



CLEANHAND

antibacterical processing

TECHNICAL SPECIFICATIONS

 Made in Italy

fapim[®]

Life in evolution



CLEAN HAND is the new antibacterial surface finish by Fapim.



Tests carried out in several European laboratories in accordance with the **ISO 22196** and **JIS Z 2801** standards have confirmed the effectiveness of **CLEAN HAND** against the main (gram+ and gram-) germs, moulds and fungi that contaminate surfaces:

- Staphylococcus aureus
- Escherichia coli
- Pseudomonas aeruginosa
- Enterococcus hirae.

Laboratory testing shows **CLEAN HAND** reduces microbes by up to 99,9% after 24 hours.

Clean Hand treatment is not a substitute for good hand hygiene practice **CLEAN HAND** surface coating provides **24-hour** resistance to microorganisms. According to laboratory tests, one year after application the paint retains the same initial antibacterial properties despite cleaning, interfering substances and scratches on the surface.

The active ingredient in **CLEAN HAND** has a constant efficacy over time and for more than 25 years.





THE STANDARD

ISO 22196 standard specifies a method for evaluating the antibacterial activity of plastics and non-porous surfaces treated with antibacterial agents.

ISO 22196 standard is based on the Japanese standard **JIS Z 2801**: the two test methods are in practice equivalent. The international ISO 22196 and the Japanese JIS Z 2801 are the most widely used to determine the effectiveness of an antibacterial treatment, and consequently to show an appropriate treatment.

ISO 22196 applies to a wide variety of materials that are supposed to have antibacterial activity and provides a quantitative measure of the effectiveness of that activity; the amount of bacteria with which the sample material is inoculated is calculated at the beginning of the test and at the end of the period of contact with the sample - usually 24 h at a temperature of 37 °C, ideal for bacterial growth; the comparison of the two amounts provides a percentage index - or logarithmic reduction - of the effectiveness of the antibacterial material.

The scientific process behind the anti-bacterial paints used by Fapim S.p.A. is based on a compound that utilizes **silver ions**, which inhibits that ability of bacteria to reproduce.

The key parameter to assess the effectiveness of the treatment is R "determination of antibacterial activity": **JIS Z 2801** specifies that when the value of $R > 2$ the treatment is effective. Antibacterial efficacy R can also be expressed as a percentage.

All Fapim antibacterial paint finishes are manufactured under the Qualicoat brand.





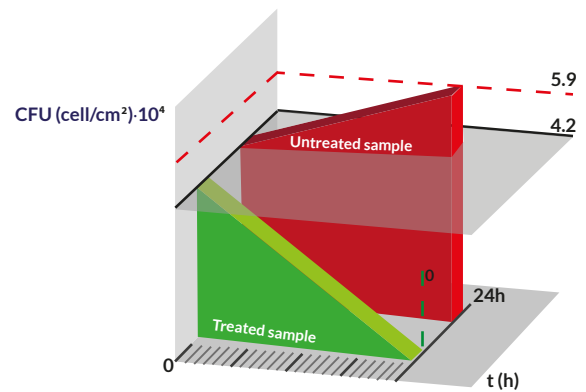
THE TESTS

Example of data/performances of paints

The antibacterial activity tests, carried out in various European laboratories in accordance with **ISO 22196** and **JIS Z 2801**, consist in submitting a sample of the material under analysis to controlled conditions of contamination by two specific strains of bacteria.

Escherichia Coli ATCC 8739

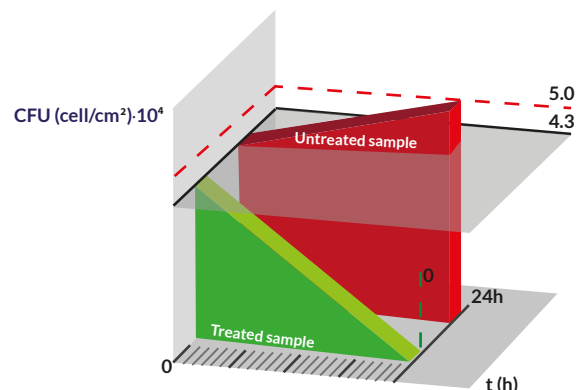
| | UNTREATED SAMPLE | TREATED SAMPLE |
|------------------------|------------------|-------------------|
| Initial inoculation | $U_0 = 4,2$ | $U_0 = 4,2$ |
| After 24H | $U_t = 5,9$ | $A_t = \text{NQ}$ |
| Antibacterial activity | - | $> 5,5$ / 100% |



CFU: colony-forming unit per cm^2 is the unit used to estimate the number of viable bacteria in a sample

Staphylococcus aureus ATCC 6538

| | UNTREATED SAMPLE | TREATED SAMPLE |
|------------------------|------------------|-------------------|
| Initial inoculation | $U_0 = 4,3$ | $U_0 = 4,3$ |
| After 24H | $U_t = 5,0$ | $A_t = \text{NQ}$ |
| Antibacterial activity | - | $> 4,6$ / 99,997% |

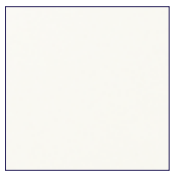




THE FINISHES

Fapim applies the **CLEAN HAND** coating to all items that involve hand contact and operation, such as cremone bolts, window handles, door handles, flat handles, latches, door bolts, panic devices, outside access drives for panic bolts, handles and window handles for sliding systems.

Finishes made with coating **CLEAN HAND**:



32-9010GLO



58-9016GLO



G5-9006MAT



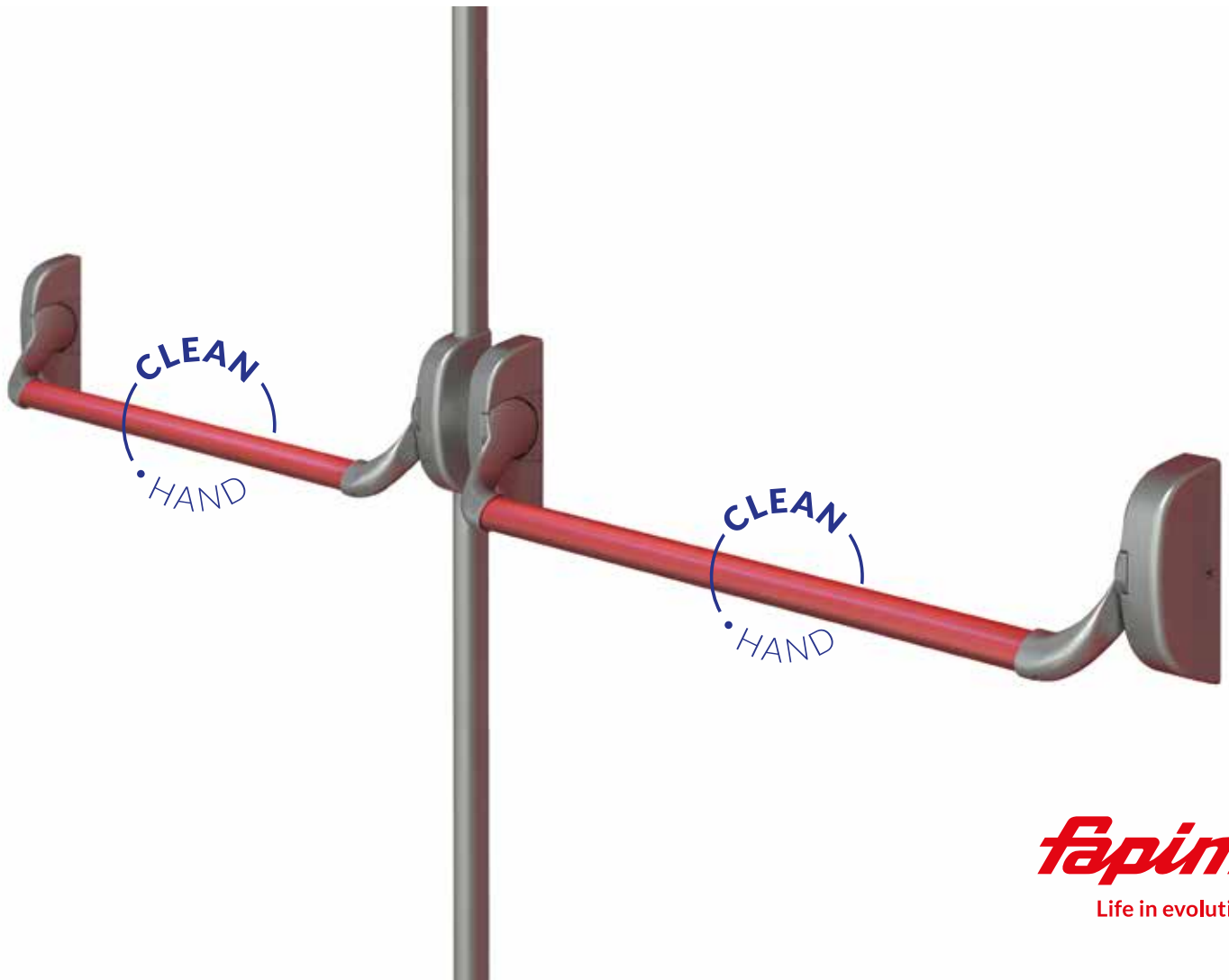
G6-SILVER-SGL



37-9005MAT



71-3000GLO



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