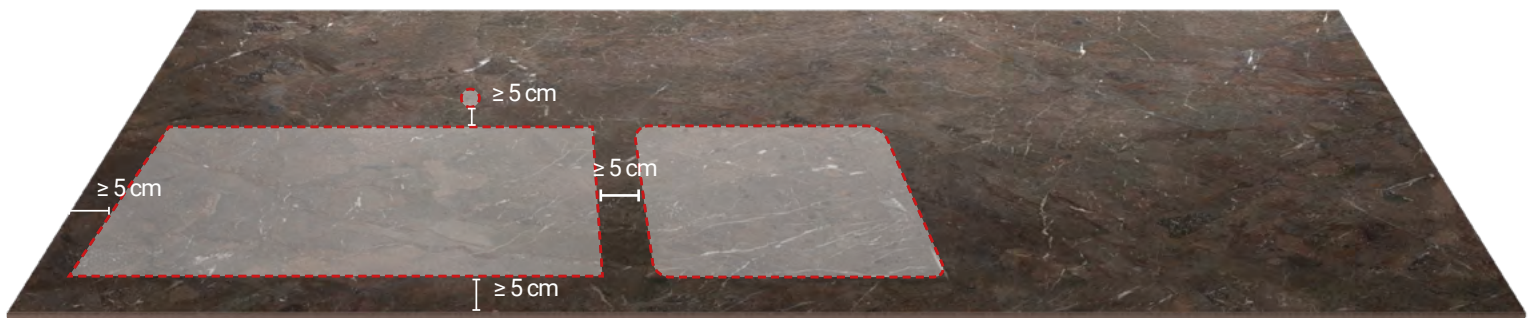
For this reason, before proceeding to cut and/or handle iTOP slabs, ask for details of the right tools and equipment to use.

### THE DIRECTION OF THE SLABS

Before embarking on the cutting process, plan all the cuts to be made so as to take maximum advantage of the surface of the slab. Consider which way the slab should face when cutting or making holes in it. Make sure that all cut-outs are made nearer to the middle of the slab, as shown in the illustration, since this area is more resistant to any pressure generated during the cutting process.



### PLANNING CUT-OUTS:



## 2. CUTTING WITH A DISC CUTTER

Make sure that the whole slab rests on the cutting table. This should be solid and strong, with a flat level surface and no unevenness. A rubber or wooden mat should be placed between the slab and cutting table to cushion any vibrations from the disc.

For top-quality end results when cutting the slab, the cutting disc should be at least 1.5 mm bigger than the thickness of the slab. The right disc to use will depend on the make. It should be in good condition, with no surface flaws that might affect the quality of the cuts it makes. Follow the manufacturer's recommendations at all times with regard to the right revolutions and cutting speed. Examples of makes of cutting discs:



ADI (<http://www.aditools.com>)

	300 mm Ø	350 mm Ø	400 mm Ø
Revolutions	1,800 RPM	1,600 RPM	1,500 RPM
Cutting speed	1.2 m / min	1.2 m / min	1.2 m / min



FREDIMAR (<http://www.fredimar.com>)

	300 mm Ø	350 mm Ø	400 mm Ø
Revolutions	2,500 RPM	2,200 RPM	1,900 RPM
Cutting speed	1.5 m / min	1.5 m / min	1.5 m / min



## 2. CUTTING WITH A DISC CUTTER

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To begin, a good edge should be ensured by removing at least 1 cm from each side to reduce any stress and leave the slab in its usable size (cutting first the long sides and then the short ones). The remaining slab can be used as it is, without cutting it down any more.



Make sure that the disc is properly cooled with water as the slab is cut, because iTOP slabs are very hard and solid. The water jet should be aimed directly at the cutting point where the disc is in contact with the slab. Cut the first and last 30 cm more slowly than the recommended speed (at half the speed) to ensure a good finish.

In the case of Blanco Plus / Super Blanco coloured slabs, reduce the cutting speed by half across the whole surface.

Never lower the disc directly onto the slab without having first drilled the corners. In exceptional cases when it is lowered directly, the disc cutter should be in automatic mode, functioning as slowly as possible.

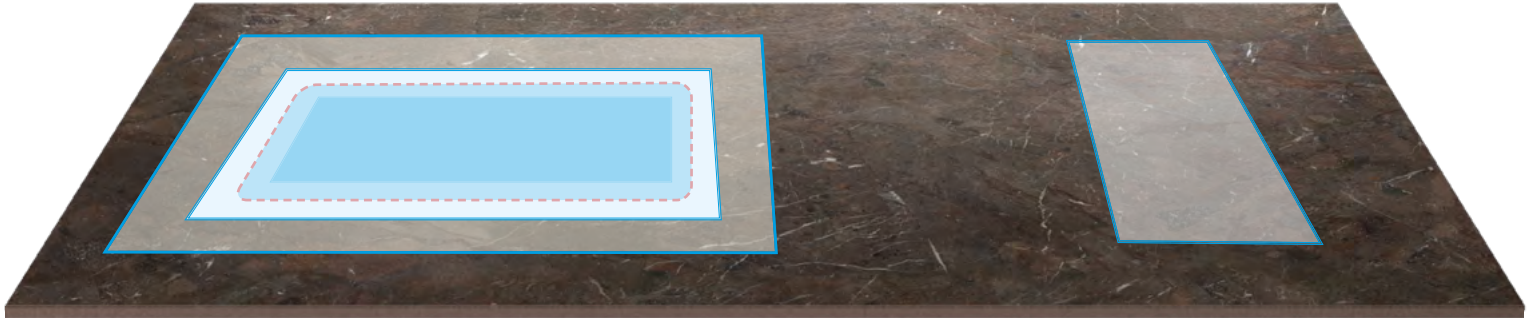



A cutting speed of 0.5m per minute should be used to make 45° mitred joints.

### 3. MAKING CUT-OUTS

#### MAKING CUT-OUTS WITH A DISC CUTTER

Before starting to make a cut-out, check that the cutting table is stable, level and that the top provides sufficient support. The suction pads should be free from dirt and impurities and they should support the whole underside of the slab, particularly the area to be cut.



 Area of suction cups

Always leave a minimum distance of 5 cm between the cut-out and the edge of the slab. The angles of cut-outs should have a minimum radius of 5 mm.



A bigger radius will ensure a higher structural resistance. In contrast, angles with no radius create a stress point on the surface. **NEVER LEAVE RIGHT ANGLES.**

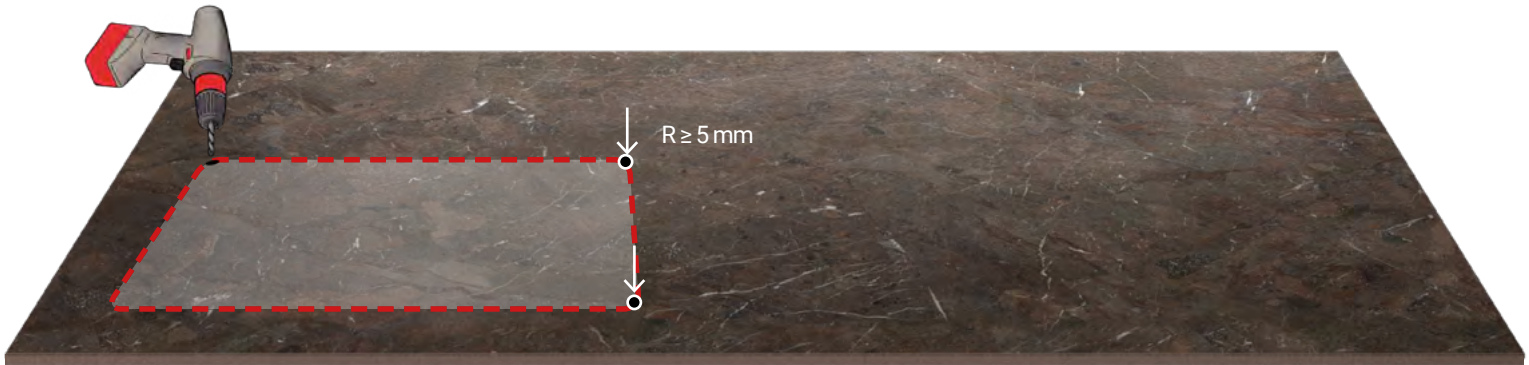


Always reinforce areas adjacent to cut sections with fibreglass to strengthen them and prevent any cracking.



### 3. MAKING CUT-OUTS

To make the corners of cut-outs, drill them using a bit with a radius of  $> 5$  mm.



Next, cut from one hole to the next in a straight line, using a bridge saw and working at a minimum speed to prevent the slab from breaking due to the stress to which it is subject.



#### TIPS WHEN USING A CNC ROUTER

##### Core drill bit:

Perforate the slab, working at the lowest speed, particularly at the end. Before proceeding to drill right through it, lift the drill bit up a little to relieve the pressure on the inside of the core bit.

##### Rabbeting router bit:

Always start by making a hole first with a core drill bit. Do not drill straight down into the surface with the rabbeting router bit. Instead, drill down in stages. The first two times, just eliminate 0.5 mm. Do not remove more than 6 mm from a 12mm-thick iTOP slab.

##### Cutter router bit:

Do not use the oscillation mode when cutting as the slab might splinter. Paler-coloured slabs are harder to cut due to some of the raw materials used to make them. The cutting speed should be reduced in such cases to prevent the tools from overheating.

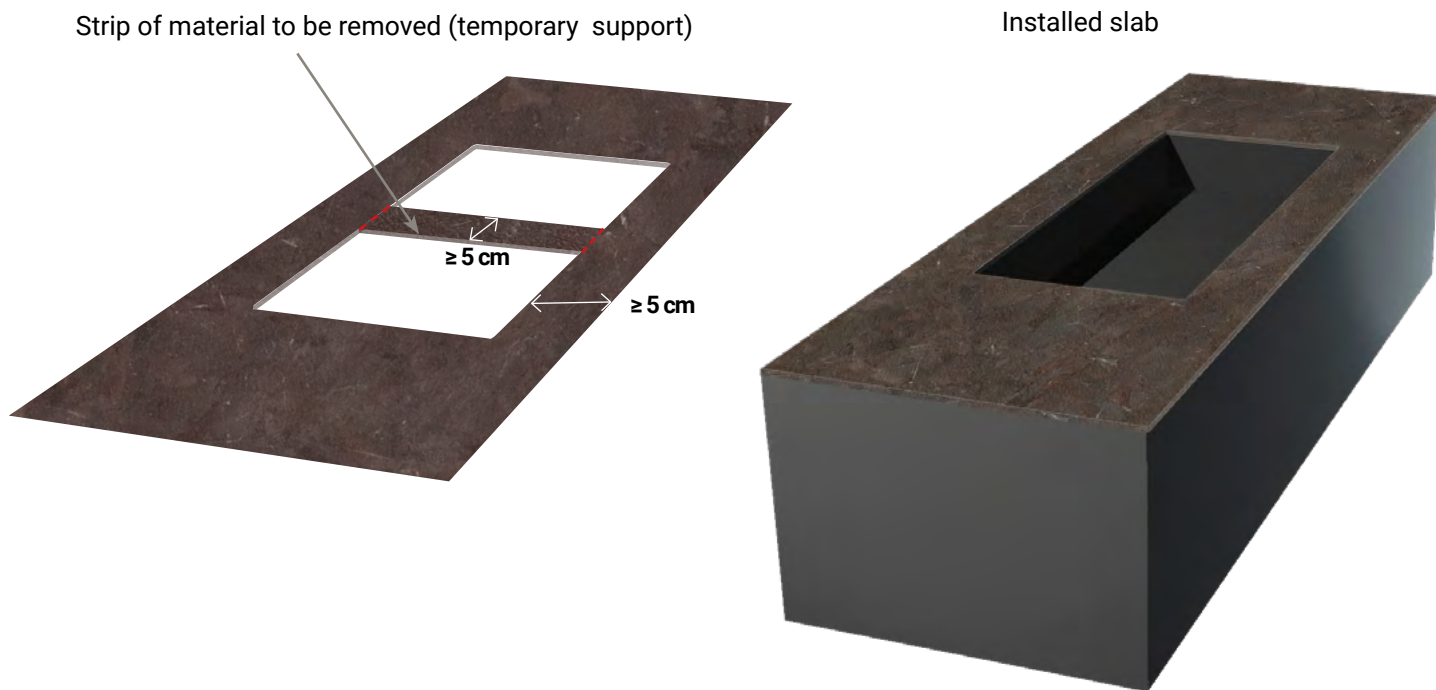
#### PARAMETERS FOR CNC TOOLS

Tool	RPM	Speed (mm/min)
Core bit	4,500 - 5,500	10
Cutter router bit	4,500 - 5,500	150
Rabbeting router bit	8,000 - 10,000	250

### 3. MAKING CUT-OUTS

#### PLANNING LARGE CUT-OUTS

If one or more large cut-outs have to be made (e.g. bigger than 50 x 100 cm) to fit sinks, vitro-ceramic hobs etc., leave a strip to hold the countertop in place. This can then be cut off once the countertop has been installed. In this way, the likelihood of the slab breaking when it is handled or installed will be reduced.



If the wrong type of cutting tool is used, the machine or slab might be damaged or even break. Problems might also occur if the whole weight of the slab is concentrated on one single point as it is cut, due to pressure from the cutting disc. For this reason, it should be cut by passing the cutting disc across it several times. Remember, too, that too slow a cutting speed can be counterproductive since the diamond edge might get damaged and the cutting disc have to be changed.

### 3. MAKING CUT-OUTS

#### CUTTING WITH WATERJET EQUIPMENT

Cut a 1 cm strip from each side to reduce the stress to which the slab is subject (first from the long sides and then from the short ones).

The slab should be fully supported by the cutting bed of the waterjet cutter. Finish the cut working toward the edge of the slab if the waterjet software permits this. The first and last 30 cm should be cut at a slower speed (half the recommended speed).

In the case of Blanco Plus / Super Blanco coloured slabs, reduce the cutting speed by half across the whole surface.

Start inside the section to be cut out and move toward the cutting line at 60% of the recommended speed to prevent the slab from splintering.

Use carpenter's squares to stop the slab from moving.



#### PARAMETERS FOR WATERJET CUTTING EQUIPMENT

Thickness	Speed	Pressure	Abrasive flow rate
20 mm	0.3 m/min	3,800 bars	0.4 kg / min
12 mm	0.6 m/min	3,800 bars	0.4 kg / min
6 mm R	1,2 m/min	3,800 bars	0.4 kg / min
4 mm	1.9 m/min	3,800 bars	0.4 kg / min

The figures shown above are recommended ones. The cutting speeds or abrasive flow rates can be adjusted to obtain a more specific finish.

## 4. CUTTING POLISHED SLABS

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iTOP polished slabs should be cut with water-cooled cutting equipment.

### **MACHINE CUTTING**

When using bridge cutting machines, waterjet equipment and CNC routers, the same conditions apply as for slabs with a natural or bush-hammered finish. Always remember that when a slab is cut with waterjet equipment, the point where you start cutting should be at a sufficient distance from the work area to avoid chipped edges.

### **CUTTING BY HAND**

As with cut-outs in slabs with a natural or bush-hammered finish, first the corners should be drilled with a water-cooled drill.

When a cut-out is hand cut, a dry cutting disc should be used. It must be remembered that with dry cutting equipment, chipped edges are more likely.

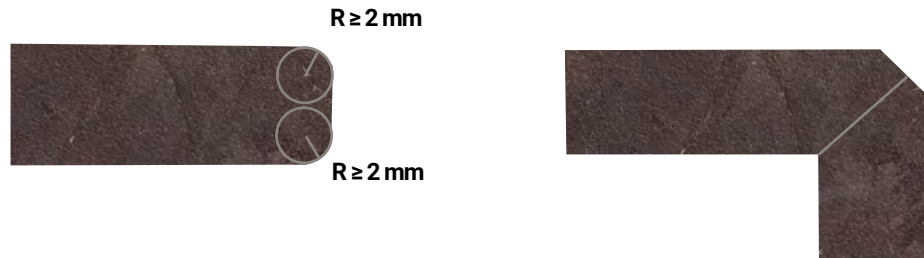
After making the cut-out, grind down the edges to the right size, using appropriate grinding discs or cup wheels.

### **WARNING:**

Due to their composition, polished slabs are more prone to sagging. To prevent this from occurring, clamp them to an aluminium bar and keep the slabs as flat as possible.

## 5. EDGES

### CUTTING EDGES



The edges should always be bevelled, with a rounded or mitred finish. This ensures added impact resistance, aesthetic appeal, and safety.

There are many types of possible edges, depending on the marble worker making the edges. Note that the bigger the bevel, the more visible the whole edge will be.

### PROTECTING AND POLISHING THE EDGES

Once they have been cut, the edges of iTOP must be treated with a sealant to waterproof the slab (FILASTONE PLUS ECO / FILA STOP DIRT / DEEP ENHANCER). These types of products enhance the edges and help to achieve a better finish.

The edges can also be polished once cut. For this purpose, use appropriate discs, always starting with finer grit ones and increasing the grit size progressively until the required finish is achieved. The edges of iTOP slabs must be water-cooled when polished. This ensures a higher shine and reduces the likelihood of chipped edges.

Inalco recommends polishing and/or micro bevelling all the sides and edges of slabs to remove possible irregularities or tiny cracks caused during the cutting and fabrication process. This will prevent cracks from appearing over the course of time as a result of these irregularities or due to the contraction/expansion of this part of the slab when hot items are placed on it.



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## FITTING

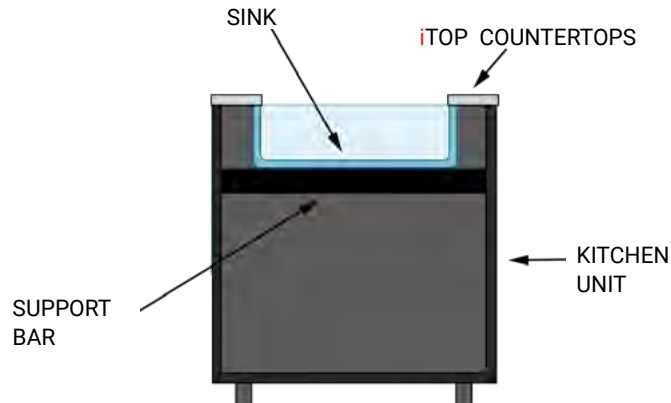
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## 1. REINFORCEMENTS

### SINK SUPPORT BAR

A support bar must be fitted below sinks. This should be fixed to the base unit on which the countertop rests. Without it, the weight of a full sink of water or other everyday utensils might cause the countertop to break or the sink to come loose.



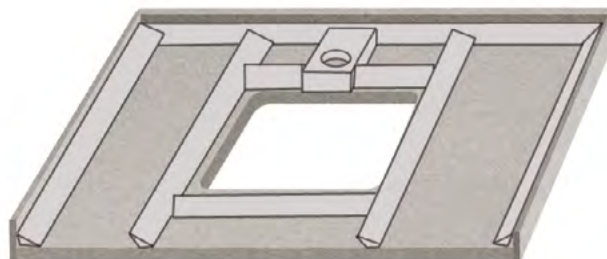
### COUNTERTOP REINFORCEMENTS

When perimeter areas of cut-outs are not supported by a solid base, they should be reinforced with suitable material to guarantee the countertop's stability and resistance.

Before fitting other materials as reinforcements, remember that they might have a different coefficient of expansion to the iTOP slab, thus causing the countertop to warp and possibly even making mitre joints split open in the mid or long term. **DO NOT USE REINFORCEMENTS MADE OF QUARTZ.**

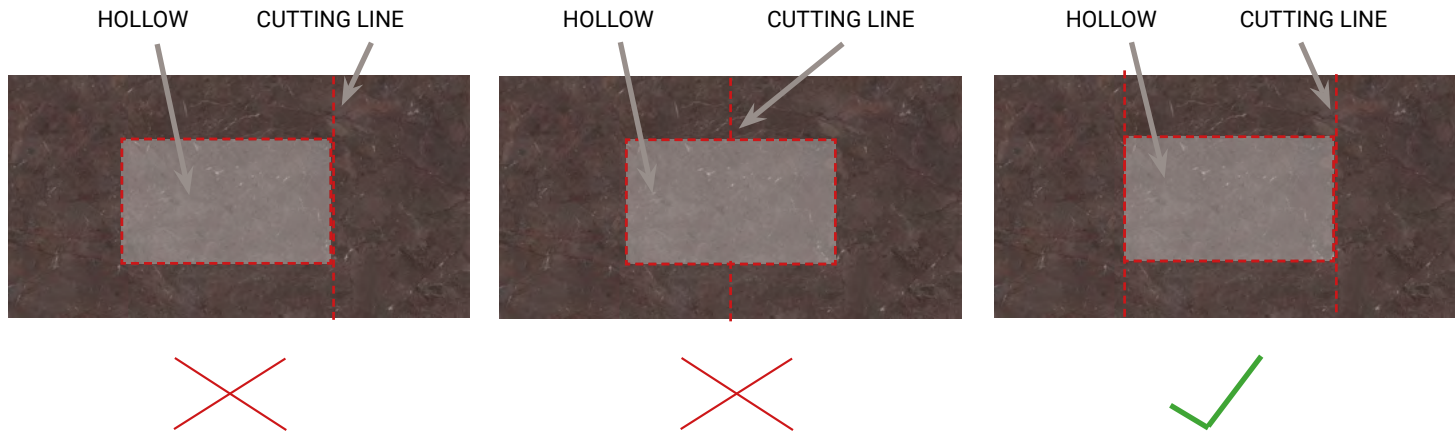
If the countertops have mitred edges, they must be reinforced at regular intervals along the whole perimeter of the surface to ensure added rigidity. These reinforcements must rest directly on the sides of the kitchen units. For the same reason, it is also important to reinforce the perimeter of cut-outs.

Holes for tap fittings should also be reinforced with wood or another similar material. This will protect the slab when the taps are fitted and during their everyday use. **DO NOT USE QUARTZ REINFORCEMENTS.**



## 1. REINFORCEMENTS

### EXAMPLES OF CUT-OUTS TO AVOID



### RESTING THE SLAB ON THE KITCHEN UNITS

Inalco always recommends the installation of iTOP slabs on a continuous surface integrated into the kitchen furniture, since this will act as a support and provide greater stability.



## 1. REINFORCEMENTS

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If the slab rests on a slatted base instead of a stable continuous surface, Inalco recommends a maximum distance of 25 cm between the crossbars. The following table shows the maximum weight that the countertop will support depending on the distance between the slats:

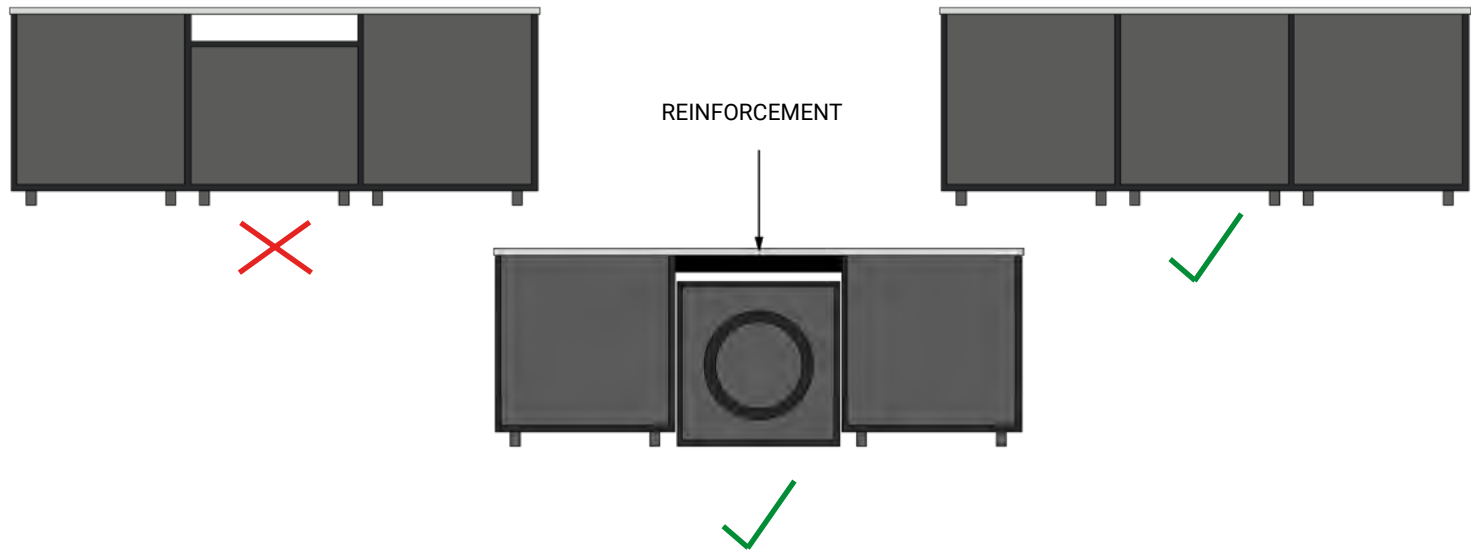
SIZE OF SUPPORT (cm)	DISTANCE BETWEEN SUPPORTS (cm)	PRESSURE BAR (cm)	RESISTANCE
120 x 60	118	100	348 kg
60 x 60	59	100	559 kg
45 x 60	43	100	867 kg
30 x 60	28	100	1,017 kg
25 x 60	23	100	1,189 kg

## 2. FITTING COUNTERTOPS

### KITCHEN UNITS, EXPANSION JOINTS AND OVERHANGS

#### Kitchen units

The units on which the iTOP slab is fitted must be level and in good condition. They must be fixed to one another and, if applicable, to the adjacent wall.



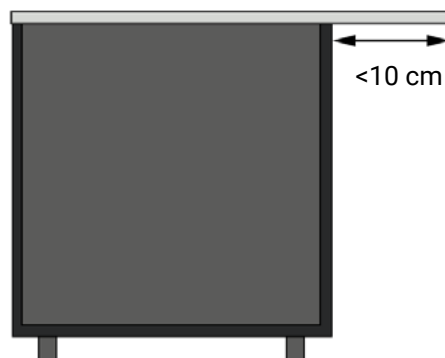
#### Expansion joints

To fill the joints, bond the slab to the units or under surface and bond the iTOP rear trim to the wall. Use a flexible adhesive, such as a fully transparent one that allows for the slab's thermal linear expansion.

Do not use non-flexible adhesives to bond the iTOP slab, such as "No More Nails" or epoxy adhesives.

#### Projecting sections

During the planning stage, take into account the size of any projecting sections so as to avoid possible breaks during the countertop's everyday use. Generally speaking, these projecting sections should not jut out more than 10 cm from the edge of the base.



If you would like it to jut out more, a prior study must be made of the necessary reinforcements to use in each particular case.

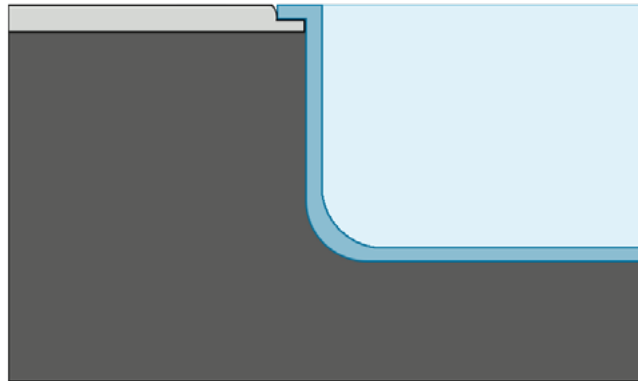
## 2. FITTING COUNTERTOPS

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### SINKS

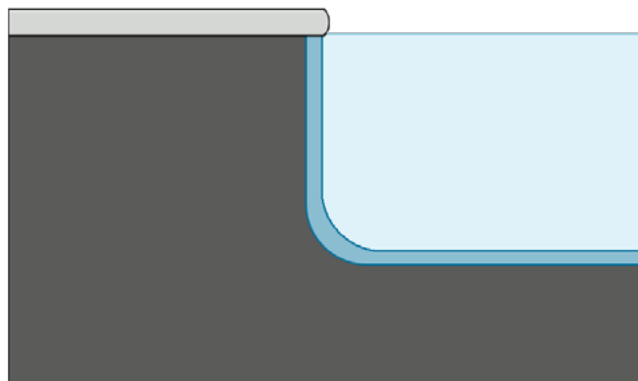
#### Flush-to-countertop sinks

To fit sinks flush with the iTOP countertop, a rebate of no more than 6 mm should be made.



#### Under-counter sinks

To avoid splintering, it is better to fit an under-counter sink. In such cases, a cut-out with a rounded edge and minimum 2 mm radius should be made.



### CERAMIC / INDUCTION HOBS

A gap of at least 2 mm should be left between the countertop and the induction hob. This should be filled with silicon able to withstand high temperatures or with the sealants provided by the manufacturer of the hob.

Do not make a rebate of more than 6 mm in iTOP slabs.

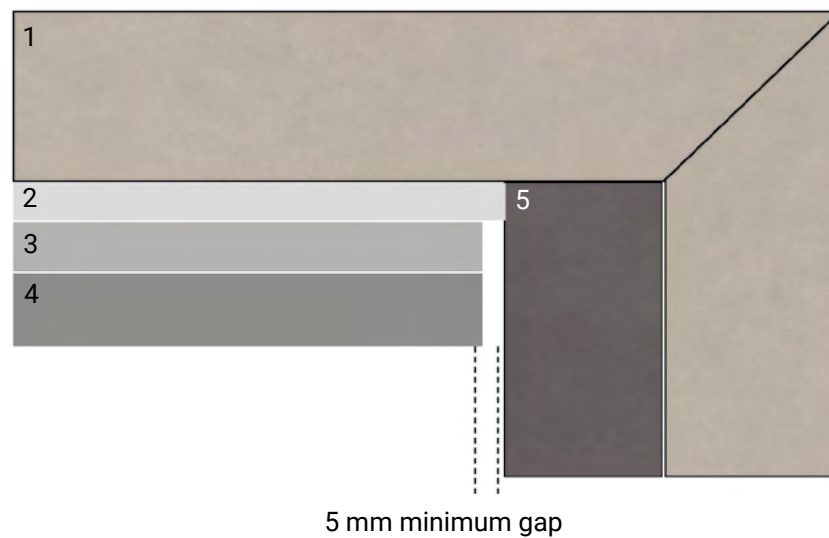
## 2. FITTING COUNTERTOPS

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### OUTDOOR COUNTERTOPS

When iTOP slabs are fitted outside, materials should be avoided that might expand or contract when climatological changes occur, such as wood or chipboard.

Avoid non-flexible adhesives, such as “No More Nails”, epoxy or building adhesives, when bonding iTOP in outdoor locations. To bond mitre joints, the adhesive should be suitable for outdoor use and resistant to ultraviolet rays.



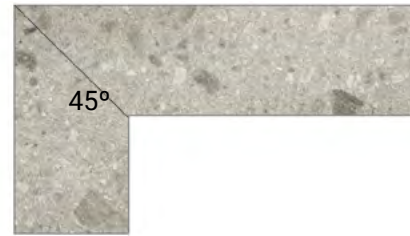
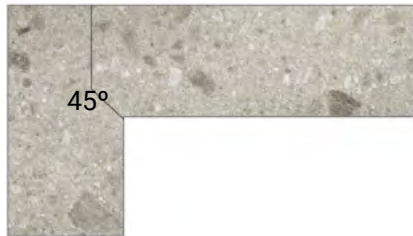
- 1- iTOP slab
- 2- C2-type cement-based adhesive, silicon or polyurethane
- 3- Reinforced cement slab or similar
- 4- Brick / stone / concrete base
- 5- Reinforcements made of iTOP or another suitable material

### 3. OBSERVATIONS

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#### L-SHAPED COUNTERTOPS

L-shaped countertops should be divided into several parts in order to avoid 90° corners.



L-shaped countertops made of a single slab without a mitre joint should have a minimum radius of 2 mm. Make sure that the base units are in perfect condition and that they are level before fitting a countertop of this kind.

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## FITTING iTOP IN PLACES WITH HIGH TEMPERATURES

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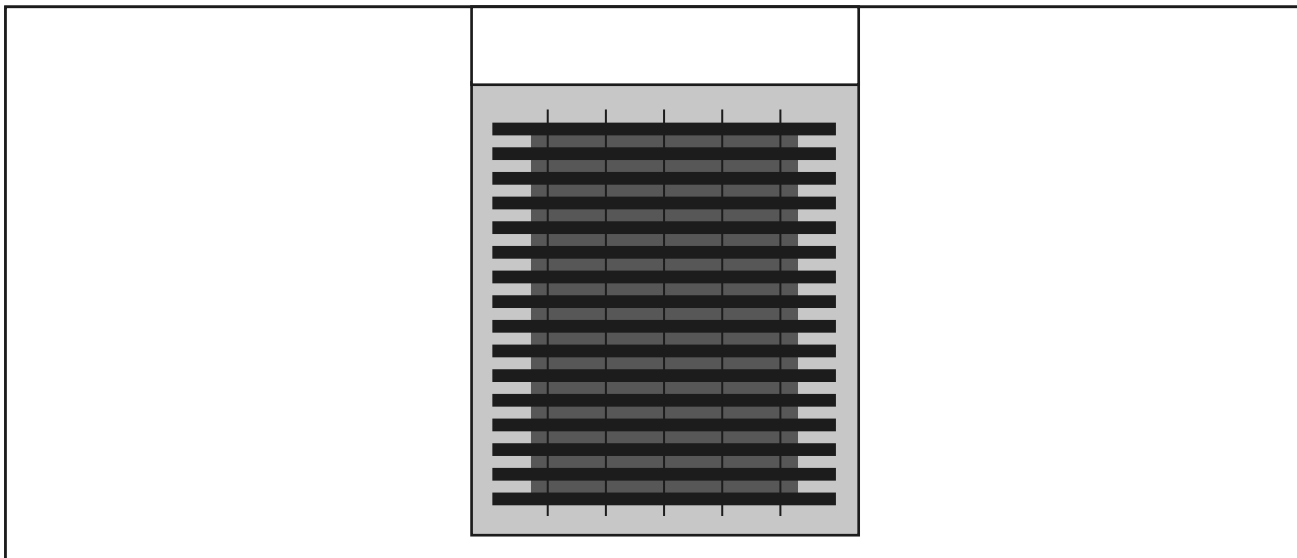
If grills and/or barbecues are integrated into iTOP, the following factors must be taken into account:

Materials subject to sharp temperature changes have different coefficients of expansion. Sufficient space must always be left to take into account such expansion movements. Always avoid direct contact between iTOP slabs and metal materials like barbecues, since the latter will have a much higher expansion.

Always leave a minimum gap of 5 mm between these materials. A bigger gap might be needed depending on factors like the size of the barbecue, the maximum temperature that it can reach etc. This gap should be filled with thermal insulation materials, like fibreglass heat insulation tape.

The edges of the iTOP slab should be polished to remove possible tiny cracks made during the cutting process or to prevent them from appearing at a later point.

The radiuses of all inner corners should have a diameter of over 10 mm. Alternatively, the countertop should be made in several pieces whenever possible. The minimum radius must always be 10 mm.



Top view of grill/ barbecue built into an iTOP countertop

Do not use iTOP slabs to line the inside of fireplaces, barbecues or ovens.

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## TECHNICAL INFORMATION

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## 1. TECHNICAL CHARACTERISTICS AS PER THE RELATED STANDARD

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### TECHNICAL CHARACTERISTICS

iTOP is a non-toxic environmentally-friendly product that complies with European legislation under current EU regulation no. 305 of the European Parliament and the Council and other specific standards.

All first-choice products by INALCO comply with and even surpass ISO standards 13006 and EN 14411.

INALCO also has an internal Quality Control System, which it applies to the whole manufacturing and storage process.



## 1. TECHNICAL CHARACTERISTICS AS PER THE RELATED STANDARD

Technical characteristics ISO 13006 / GROUP Bla UNE - EN 14411 GROUP Bla		Reference standard	Required value	Mean value
<b>Physical characteristics</b>	Water absorption	EN-ISO 10545-3	≤ 0.5 %	≤ 0.1 %
	Breaking strength	EN-ISO 10545-4	20 / 12 mm: ≥ 1,300 N	Surpasses standard
			6 mm: 700 N	Surpasses standard
	Bending strength	EN-ISO 10545-4	≥ 35 N / mm <sup>2</sup>	Surpasses standard
	Resistance to impacts	EN-ISO 10545-5	≥ 0.55 without visible defects	> 0.80 without visible defects
	Resistance to deep abrasion	EN-ISO 10545-6	≤ 175 mm <sup>3</sup>	≤ 135 mm <sup>3</sup>
	Resistance to fire	UNE-EN 13501:1:07 + A1	-	A <sub>1</sub>
	Linear thermal expansion	EN-ISO 10545-8	-	≤ 9 x 10 <sup>-6</sup> K <sup>-1</sup>
	Thermal shock resistance	EN-ISO 10545-9	-	Resistant
Frost resistance	EN-ISO 10545-12	Required	Resistant	
<b>Chemical characteristics</b>	Resistance to household cleaning products and swimming pool additives	EN-ISO 10545-13	GB Min.	Resistant (GA)
	Resistance to low concentrations of acids and alkalis	EN-ISO 10545-13	As indicated by manufacturer	Resistant (GLA)
	Resistance to staining	EN-ISO 10545-14	Class 3 Min.	Class 5

(\*) Results obtained from test samples.

## 2. TESTS APPLIED TO iTOP

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IMPACT RESISTANCE



THERMAL SHOCK RESISTANCE

## 2. TESTS APPLIED TO iTOP

### WATER ABSORPTION [EN-ISO 10545-3]

This determines the product's water absorption capacity (0.1%).

5	4	3	2	1
max				min

### STAIN RESISTANCE [EN-ISO 10545-14]

This determines the surface's tendency to absorb stains.

A	B	C	ITOP NATURAL, BUSH-HAMMERED & DT
max		min	

A	B	C	ITOP POLISHED
max		min	

### CHEMICAL RESISTANCE [EN-ISO 10545-13]

This tests whether the surface is affected by different products like solvents or bleaches.

A	B	C	ITOP NATURAL, BUSH-HAMMERED & DT
max		min	

A	B	C	ITOP POLISHED
max		min	

### LIGHT RESISTANCE [DIN 51094]

After exposing a slab to a powerful 400 W light for 30 days, no colour change or other surface alteration was detected.

5	4	3	2	1
max				min

### HEAT RESISTANCE [EN-ISO 10545-9]

It does not burn or undergo any change when subjected to 10 cycles of temperatures ranging from 15°C to 145°C.

5	4	3	2	1
max				min

### FROST RESISTANCE [EN-ISO 10545-12]

It is unaffected when subjected to over 100 freeze-thaw cycles of between +5°C and -5°C.

5	4	3	2	1
max				min

### BREAKING STRENGTH [EN-ISO 10545-4]

A 500 x 500 x 12 mm slab, supported by 2 side bars with a 475 mm separation between them, is subjected to the pressure of a bar in the centre of it until it breaks (570 kg).

5	4	3	2	1
max				min

### IMPACT RESISTANCE

A 200g weight in a tube is dropped onto a 30 x 30 cm surface area from a height of 60 cm so that it falls onto a specific point, with no resulting damage.

5	4	3	2	1
max				min

### THERMAL SHOCK RESISTANCE

A metal recipient with a temperature of 200°C is rested on a slab at a temperature of 15°C, with no resulting damage.

5	4	3	2	1
max				min

$$\text{min} = \frac{\text{Low resistance to test}}{\text{Mid-level result}}$$

$$\text{max} = \frac{\text{High resistance to test}}{\text{Optimum result}}$$

### 3. TECHNICAL iTOP PRODUCT DATA (AIDIMME)



#### MANUFACTURER:

##### INALCO

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12110 Alcora (Castellón) Spain

tel: (+34) 964 36 80 00

e-mail: correo@inalco.es | www.inalco.es

#### PRODUCT:

**iTOP COUNTERTOPS** by Inalco are 1.600 x 3.200 / 1.500 x 3.200 mm large-format slabs.

Mainly conceived for use as worktops, **iTOP COUNTERTOPS** come in over 40 colours in a natural, polished and bush-hammered finish.

The tests described in this sheet have been carried out at Inalco's request in the laboratories of **AIDIMME (THE TECHNOLOGICAL INSTITUTE FOR METALWORK, FURNITURE, WOOD, PACKAGING AND ANCILLARY MATERIALS)**. The obtained results only relate to the analysed samples.

The said results are contained in the test reports **AIDIMME 1612099-01 and 1612099-02**.

**UNE 56875V2 standard**, "Kitchen Furniture. Specifications, requirements and test methods" in situations of normal use.

**UNE 56867 standard**, "Bathroom furniture. Testing of surface finishes", for bathroom design plans.

**UNE EN 438-4 standard** on over 2mm-thick high-pressure laminates for general use and **UNE EN 438-6** on compact high-pressure laminates for outdoor use.

### 3. TECHNICAL iTOP PRODUCT DATA (AIDIMME)

CONDUCTED TESTS	STANDARD		
	KITCHENS	BATHROOMS	OTHERS
<b>SURFACE RESISTANCE TESTS</b>			
Resistance to cold food products	UNE 56875V2	-	-
Resistance to cleaning products	UNE 56875V2	-	-
Resistance to hot food products	UNE 56875V2	-	-
Resistance to dry heat at 180°C	UNE 56875V2	UNE 56867	UNE EN 438-4
Resistance to water vapour	UNE 56875V2	UNE 56867	UNE EN 438-4
Abrasion resistance	UNE 56875V2	UNE 56867	-
Scratch resistance	UNE 56875V2	-	UNE EN 438-4
Impact resistance to dropped ball	UNE 56875V2	UNE 56867	-
Resistance to products typically found in a bathroom	-	UNE 56867	-
Resistance to cleaning products	-	UNE 56867	-
Stain resistance	-	-	UNE EN 438-4
Resistance to cigarette burns	-	-	UNE EN 438-4
<b>AGEING TESTS</b>			
Light fastness	UNE 56875V2	UNE 56867	UNE EN 438-4
Appearance	-	UNE 56867	-
Resistance to rubbing	-	-	UNE EN ISO 11640
Crack resistance	-	-	UNE EN 438-4
Dimensional stability at a high temperature	-	-	UNE EN 438-6
Cooling cycles	-	-	UNE 48 025
Climatic shock test	-	-	UNE EN 438-6



### 3. TECHNICAL iTOP PRODUCT DATA (AIDIMME)

TEST PRODUCT: POLISHED iTOP COUNTERTOPS  
REF: AIDIMME 1612099-01

CHARACTERISTIC	RESULT	REQUIREMENT (UNE 56875V2) (heavy use)	REQUIREMENT (UNE 56867) (bathroom design plans)	REQUIREMENT (UNE EN 438-4) (UNE EN 438-6) OTHERS
Resistance to cold food products (Assessed after 24 hours)	All the products: 0	0 Correct	-	-
Resistance to cleaning products (Assessed after 24 hours)	All the products: 0	0 Correct	-	-
Resistance to hot food products (Assessed after 4 hours)	All the products: 0	0 Correct	-	-
Resistance to dry heat at 180°C (Assessment)	Shine: 5 Colour: 5	Shine: ≥ 4 Colour: ≥ 5 Correct	Shine: ≥ 3 Colour: ≥ 4 Correct	Glossy finishes: ≥ 3 Other finishes: ≥ 4 Correct
Resistance to water vapour (Assessment)	Shine: 5 Colour: 5	Shine: ≥ 4 Colour: ≥ 4 Correct	Shine: ≥ 4 Colour: ≥ 4 Correct	Glossy finishes: ≥ 3 Other finishes: ≥ 4 Correct
Abrasion resistance - Initial point (cycles) - Resistance (cycles)	No surface wear and tear >1000 >1000	≥ 150 ≥ 350 Correct	≥ 100 ≥ 250 Correct	-
Scratch resistance (Assessment)	5	≥ 3 Correct	-	Smooth finishes: ≥ 2 Textured finishes: ≥ 3 Correct
Impact resistance to dropped ball -Dropped from a height of 40 cm (Assessment) -Ball dimensions (324 ± 10) g and (42.8 ± 0.5) mm	No cracking	No cracking Correct normal use	-	-
Light fastness (Assessment of grey scale)	5	≥ 4-5 Correct	≥ 4 Correct	≥ 4-5 Correct
Appearance (Assessment)	No flaws observed	-	No flaws Correct	-
Resistance to products typically found in a bathroom (Assessed after 16 hours)	All the products: Shine: 5 Colour: 5	-	Shine: ≥ 3 Colour: ≥ 4 Correct	-

### 3. TECHNICAL iTOP PRODUCT DATA (AIDIMME)

#### TEST PRODUCT: POLISHED iTOP COUNTERTOPS

REF: AIDIMME 1612099-01

CHARACTERISTIC	RESULT	REQUIREMENT (UNE 56875V2) (heavy use)	REQUIREMENT (UNE 56867) (bathroom design plans)	REQUIREMENT (UNE EN 438-4) (UNE EN 438-6) OTHERS
Resistance to cleaning products (Assessed after 16 hours)	All the products: Shine: 5 Colour: 5	-	Shine: $\geq 3$ Colour: $\geq 4$ Correct	-
Impact resistance to dropped ball -Dropped from a height of 30 cm (Assessment) -Ball dimensions (324 $\pm$ 10) g and (42.8 $\pm$ 0.5) mm	0	-	$\leq 1$ Correct	-
Resistance to staining (Assessment)	All the products: 5	-	-	$\geq 4$ Correct
Resistance to rubbing (Assessment of grey scale) - Dry (1000 cycles) - Wet (200 cycles) - Observations	5 5 No damage or tear	-	-	UNE EN ISO 11640 No surface damage or tear
Resistance to cigarette burns (Degree)	5	-	-	$\geq 3$ Correct
Crack resistance (Degree)	5	-	-	$\geq 4$ Correct
Dimensional stability at a high temperature (%)	0.05			Longitudinal: $\leq 0.3$ Transversal: $\leq 0.6$ Correct
Cooling cycles (Assessed after 40 cycles)	No visible deterioration	-	-	UNE 48 025 No visible deterioration
Climatic shock test Initial bending strength (N/mm <sup>2</sup> ) Final bending strength (N/mm <sup>2</sup> ) Level of resistance	50.9 50.3 0.99	-	-	Resistance: $\geq 0.95$
Appearance (Degree)	5 No deterioration	-	-	Rating $\geq 4$ Compliant

### 3. TECHNICAL iTOP PRODUCT DATA (AIDIMME)

TEST PRODUCT: NATURAL & BUSH-HAMMERED iTOP COUNTERTOPS  
REF: AIDIMME 1612099-02

CHARACTERISTIC	RESULT	REQUIREMENT (UNE 56875V2) (heavy use)	REQUIREMENT (UNE 56867) (bathroom design plans)	REQUIREMENT (UNE EN 438-4) (UNE EN 438-6) OTHERS
Resistance to cold food products (Assessed after 24 hours)	All the products: 0	0 Correct	-	-
Resistance to cleaning products (Assessed after 24 hours)	All the products: 0	0 Correct	-	-
Resistance to hot food products (Assessed after 4 hours)	All the products: 0	0 Correct	-	-
Resistance to dry heat at 180°C (Assessment)	Shine: 5 Colour: 5	Shine: ≥ 4 Colour: ≥ 5 Correct	Shine: ≥ 3 Colour: ≥ 4 Correct	Glossy finishes: ≥ 3 Other finishes: ≥ 4 Correct
Resistance to water vapour (Assessment)	Shine: 5 Colour: 5	Shine: ≥ 4 Colour: ≥ 4 Correct	Shine: ≥ 4 Colour: ≥ 4 Correct	Glossy finishes: ≥ 3 Other finishes: ≥ 4 Correct
Abrasion resistance - Initial point (cycles) - Resistance (cycles)	No surface wear and tear >1000 >1000	≥ 150 ≥ 350 Correct	≥ 100 ≥ 250 Correct	-
Scratch resistance (Assessment)	5	≥ 3 Correct	-	Smooth finishes: ≥ 2 Textured finishes: ≥ 3 Correct
Impact resistance to dropped ball -Dropped from a height of 40 cm (Assessment) -Ball dimensions (324 ± 10) g and (42.8 ± 0.5) mm	No cracking	No cracking Correct normal use	-	-
Light resistance (Assessment of grey scale)	5	≥ 4-5 Correct	≥ 4 Correct	≥ 4-5 Correct
Appearance (Assessment)	No flaws observed	-	No flaws Correct	-
Resistance to products typically found in a bathroom (Assessed after 16 hours)	All the products: Shine: 5 Colour: 5	-	Shine: ≥ 3 Colour: ≥ 4 Correct	-

### 3. TECHNICAL iTOP PRODUCT DATA (AIDIMME)

TEST PRODUCT: NATURAL & BUSH HAMMERED iTOP COUNTERTOPS  
REF: AIDIMME 1612099-02

CHARACTERISTIC	RESULT	REQUIREMENT (UNE 56875V2) (heavy use)	REQUIREMENT (UNE 56867) (bathroom design plans)	REQUIREMENT (UNE EN 438-4) (UNE EN 438-6) OTHERS
Resistance to cleaning products (Assessed after 16 hours)	All the products: Shine: 5 Colour: 5	-	Shine: $\geq 3$ Colour: $\geq 4$ Correct	-
Impact resistance to dropped ball -Dropped from a height of 30 cm (Assessment) -Ball dimensions (324 $\pm$ 10) g and (42.8 $\pm$ 0.5) mm	0	-	$\leq 1$ Correct	-
Resistance to staining (Assessment)	All the products: 5	-	-	$\geq 4$ Correct
Resistance to rubbing (Assessment of grey scale) - Dry (1000 cycles) - Wet (200 cycles) - Observations	5 5 No damage or tear	-	-	UNE EN ISO 11640 No surface damage or tear
Resistance to cigarette burns (Degree)	5	-	-	$\geq 3$ Correct
Crack resistance (Degree)	5	-	-	$\geq 4$ Correct
Dimensional stability at a high temperature (%)	0.02			Longitudinal: $\leq 0.3$ Transversal: $\leq 0.6$ Correct
Cooling cycles (Assessed after 40 cycles)	No visible deterioration	-	-	UNE 48 025 No visible deterioration
Climatic shock test Initial bending strength (N/mm <sup>2</sup> ) Final bending strength (N/mm <sup>2</sup> ) Level of resistance	50.9 50.3 0.99	-	-	Resistance: $\geq 0.95$
Appearance (Degree)	5 No deterioration	-	-	Rating $\geq 4$ Compliant

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## DECLARATION OF CONFORMITY

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**MATERIALS IN CONTACT WITH FOOD  
REGULATION (EC) 1935/2004  
SPANISH ROYAL DECREE 891/2006**

## MANUFACTURER

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<b>COMPANY NAME:</b>	INDUSTRIAS ALCORENSES CONFEDERADAS S.A. (INALCO)
<b>ADDRESS:</b>	C/ SAN SALVADOR, 54, 12110 - ALCORA - CASTELLÓN (SPAIN)
<b>PRODUCT IDENTIFICATION:</b>	<b>iTOP Countertops</b>
<b>DATE OF DECLARATION:</b>	15/05/2020
<b>REGULATION:</b>	REGULATION (EC) 1935/2004 of October 27th 2004. SPANISH ROYAL DECREE 891/2006 of July 2006.

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### 1. SCOPE OF DECLARATION:

This Product Safety Declaration provides information concerning the safety of **MDI iTOP Countertops** surfaces when in contact with food in accordance with European Regulation (EC) 1935/2004 of October 27<sup>th</sup> and its transposition to Spanish legislation by virtue of Spanish Royal Decree 891/2006 of July 21<sup>st</sup>.

### 2. DECLARATION OF CONFORMITY:

**INDUSTRIAS ALCORENSES CONFEDERADAS, S.A.**, hereby declares:

That **MDI iTOP Countertops** surfaces do not represent any danger when they are in contact with food. This is endorsed by tests conducted by external laboratories, certified in accordance with specific regulations: European Regulation (EC) 1935/2004 and the UNE-EN ISO 10545-15: 1998 standard on the determination of lead and cadmium given off by glazed tiles.

(\*) Report of test C201861.



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## CLEANING

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## 1. INITIAL CLEANING

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Following the fabrication and fitting of iTOP products, the whole surface should be given an initial clean using MDi TOTAL CARE.

MDi TOTAL CARE is a natural eco-friendly cleaning product for removing common stains from MDi products.

Please remember:

- Do not press the sponge down too hard on the surface to be cleaned. MDi TOTAL CARE contains materials of a certain particle size, and so if the same area is rubbed energetically or rubbed too many times, the surface of some finishes might acquire a slight shine. (\*)
- Sometimes a surface might have an imperceptible film of dirt or residues from cleaning products. Consequently, when MDi TOTAL CARE is used, it must be applied to the whole surface so as to clean it in a uniform way.

## 2. EVERYDAY CLEANING

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iTOP is a non-porous surface, which makes it very easy to clean.

To remove environmental dust, just wipe the surface with a dry cloth. Do not use products that contain wax, polish or strong acids like hydrofluoric or sulphuric acid.

For optimum care, use a slightly acidic detergent and diluting a small amount in water. For everyday cleaning, MDi TOTAL CARE is also recommended.

With the passage of time and continual use, if more thorough cleaning is needed, repeat the cleaning operation that was used when the product was first fitted.

Do not drag heavy objects directly across the surface so as to avoid scratching it.

(\*) Do not use MDi TOTAL CARE on surfaces with a Polished finish.



### 3. CLEANING INSTRUCTIONS BY TYPE OF STAIN

#### NATURAL, BUSH-HAMMERED AND SANDBLASTED SURFACES

Stains should be removed as soon as they occur to prevent them from drying. Before any kind of product is used on the surface, test it out on a concealed area and leave it to act for 4 to 5 minutes. Then rinse it with plenty of water to check that the surface's colour or shine is not affected.

Examples of suitable commercial cleaning products for MDI iTOP surfaces are solvents, grease removers and ammonia.

TYPE OF STAIN	STEP ONE	STEP TWO TYPE OF DETERGENT*	EXAMPLE OF DETERGENTS**
Cement, pencil marks, lime scale, scratches by metal objects, rust	Wash with water as soon as possible and rub the area gently with a cloth.	Acid	AKEMI Acid Cleaner, Deterdek by FILA, commercial cement remover, FABER cement remover, FABER tile cleaner
Epoxy grouting residues		Acid	AKEMI Epoxy Remover, Fila CR10, grease remover, FABER epoxy cleaner
Fat, grease, food, rubber, ink, felt tip pen, blood, nicotine, vomit, urine, etc.		Acid Solvent	AKEMI Stone Cleaner, AKEMI Intensive Cleaner, Fila PS/87, FABER deep degreaser, FABER coloured stain remover
Graffiti, paint, varnish		Solvent	AKEMI Graffiti Remover, Fila NoPaint Star, commercial solvent, FABER graffiti remover, FABER epoxy cleaner
Coffee, tea, juice, soft drinks		Alkaline Oxidizing	AKEMI Algae and Moss Remover POWER, Fila SR/95, FABER coloured stain remover
Candle wax or wax for repairing scratches, tree resin, remains of adhesive tape		Solvent	AKEMI Wax Stripper, AKEMI AFIN Acryclean, Filasolv, commercial solvent, FABER deep degreaser / oil & grease remover / solvent stripper
Silicone		Acetone	AKEMI AFIN Acryclean, Fila Zero Sil, acetone, FABER deep degreaser / oil & grease remover
Dirty joints, wax-based care products		Acid	AKEMI Intensive Cleaner, Fuganet, FABER grout cleaner, FABER deep degreaser / oil & grease remover
Rust		Acid	AKEMI Rust Remover, FABER cement remover
Stains caused by plants, leaves, flowers or ink		Alkaline Solvent	AKEMI Algae and Moss Remover POWER, FABER coloured stain remover
Hairspray, shoe polish		Alkaline	AKEMI AFIN Acryclean, FABER deep degreaser / oil & grease remover
Soot	Remove with a vacuum cleaner	Acid	AKEMI Stone Cleaner, FABER cement remover

\* Acidic detergents: lime scale remover, cement remover, paint remover etc.  
 Alkaline detergents: basic cleaning products like grease removers or ammonia.  
 Solvents: Turpentine, acetone, alcohol, universal solvents etc.  
 Oxidizing detergents: diluted bleach, hydrogen peroxide etc.

\*\* For further information, visit [www.akemi.com](http://www.akemi.com) / [www.filasolutions.com](http://www.filasolutions.com) / [www.fabersurfacecare.com](http://www.fabersurfacecare.com)

### 3. CLEANING INSTRUCTIONS BY TYPE OF STAIN

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#### POLISHED SURFACES

As with natural and bush-hammered surfaces, the stains should be cleaned away as soon as they occur to prevent them from drying. Before any type of cleaning product is used on the surface, test it out on an area that is not very visible to check that the shine or colour are not affected by the product.

To clean surfaces with a polished finish, remember that their chemical resistance is lower than that of other finishes and so some substances might affect their appearance.

Do not clean the surfaces with metal or abrasive scouring pads.

Do not use scouring pads or other cleaning materials that might be too rough for the surface. Inalco recommends cleaning utensils suitable for glassware (AKEMI Cleaner for Glass and Plastics / AKEMI Techno Ceramic Daily Cleaner).

Clean the surface with a damp cloth and soapy water and then dry it with an absorbent cloth. If the stain persists, moisten it with hot water, leave it to act, and then dry the surface with a clean dry cloth.

Suitable cleaning products for polished surfaces include solvents, grease removers and ammonia. Cleaning products to avoid include abrasive cleaners or sponges, FERROKIT, hydrofluoric acid and other concentrated acids, bleach and products with a pH of more than 11 or under 4.

Although, in thermal shock tests, the polished finish was found to withstand extreme temperatures, it is better to use protective objects like coasters, table mats and napkins.

Likewise, do not cut anything directly on the countertop surface, throw objects onto it or drag them across it. Polished finishes should not be used in areas with sinks due to the greater likelihood of wear and tear from everyday use.

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## MATERIAL SAFETY DATA SHEET

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## 1. IDENTITY OF THE PRODUCT AND MANUFACTURER

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**Product:**

iTOP

**Recommended uses:**

Countertops and furniture

**Manufacturer:**

INALCO (Industrias Alcorenses Confederadas S.A.)

Tel.: (+34) 964 368000

www.inalco.es

C/ San Salvador, 54, 12110 Alcora (Castellón - SPAIN)

**Emergency telephone no.:**

Medical Toxicological Information Service (+34) 91 562 0420



## 2. HAZARDS IDENTIFICATION

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**Classification of product:**

The product is not classified as hazardous in accordance with Regulation (EC) No. 1272.

**Hazards identification:**

The product is inert and it does not pose any danger to health or the environment with normal use. During the cutting and polishing process, dust may be released with suspended particles of crystalline silica (SiO<sub>2</sub>) in an inhalable fraction.

**Other hazards:**

There are no hazards associated with the product. It is advisable to perform cutting operations in a well-ventilated place or using water-cooled cutting equipment due to the product's content in breathable crystalline silica.

## 3. INFORMATION / COMPOSITION OF COMPONENTS

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**Chemical composition:** Mixture

Substance	CAS	EINECS	Concentration
Crystalline Silica	14808-60-7	238-878-4	10 - 15%

## 4. FIRST AID

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The product in its finished form does not require special preventive measures. During cutting, polishing, grinding or drilling operations, preventive measures should be taken to keep silica dust to a minimum.

**Inhalation:** Move away from source of exposure and breathe fresh air. Seek medical attention in the event of discomfort.

**Contact with eyes:** Flush eyes with abundant water for several minutes.

**Contact with skin:** The dust is not irritating to the skin. Wash with soap and water.

**Ingestion:** Not applicable.

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## 5. FIRE-FIGHTING MEASURES

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**Extinguishing media:** The product is not flammable and it is not a source of combustion. In the event of a fire in the immediate area, there is no restriction with regard to the extinguishing media.

**Specific hazards arising from the mixture:** The product's composition does not constitute a hazard in the event of fire.

**Recommendations for firefighters:** No special recommendations are needed.

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## 6. ACCIDENTAL RELEASE MEASURES

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**Personal precautions:** Not applicable.

**Environmental precautions:** No special measures are required.

**Cleaning-up method:** Not applicable.

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## 7. HANDLING AND STORAGE

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**Precautions for safe handling:** The product requires special handling with suction cup systems, and special precautions must be taken when it is manually handled. Cut-resistant gloves should be used to prevent accidental injuries due to breakages. Shoes and safety goggles must be worn as protection against flying particles during machining or cutting. Avoid over-exertion when handling the slabs manually.

**Storage:** No special storage measures are required, except for protection against impacts so as to avoid possible breakages. The product should be stored in its original packaging until it is used.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

**Control parameters:** Due to the possible release of dust during cutting and polishing operations, wet cutting and polishing systems should be used. The regulations regarding exposure values to crystalline silica are determined by Directive 2000/39/EC and Spanish Royal Decree 374 which refers readers to the values published by the INSHT.

DAILY EXPOSURE LIMIT VALUES (DELV)		
Substance	CAS no.	DELV
Crystalline Silica	14808-60-7	0.05 mg / m <sup>3</sup> (*)
Inhalable dust fraction		3 mg / m <sup>3</sup> (*)

(\*) Limit values applied in Spain. See the applicable values for each pertinent country.

**Exposure controls:** Exposure to dust released during machining processes (cutting or polishing) must be controlled and kept to a minimum. To do so, joint and individual protective measures must be taken.

Minimize the generation of dust by using mechanical ventilation systems and water supply systems. Avoid the use of compressed air and make sure the air is constantly filtered.

### Personal protection:



#### Respiratory protection:

Use respiratory protection against type P3 particles (EN-143).



#### Eye protection:

Use protective goggles to protect against flying particles.



#### Hand Protection:

The use of mechanical protective gloves is recommended to avoid accidental cuts due to broken parts.

#### Skin protection:

No skin protection is required.

## 9. PHYSICAL / CHEMICAL CHARACTERISTICS

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<b>Physical State:</b>	Solid
<b>Odour:</b>	Odourless
<b>Colour:</b>	Depends on the model
<b>PH:</b>	Not applicable
<b>Density:</b>	2390 – 2410 Kg / m <sup>3</sup>
<b>Solubility in water:</b>	Insoluble
<b>Boiling point:</b>	Not applicable
<b>Melting point:</b>	Not applicable
<b>Other information:</b>	No relevant data are known

## 10. STABILITY AND REACTIVITY

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<b>Reactivity:</b>	Not applicable
<b>Chemical stability:</b>	Stable
<b>Possibility of hazardous reactions:</b>	None known
<b>Conditions to avoid:</b>	Formation of dust during processes
<b>Incompatible materials:</b>	Avoid contact with strong acids for prolonged periods
<b>Hazardous decomposition products:</b>	None known

## 11. TOXICOLOGICAL INFORMATION

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The dust generated during machining, cutting and polishing processes contains silica particles in suspension. Prolonged exposure to breathable crystalline silica (SiO<sub>2</sub>) can cause lung fibrosis and silicosis.

The symptoms are manifested by an appreciable loss of lung capacity.

## 12. ECOLOGICAL INFORMATION

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The product is not harmful to the environment and neither does it release materials that might be environmentally hazardous.



### 13. DISPOSAL CONSIDERATIONS

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Taking as a reference, current legislation: European Directive 91/156 / EEC, Spanish Waste Act 10/98, and Spanish Royal Decree 1481 on Waste Disposal.

The waste generated by iTOP materials can be disposed of through an authorized waste disposal manager. Cardboard, paper and wood packaging should be recycled by authorized managers.

### 14. TRANSPORT INFORMATION

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<b>Transport by land (ADR/RID):</b>	Unrestricted
<b>Transport by sea (IMDG):</b>	Unrestricted
<b>Transport by air (ICAO/IATA):</b>	Unrestricted

### 15. REGULATORY INFORMATION

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This Material Safety Data Sheet (MSDS) has been drafted following the guidelines of the CLP Regulation (EC Regulation 1272).

### 16. OTHER INFORMATION

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NFPA 704 risk rating system.



<b>Risk – Health:</b>	0
<b>Flammability:</b>	0
<b>Reactivity:</b>	0

The product should not be used for purposes other than those specified by the manufacturer.



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Date of edition: July 2022