

Patient's Toilet & Shower Room Floor



INTRODUCTION

This project aims to increase the coefficient of friction on existing wet area floor tiles so as to reduce the chance of falls in the patient's toilets and shower rooms.

Anti-slip floor tile comes in different friction value, the higher the friction value, the rougher the surface. For indoor application, only a certain range of anti-slip tiles are preferred with acceptable roughness to prevent serious injuries during accident like slip and fall. As time goes by, anti-slip tile performance will drop due to wear and tear.



Need a method that can increase the traction without having major renovation work and downtime.

METHODOLOGY

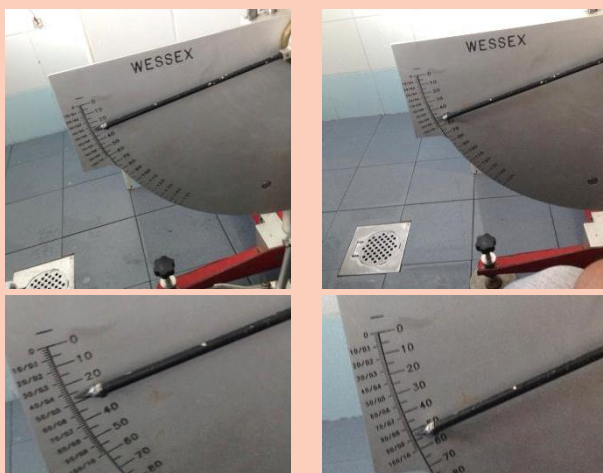
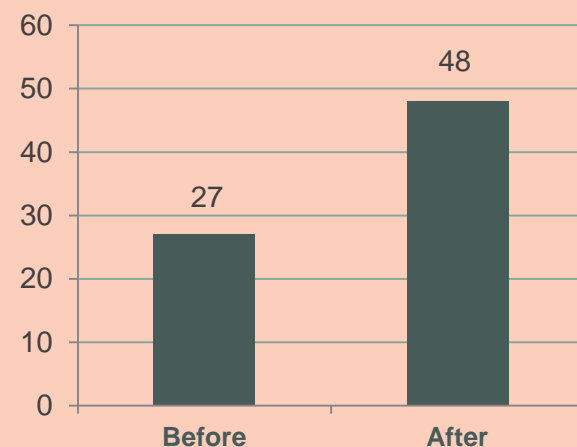
Apply a **clear chemical solution** on the toilet tiles. The chemical is to **penetrate** deep into the **pores** of the floor tiles to **dissolve and extract** all foreign substances from the tile and grout, and **microscopically** etches the surfaces to **create better traction**.

This profile is so subtle that it cannot be felt or seen. When the surface is wet with water, these shallow indentations fill. When a pedestrian walks across the wet surface and their shoe starts to slide, the water is squeezed out of the indentations turning them into **thousands of suction cups** that helps stop the shoe from slipping.

For **housekeeping**, the surface has to be kept **free of soil accumulation and grease**. Since we are using this for patient's toilet and shower, it will be easily maintained.

At the same time, this chemical will also regenerate calcium fluoride (fluorination process) to extend the grout life and to **block the growth of bacteria & fungi**.

*BPN
value



Group	Pendulum mean *BPN		Notional contribution of the floor surface to the risk of slipping when wet
V	> 54	>44	Very Low
W	45 - 54	40 - 44	Low
X	35 - 44	-	Moderate
Y	25 - 34	-	High
Z	< 25	-	Very High

Classification extracted from SS 485:2011
Table 1 : Wet pendulum test classification



* BPN – British Pendulum Number, unit to measure floor traction.

RESULT

Surface traction increased and **foreign substance** in tile & grout is **extracted**.

A frictional test (Wet Pendulum Test) was conducted by *Cast Laboratories Pte Ltd*. The *BPN improved from reading of **27 (before treatment)** to **48 (after treatment)**.

- **Better traction from high to low risk**
Microscopically etches the surfaces
- **Extend the flooring lifespan**
Dissolves and extracts all foreign substances
- **Prevent growth of bacteria & fungi**
Through fluorination process
- **Easy application & low odor**
Apply and keep surface damp for recommended time, then rinse away. There is no curing period; the area can be used immediately after application.
- **Save time and manpower compare to normal renovation work of replacing floor tile**



CONCLUSION

The result above shows a great improvement in the flooring's slip resistance, **from a high risk of slipping, to low risk of slipping**