

TECHNICAL INFORMATION



TECHNICAL INFO

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1. TECHNICAL CHARACTERISTICS ACCORDING TO STANDARD

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 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.



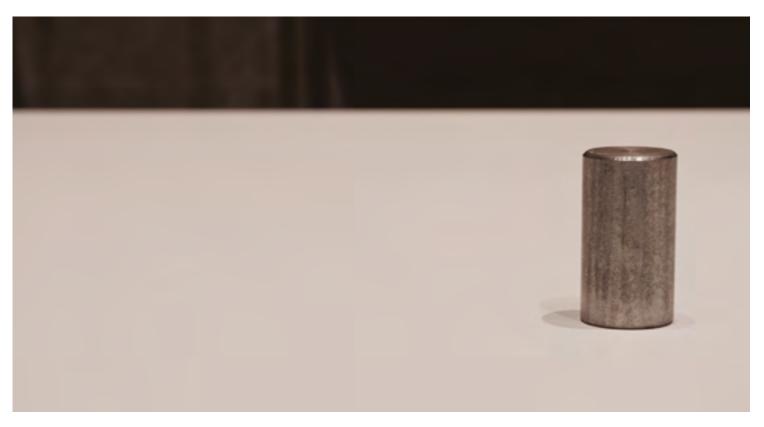
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| Technical character ISO 13006 / GROUF GROUP Bla | ristics 9 Bla UNE - EN 14411 | Reference standard | Required value | Mean value |
|-------------------------------------------------------|----------------------------------------------------------------------|---------------------------|---------------------------------------|----------------------------------------|
| | Water absorption | EN-ISO 10545-3 | ≤ 0,5 % | ≤ 0,1 % |
| | Breaking strength | EN-ISO 10545-4 | ≥ 1.300 N | Standard overtakes |
| | Bending strength | EN-ISO 10545-4 | ≥ 35 N / mm² | Standard overtakes |
| | Resistance to impact | EN-ISO 10545-5 | ≥ 0.55 without visible deffects | > 0.80 without visible deffects |
| Physical | Resistence to deep abrasion | EN-ISO 10545-6 | ≤ 175 mm³ | ≤ 135 mm³ |
| characteristics | Resistance to fire | UNE-EN 13501:1:07 + A1 | - | A ₁ |
| | Lineal thermal expansion | EN-ISO 10545-8 | - | ≤ 9 x 10 ⁻⁶ K ⁻¹ |
| | Thermal shock resistance | EN-ISO 10545-9 | - | Resists |
| | Mohs surface hardness | EN 101 | Min. 5 | 5 - 9 |
| | Frost resistance | EN-ISO 10545-12 | Required | Resists |
| | Resistance to household cleaning products and swimming pool aditives | EN-ISO 10545-13 | GB Min. | Resists (GA) |
| Chemical characteristics | Resistance to acids and bases in low concentration | EN-ISO 10545-13 | As indicated by manufacturer | Resists (GLA) |
| | Resistence to staining | EN-ISO 10545-14 | Class 3 Min. | Class 5 |



1. TECHNICAL CHARACTERISTICS ACCORDING TO STANDARD

2. TESTS APPLIED TO ITOP

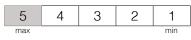


IMPACT RESISTANCE



THERMAL SHOCK RESISTANCE

WATER ABSORPTION RESISTANCE [EN-ISO 10545-3] This determines the product's water absorption capacity (0,1%).



STAIN RESISTANCE [EN-ISO 10545-14] This determines the surface's tendency to absorb stains.

| | | | _ |
|-----|---|-----|-----------------------------|
| А | В | С | ITOP NATURAL AND BUSH-HAM |
| max | | min | _ |
| | | | |
| A | В | С | TOP HIGH GLOSS POLISHED / N |
| max | | min | = |

CHEMICAL RESISTANCE [EN-ISO 10545-13] This tests whether the surface is affected by different products like solvents or bleaches.

| Δ | R | C |] ITOP NATURAL AND BUSH-HAMN |
|-----|---|-----|---------------------------------|
| | D | 0 | |
| max | | min | |
| А | В | С | ITOP HIGH GLOSS POLISHED / M |
| 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]

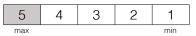
It does not burn or undergo any change when subjected to 10 cycles of temperatures ranging from 15°C to 145°C.

| 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).



IMPACT RESISTANCE

A 200 gr. 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 |

[Low resistance to test] $\min =$ Mid-level result



2. TESTS APPLIED TO ITOP

MMERED

MATT POLISHED

IMERED

MATT POLISHED

[High resistance to test]

max =

Optimum result

3. PRODUCT TECHNICAL SHEET ITOP (AIDIMME)



MANUFACTURER:

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PRODUCT:

ITOP COUNTERTOPS by Inalco are 12 mm-thick 1500 x 3200 mm large-format porcelain slabs.

Mainly conceived for use as worktops, ITOP COUNTERTOPS come in over 40 colours in a natural, polished and bushhammered finish.

The tests described in this sheet have been carried out in the AIDIMME laboratory (METALMECHANICAL TECHNOLOGICAL INSTITUTE, FURNITURE, WOOD, PACKAGING AND RELATED), at Inalco's request. The results obtained only concern the samples analyzed.

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 56867standard, "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. PRODUCT TECHNICAL SHEET ITOP (AIDIMME)

| CONDUCTED TESTS | | STANDARD | | | | |
|------------------------------------------------------|--------------------|-----------|------------------|--|--|--|
| | STANDARD | BATHROOMS | OTHERS | | | |
| SUR | FACE RESISTANCE TE | STS | | | | |
| 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 | | | |
| | AGEING TESTS | | | | | |
| Light resistance | 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. PRODUCT TECHNICAL SHEET ITOP (AIDIMME)

TEST PRODUCT: ITOP COUNTERTOPS NATURAL & BUSH-HAMMERED 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) |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------|
| 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 | - | - |
| Resistence 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 | - |

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3. PRODUCT TECHNICAL SHEET ITOP (AIDIMME)

TEST PRODUCT: ITOP COUNTERTOPS NATURAL & BUSH-HAMMERED 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) |
|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------------------------------------|----------------------------------------------------------|-----------------------------------------------------|
| Resistance to cleaning products (Assessed after 16 hours) | All the products: Shine: 5 Colour: 5 | _ | Shine: ≥ 3 Colour: ≥ 4 Correct | - |
| Impact resistance to dropped ball -Dropped from a height of 30 cm (Assessment) -Ball dimensions (324 ± 10) g and (42.8 ± 0.5) mm | 0 | - | ≤1 Correct | - |
| Resistance to staining (Assessment) | All the products: 5 | - | - | ≥ 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 | - | - | ≥ 3 Correct |
| Crack resistance (Degree) | 5 | - | - | ≥ 4 Correct |
| Dimensional stability at a high temperature (%) | 0.02 | | | Longitudinal: ≤ 0.3 Tranversal: ≤ 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 ²) Final bending strength (N/mm ²) Level of resistance | 50.9 50.3 0.99 | - | - | Resistence: ≥ 0.95 |
| Appearance (Degree) | 5 No deterioration | - | - | Rating ≥ 4 Complies |





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