



TECHNICAL INFORMATION



TECHNICAL INFORMATION CONTENTS

1. TECHNICAL CHARACTERISTICS ACCORDING TO STANDARD	01
2. TESTS APPLIED TO ITOP	03
3. PRODUCT TECHNICAL SHEET ITOP (AIDIMME)	05

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.



1. TECHNICAL CHARACTERISTICS ACCORDING TO STANDARD

Technical characteristics ISO 13006 / GROUP BIa UNE - EN 14411 GROUP BIa		Reference standard	Required value	Mean value
Physical characteristics	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 / mm ²	Standard overtakes
	Resistance to impact	EN-ISO 10545-5	≥ 0.55 without visible defects	> 0.80 without visible defects
	Resistance to deep abrasion	EN-ISO 10545-6	≤ 175 mm ³	≤ 135 mm ³
	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
Chemical characteristics	Resistance to household cleaning products and swimming pool aditives	EN-ISO 10545-13	GB Min.	Resists (GA)
	Resistance to acids and bases in low concentration	EN-ISO 10545-13	As indicated by manufacturer	Resists (GLA)
	Resistance to staining	EN-ISO 10545-14	Class 3 Min.	Class 5

2. TESTS APPLIED TO ITOP



IMPACT RESISTANCE



THERMAL SHOCK RESISTANCE



2. TESTS APPLIED TO ITOP

WATER ABSORPTION RESISTANCE [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 AND BUSH-HAMMERED
max		min	

A	B	C	ITOP HIGH GLOSS POLISHED / MATT 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 AND BUSH-HAMMERED
max		min	

A	B	C	ITOP HIGH GLOSS POLISHED / MATT 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 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

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

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

3. PRODUCT TECHNICAL SHEET ITOP (AIDIMME)



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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 bush-hammered 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 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. PRODUCT TECHNICAL SHEET ITOP (AIDIMME)

CONDUCTED TESTS	STANDARD		
	STANDARD	BATHROOMS	OTHERS
SURFACE RESISTANCE TESTS			
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 POLISHED
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)
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. PRODUCT TECHNICAL SHEET ITOP (AIDIMME)

TEST PRODUCT: ITOP COUNTERTOPS POLISHED
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)
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 (%)	0.05	-	-	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	-	-	Resistance: ≥ 0.95
Appearance (Degree)	5 No deterioration	-	-	Rating ≥ 4 Complies

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	-	-
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. 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/mm²) Final bending strength (N/mm²) Level of resistance	50.9 50.3 0.99	-	-	Resistance: ≥ 0.95
Appearance (Degree)	5 No deterioration	-	-	Rating ≥ 4 Complies



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