



ATP Test Report

For

Cleaning Contractors

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Document Lead Sheet

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Report History

1.00 Issued

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1. Introduction

Environmental Efficiency Consultants were engaged by Cleaning Contractors, to independently verify claims made by Resysten Protective Coatings that their coating technologies inhibit microbiological growth on surfaces and provided protection against harmful pathogens. Resysten Protective Coating utilises the photocatalytic catalytic reaction between Titanium Dioxide (TiO₂) and either direct sunlight or artificial light.

The verification tests were conducted in the access areas of an apartment block over 3 weeks. ATP tests were conducted on high touch areas in the test apartment block and a control block.

ATP (adenosine triphosphate) is an energy molecule found in all living cells that allows cellular metabolism to take place. All organic matter contains ATP, including skin, blood, mucus, saliva, viruses, fungi, moulds, spores and bacteria.

ATP Testing is a common method in healthcare and food facilities to ensure a high level of cleanliness and hygiene has been achieved, typically after a sanitisation process has been conducted.

Where used to ensure a complete sanitisation of an area has been achieved, surface swabs will be taken from representative locations before and after the sanitisation process. The swabs will be analysed by using the Hygiena EnSure Touch System device with Hygiena™ Ultrasnap™ Surface ATP swabs.

2. Locations

The following locations were used for the verification test:

Table 2-1 Test Apartment Block Locations

Apartment Block	Area
Core 4	Lift Call Button
	Left hand lift hand rail
	Mail Boxes (Right Hand Side)
	Apartment buzzer/ intercom
	Lobby Hand Sanitiser dispenser
	Lobby Door release button
	Lobby interior door handle

Table 2-2 Control Apartment Block Locations

Apartment Block	Area
Core 5	Apartment buzzer/ intercom
	Lobby Hand Sanitiser dispenser
	Lift Call Button



Figure 2-1 Core 4 Test Apartment block Lift Call Button



Figure 2-2 Core 4 Test Apartment block Left hand rail



Figure 2-3 Core 4 Test Apartment block post boxes (RHS)



Figure 2-4 Core 4 Test Apartment block buzzer/ intercom



Figure 2-5 Core 4 Test Apartment block Hand Sanitiser Dispenser



Figure 2-6 Core 4 Test Apartment block Lobby Door release button



Figure 2-7 Core 4 Test Apartment block Lobby interior door handle



Figure 2-8 Core 4 Test Apartment block buzzer/ intercom



Figure 2-9 Core 4 Test Apartment block Hand Sanitiser Dispenser



Figure 2-10 Core 4 Test Apartment block Lift Call Button

3. Method

The verification methodology was conducted as follows:

1. **Baseline Survey.**
 - a. Initial ATP testing was performed using the Ultrasnap™ Surface ATP swabs and analysed by Hygiena EnSure Touch System device at the test apartment block (Core 4) and the control apartment block (core 5) locations.
 - b. Immediately following the baselines ATP tests, all test location in core 4 were pre-cleaned with Tyrosan and then the Resysten protective coating was applied.
2. **Re-Test (2 weeks after baseline)**
 - a. All locations in core 4 and core 5 were wiped with a moistened cloth to prevent any dust deposits interfering with results then re-tested for ATP.
3. **Re-Test (4 weeks after baseline)**
 - a. All locations in core 4 and core 5 were wiped with a moistened cloth to prevent any dust deposits interfering with results then re-tested for ATP

4. Results

Table 4-1 Table of Results for Test Apartment (Core 4)

Location	Baseline ATP Result ¹ (06/04/2021)	ATP result ¹ (21/04/2021)	ATP result ¹ (05/05/2021)	Percentage reduction ²
Lift Call Button	551	157	52	90.6%
Left hand lift hand rail	514	58	65	87.4%
Mail Boxes (Right Hand Side)	160	18	23	85.6%
Apartment buzzer/intercom	734	64	39	94.7%
Lobby Hand Sanitiser dispenser	224	38	9	96.0%
Lobby Door release button	216	32	28	87.0%
Lobby interior door handle	575	173	62	89.2%

¹ All ATP Results are expressed as RLU's (Relative Light Units)

² Percentage reduction in ATP between initial results and the final test date.

Table 4-2 Table of Results for Control Apartment (Core 5)

Location	Baseline ATP Result ³ (06/04/2021)	ATP result ¹ (21/04/2021)	ATP result ¹ (05/05/2021)
Apartment buzzer/ intercom	943	338	118
Lobby Hand Sanitiser dispenser	90	132	38
Lift Call Button	184	264	152

³ All ATP Results are expressed as RLU's (Relative Light Units)

5. Discussion

Results show that there was approximately a reduction of 90% of ATP between the initial baseline test at core 4 and the final testing conducted on 05/05/2021. In comparison the control apartment block (core 5) location test results did not show a similar reduction, in fact the ATP readings were erratic in nature. Therefore, the reductions noticed at core 4, can be only due to the Resysten Protective Coating eradicating microbial activity.

Appendix 1 Certificate of Competence



About Environmental Efficiency

Environmental Efficiency was founded in 1996 by two experienced consulting engineers, both with extensive backgrounds in manufacturing, quarrying, IT and construction in the UK, Ireland and overseas.

Our mission is to help improve our clients' environmental and H&S performance in cost effective and practical ways and as a result build long term relationships.

Engineers are natural problem solvers and this, coupled with the expertise of our staff of environmental consultants, enables us to offer solutions to environmental problems that are cost effective and practical.

Environmental Efficiency is engaged in energy, environmental and H&S consultancy across the entire range of manufacturing and commercial activity. Our clients range from US and European based multinationals to indigenous start-ups. What these clients have in common is a requirements for cost effective consultancy and pragmatic solutions to their issues.

Our core services include

- Air, Noise and Water monitoring
- Bund integrity assessments
- Due diligence
- Energy audits
- Workplace/Occupational monitoring
- Environmental Management System implementation
- Environmental Impact Statements

Environmental Efficiency has offices in Ireland (Bray and Cork), Northern Ireland (Lisburn) and Britain (Birmingham).

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