

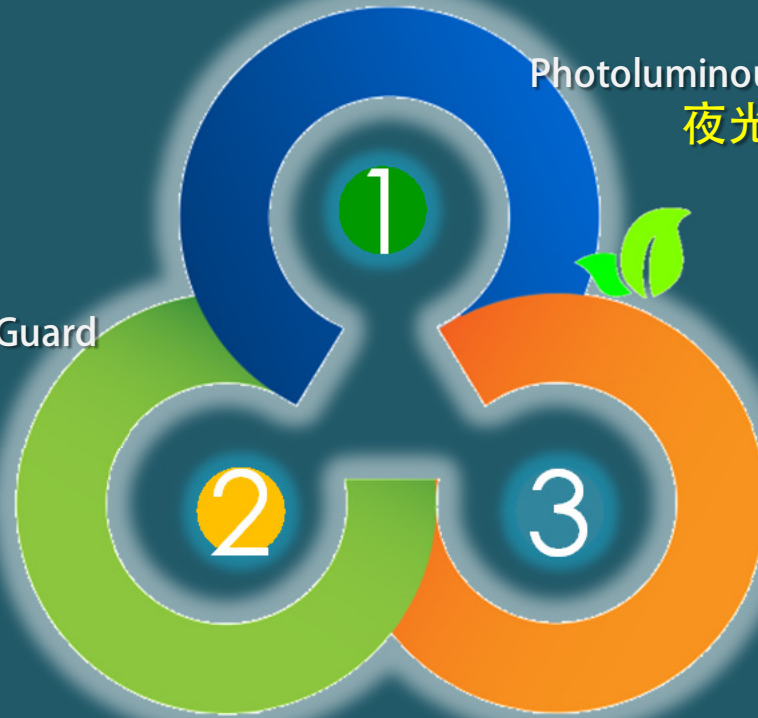
SECUTECHNIK

Green and Safety Solution!



Technology of Germany

Visual Warning & Protective Bumper Guard
全天候防撞保護泵把



Photoluminescent Safety Guidance System
夜光逃生照明系統

High Performance Anti-Slip Solution
一站式高效能防滑系統方案

SECUTECHNIK

Green and Safety Solution! 



Technology of Germany

- 1** Photoluminescent Safety Guidance System
夜光逃生照明系統
- 2** Visual Warning & Protective Bumper Guard
全天候防撞保護系統
- 3** High Performance Anti-Slip Solution
一站式高效能防滑系統方案





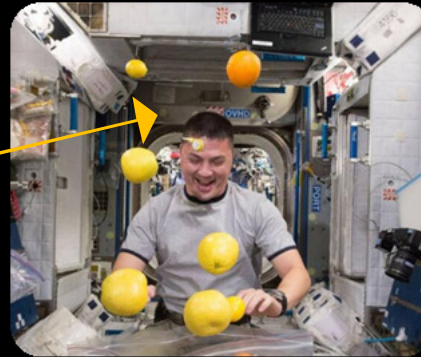
Permalight in Space!

Permalight in Space

PERMALIGHT® installed on the International Space Station.

In an effort to reduce maintenance costs of the battery powered emergency egress guidance system on the International Space Station (ISS), NASA evaluated a more cost efficient photoluminescent system with regards to

- effectiveness
- reliability
- durability



Permalight's photoluminescent high performance product complies with all of the stringent NASA requirements and was accepted for the installation on the ISS.

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PERMALIGHT®

Photoluminescent Safety Guidance System

夜光逃生照明系統



Low Location Guidance System
is needed!

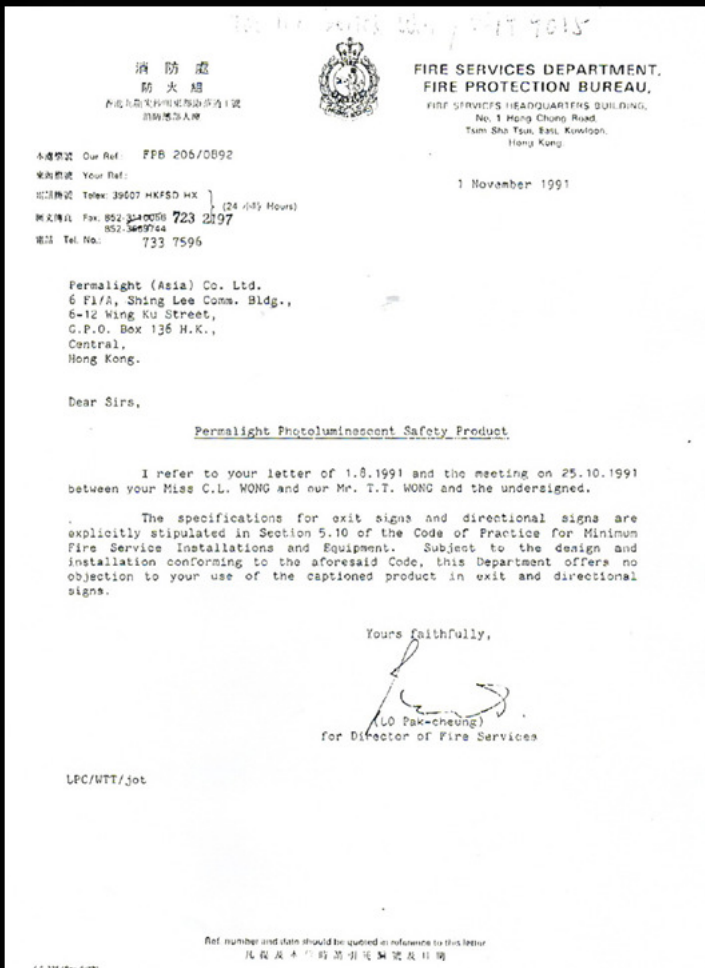


*The smoke emission is shown clearly in this illustration:
60 second after beginning of fire "free" viewing and air for breathing is only possible in a height of at most 40 cm.*

Low Location Guidance System
is needed!



With smoke present, occupants can only make out a short distance in front.
They are encouraged to drop to the floor and follow the Low Location Lighting paths.



CODE OF PRACTICE FOR MINIMUM FIRE SERVICE INSTALLATIONS AND EQUIPMENT



5.1 Audio/Visual Advisory System

VISUAL

A system of coloured and flashing lights, which may be incorporated to the exit signs and directional

signs as required under 5.10 and supplemented by low-level directional signs to indicate:

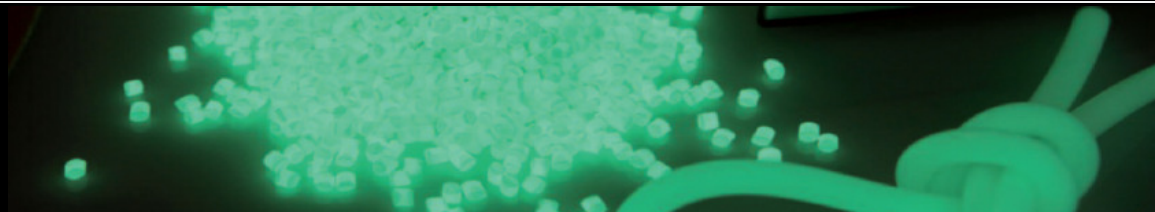
- (a) the floor/floors to be evacuated by operating the lights on that floor/those floors in flashing mode,
- (b) the evacuation routes by following the low-level directional signs.

Low level directional signs shall be installed with the lower edges not higher than 200 mm from the finished floor level.

Low level directional signs shall be of self luminous types and conform to British Standard 5499: Part 2 or, alternatively, shall be of photoluminous types and conform to DIN 67510 Part 4 or equivalent.

Photoluminous pigment properties:

1. Non-toxic
2. Non-radioactive
3. Flame retardant
4. Lead-free
5. Free of phosphor
6. Environmental friendly



Contribution of LEED Credits

Due to its many environmental paybacks, the use of photoluminescent exit signs can earn buildings a number of points in the following LEED credits:

- EA Credit 1 – Energy and Atmosphere: Optimizing Energy Performance
- MR Credit 4 – Material and Resources-Recycled Content
- ID Credit 1.1 – Innovation in Design: Significant Environmental Benefits



Why Permalight?

- **Permalight pioneered to develop light storing safety guidance systems**
- **Early adoption by US government**

In 1994, following the bomb attack in the World Trade Center basement parking garage, the Port Authority of New York and New Jersey installed PERMALIGHT® photoluminous markings on the steps, landings and handrail top bars of their emergency staircases.

- **Saved lives during 9/11 World Trade Center Attack**

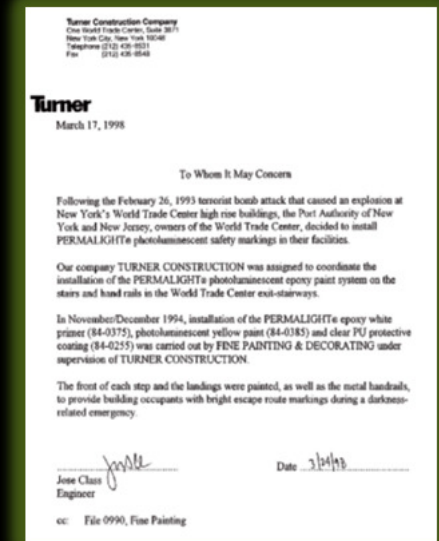
According to NIST, 33% of survivors in WTC Tower I and 17% of survivors in WTC Tower II were aided by the PERMALIGHT® photoluminous markings on the steps, landings and handrails.

- **Influenced new building codes**

Based on the NIST findings, New York City Department of Buildings developed a range of improvements, enforced by Local Law 26 of 2004, which included photoluminous exit path markings. The NYC requirements are detailed in Reference Standard RS6-1 and 6-1A.

NRC – National Research Council of Canada, in collaboration with Public Works and Government Services Canada (PWGSC) evaluated the use of photoluminous markings for Canadian federal office buildings and published their Guide for the Installation of photoluminous Exit Stairway Markings in Buildings

- NIST study at <http://wtc.nist.gov/NCSTAR1/PDF/NCSTAR%201-7.pdf>.
- Canadian Guide at <http://www.nrccnrc.gc.ca/obj/irc/doc/pubs/nrcc50818/nrcc50818.pdf>



Why Permalight?

Standards compliances and Certificates (I):

- 2009 IBC – International Building Code
- 2009 IFC – International Fire Code
- NFPA 101 – Life Safety Code
- NFPA 5000 – Building Construction and Safety Code
- California Building Code compliant; certified by CA State Fire Marshal
- New York City Local Law 26, Reference Standard RS6-1 compliant: 4 MEA-listed materials
- JCAHO – Joint Commission on the Accreditation of Healthcare Organizations
- UL 1994-listed Luminous Egress Path Markings
- UL924-listed Light-storing EXIT Signs, listed by Underwriters Laboratories and ETL-Intertek Testing
- OSHA – Occupational Safety And Health Administration 1910.37 (b)(6)
- ADA – Americans with Disabilities Act
- 2005 Facilities Standard (P100) for US Public Buildings of GSA-General Services Administration
- ASTM E2072-10 Specification for Light-storing Safety Markings
- ASTM E2073-10 Test Method for Light-storing Markings
- ASTM E2030-09a Guide for Recommended Uses of Light-storing Safety Markings
- ASTM D4828 –Wash ability Test
- ASTM D3648 – Non-Radioactivity Test
- ASTM E162 – Surface Flammability Test
- ASTM D635 – Rate of Burning Test
- ASTM G155 – UV-Degradation Resistance Test

Why Permalight?

Standards compliances and Certificates (II):

- CIEMAT – radioactivity test
- AFITI LICO – fire test
- Bombardier SMP 800-C – Toxicity Test
- APTA SS-PS-004-99, Rev. 2 – Standard for Low-Location Exit Path Marking, published October 2007
- APTA SS-PS-002-98, Rev. 3- Standard for Emergency Signage for Egress/Access of Passenger Rail Equipment, published October 2007 by the American Public Transportation Association
- Canadian Guide for the Installation of Light-storing Exit Stairway Markings in Buildings, NRC Canada
- ISO 15370-Low-Location Lighting on Passenger Ships
- ISO 16069-Graphical Symbols, Safety Signs, Safety Way Guidance Systems (SWGS)
- ISO 17398-Safety Colors and Safety Signs
- Lloyd's Register of Shipping
- Germanischer Lloyd ,See-BG
- American Bureau of Shipping
- Canadian Coast Guard
- Spanish Regulation UNE 23035 1-4:2003 (tested for onshore applications by the following institutes):
- AIDO – luminance test and salt spray test

SECUTECHNIK

Territory of Job Reference



Technology of Germany



HSBC



NTT



CLP



CEM Macau



HAECO



COCA-COLA



HONGKONG & KOWLOON FERRY



LEED Platinum Green Building
-HSBC Shek Mun Data Center



SERVICES PROVIDED

Supply and install of Secutechnik Photoluminescent Guidance System for the whole building from basement to roof area.

OVERVIEW

This project comprises construction of a 13-storey building with 2-storey basement carpark, computer equipment rooms, office area, canteen, gymnasium, associated external paving and landscaping works.

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HSBC Data Centre, Plant Room

PERMALIGHT[®]



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HSBC Data Centre, Plant Room

PERMALIGHT®

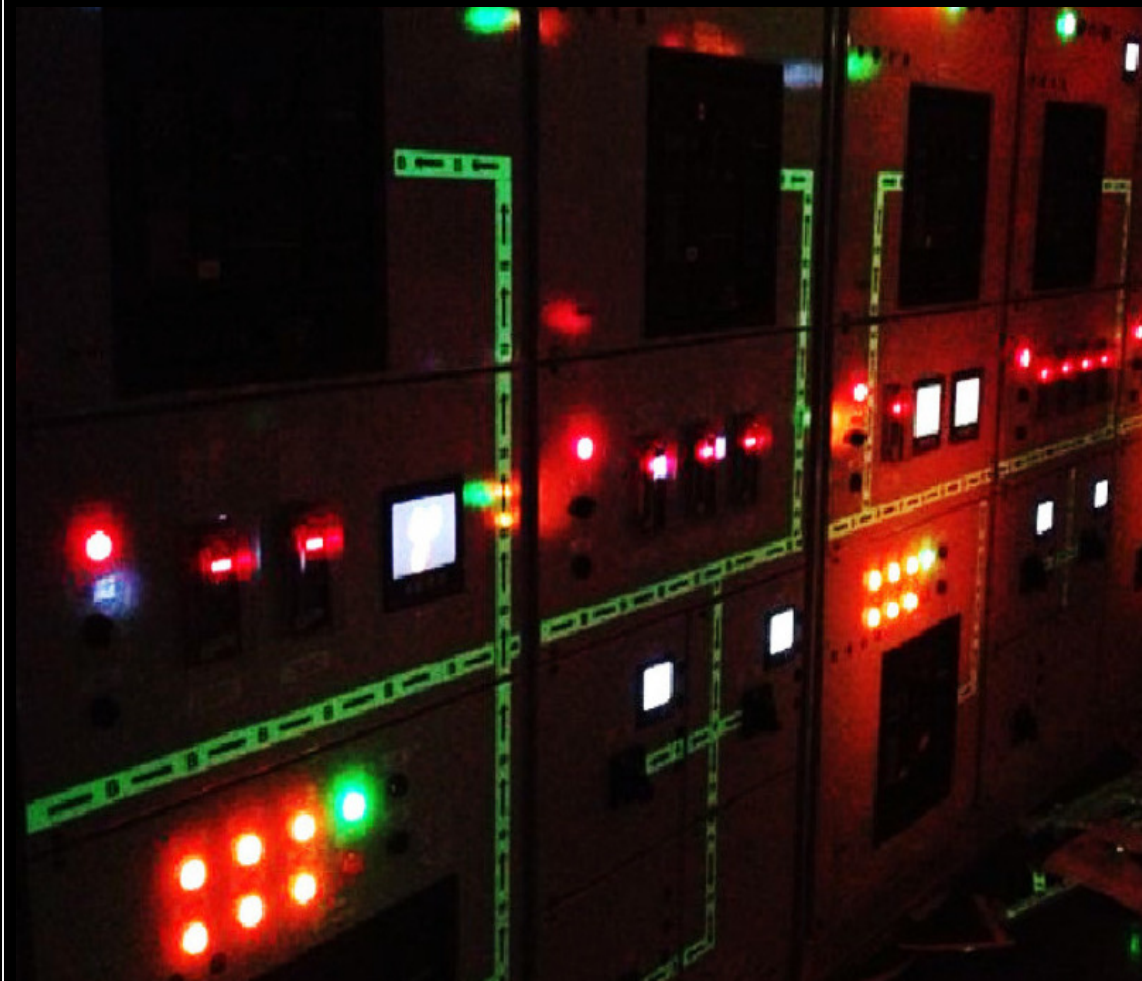


SECU TECHNIK



HSBC Data Centre, Plant Room

PERMALIGHT®



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NTT Data Centre

PERMALIGHT®



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NTT Data Centre, Plant Room

PERMALIGHT®



澳電為推動綠色安全意識再下一城

鴨涌河變電站裝置亞洲首個配備夜光逃生照明系統

近來各國都積極提倡環保及安全意識，為社會的可持續發展努力。澳門電力股份(澳電)在這方面更是本地先驅企業，不斷在設備引進及人才培訓方面推動綠色安全意識。最近澳電更率先從德國引進一套「不需電源」的夜光逃生照明系統，提升本地供電網絡的綠色安全標準。該系統由德國 Securemen 公司生產，利用特製的環保物料，吸收並儲存室內及周邊環境的光能，當遇到火警或緊急情況，在漆黑環境下，該夜光系統會自動發光，提供緊急照明以協助逃生。



對於這套名為「不需電源」的夜光逃生照明系統，它不僅節能環保，更可大大降低因日常保養維修不足而導致的種種問題，確保是百分百可靠的逃生照明系統。在歐美等先進國家，夜光逃生照明系統已成為必備的基本消防設施。相對在亞洲等地區，這技術仍在起步階段，而澳電已率先引進此技術，並且在鴨涌河變電站裝置亞洲首個配備夜光逃生照明系統。

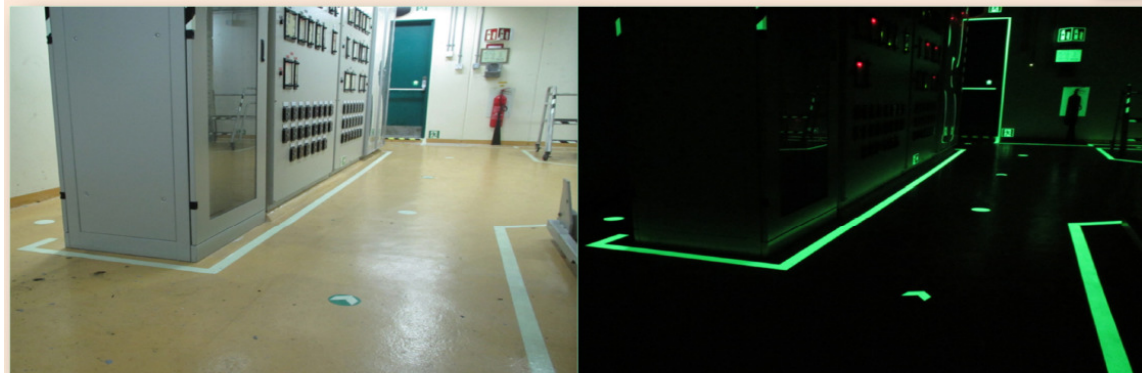
根據廠商所提供的資料，這種能吸收及儲存光能的物料，本身是無毒，無放射性，阻燃及百分百安全環保，可持續使用 25 年。該夜光技術最先應用于軍事、航空及海事用途，及後發展成民用的安全產品。而德國是全球最先發展及採用此技術的國家，其應用標準 DIN 67510，更是全球最完善的夜光技術標準。安裝規格方面，主要是根據 ISO 16069 作為設計藍本。



澳電為推動綠色安全意識再下一城

鴨涌河變電站裝置亞洲首個配備夜光逃生照明系統

近來各國都積極提倡環保及安全意識，為社會的可持續發展努力。澳門電力股份(澳電)在這方面更是本地先驅企業，不斷在設備引進及人才培訓方面推動綠色安全意識。最近澳電更率先從德國引進一套「不需電源」的夜光逃生照明系統，提升本地供電網絡的綠色安全標準。該系統由德國 Securemen 公司生產，利用特製的環保物料，吸收並儲存室內及周邊環境的光能，當遇到火警或緊急情況，在漆黑環境下，該夜光系統會自動發光，提供緊急照明以協助逃生。

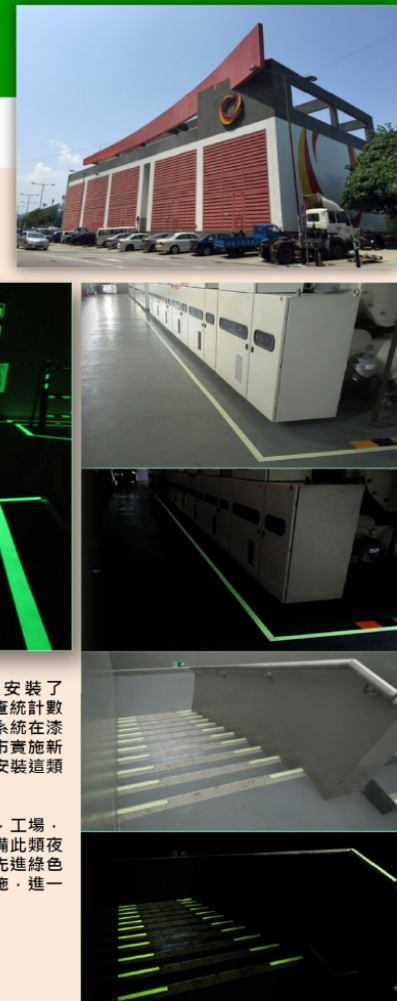


由於此系統完全「不需電源」操作或定期檢查，它不只是節能環保，更可大大降低因日常保養維修不足而導致的種種問題，確保是百分百可靠的逃生照明系統。在歐美等先進國家，夜光逃生照明系統已成為必備的基本消防設施。相對在亞洲等地區，這技術仍在起步階段，而澳電已率先引進此技術，並且在鴨涌河變電站裝置亞洲首個配備夜光逃生照明系統。

根據廠商所提供的資料，這種能吸收及儲存光能的物料，本身是無毒，無放射性，阻燃及百分百安全環保，可持續使用 25 年。該夜光技術最先應用于軍事、航空及海事用途，及後發展成民用的安全產品。而德國是全球最先發展及採用此技術的國家，其應用標準 DIN 67510，更是全球最完善的夜光技術標準。安裝規格方面，主要是根據 ISO 16069 作為設計藍本。

當年在 911 恐怖襲擊中倒塌的紐約世貿大廈，亦安裝了 Securemen 的夜光逃生照明系統。及後根據後來生還者的調查統計數據顯示，發現當中三份一的生還者，都是利用此夜光逃生照明系統在漆黑的環境中找到逃生出口，才能安全逃離災難現場。從此紐約市實施新的消防安全法例，規定樓高超過75英尺的多層大廈，一律需要安裝這類「不需電源」的夜光照明系統，以確保市民大眾的生命安全。

在歐美很多軍用及民用的重要設施，包括電廠、數據中心、工場、機器房、水泵房、隧道、地下鐵路、酒店、摩天大樓等，都配備此類夜光逃生照明系統，提高安全標準。鴨涌河變電站只是澳電推動先進綠色安全技術的第一站，經評估後將考慮拓展至其他供電及配電設施，進一步提升公司整體的安全標準。



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CEM, Macau, Power Plant HV Room

PERMALIGHT®



SECUTECHNIK



CEM, Macau, Power Substation

PERMALIGHT®



SECUTECHNIK



CEM, Macau, Power Transformer Room

PERMALIGHT®

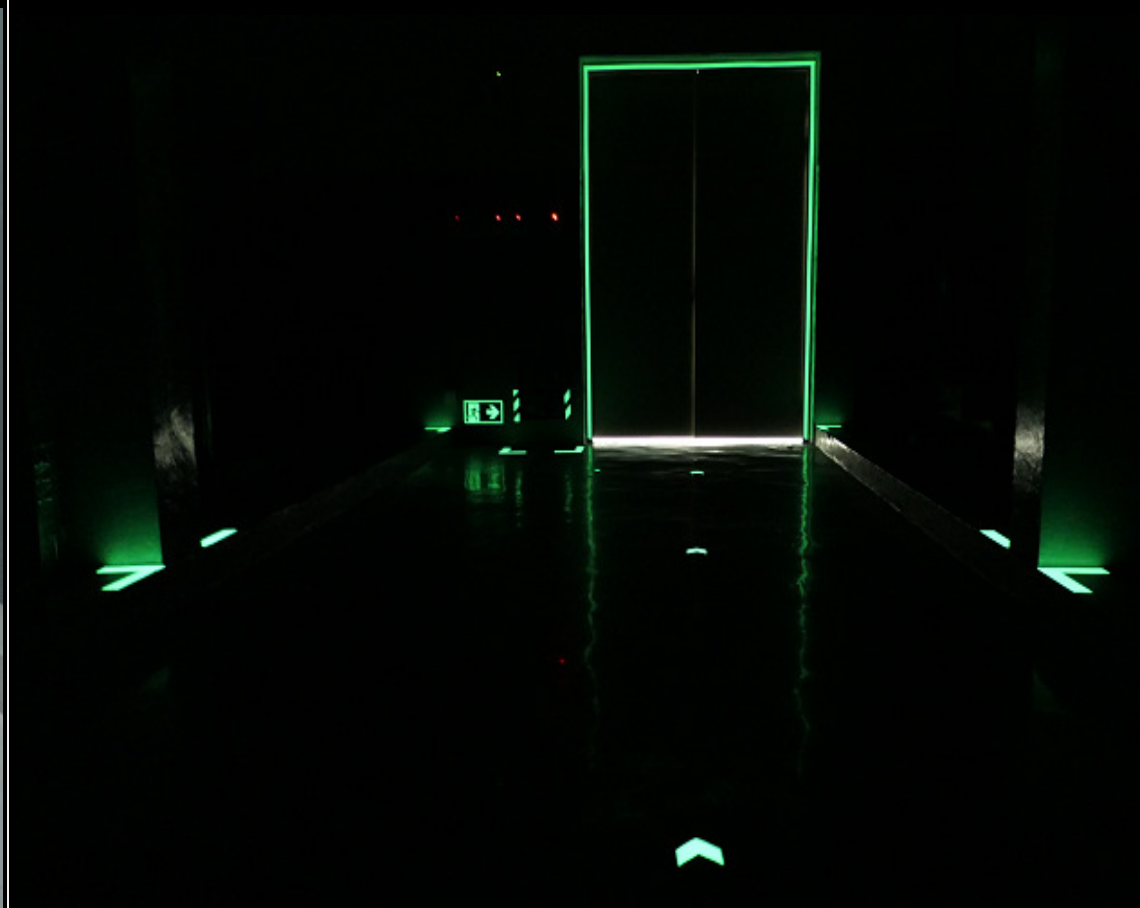


SECU TECHNIK



CEM, Macau, UMSS

PERMALIGHT®



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CEM, Macau, UMSS

PERMALIGHT[®]



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CLP, Cable Tunnel

PERMALIGHT®

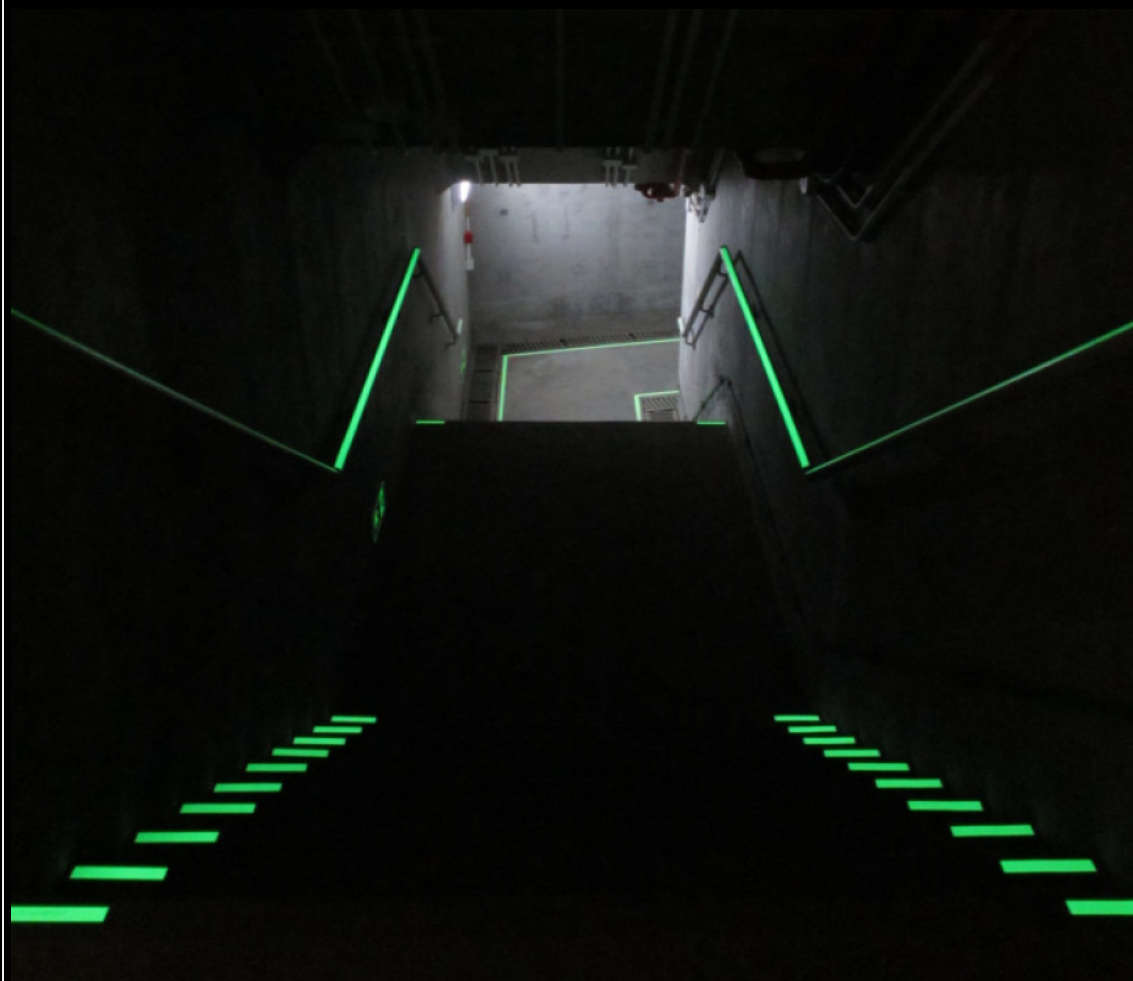


SECUTECHNIK



CLP, Staircase

PERMALIGHT®



SECUTECHNIK



TVB, Corridor

PERMALIGHT®



SECUTECHNIK



IFC, Conference Room

PERMALIGHT®



SECUTECHNIK



Hong Kong and Kowloon Ferry

PERMALIGHT®



SECUTECHNIK



Hong Kong and Kowloon Ferry

SECUTECHNIK



Hong Kong and Kowloon Ferry

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Hong Kong and Kowloon Ferry

PERMALIGHT[®]



Key Benefits from SECUTECHNIK:

- Professional Solutions, we offer full range product line in each category
- High Product Quality and Excellent Performance
- Indoor and Outdoor Applications
- Durable Solution with up to 25 years performance warranty
- Standard & Compliance:
 - ✓ DIN 67510 150mcd/m²,
 - ✓ DIN 51130 R10 to R13,
 - ✓ DIN 4102 B2...etc
- Environmental Friendly: Non Radioactive, Non Toxic , Lead free, Flame Retardant, CFC free PU Foam
- Contribution of LEED Credits
- Simple and Easy Installation, most products come with Strong Adhesion
- Free Pre-Sale Service and After Sales Supports

High Performance Anti-Slip Solution

一站式高效能防滑系統方案



Anti-slip Solution Provider!

- Easy Clean Tape for wet area



- Public 46 to ensure long term appearance

- General Tape work for outdoor & indoor



1 Anti-Slip Tape

- Anti-slip tapes with metal backing plate

- Conformable Tape for uneven surface

Anti-Slip Mat

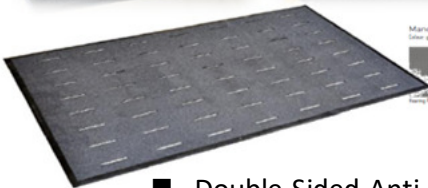
2

Full Range Anti-slip Products

3

Glass Reinforced Plastic (GRP)

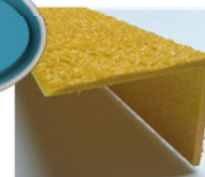
- Silicon-Carbide Grit anti-slip surface
- Composite material Iso-Polyester-Resin
- Thickness: Medium 3.8mm, Heavy Duty 4.2mm



- Double Sided Anti-slip Mat



- Strip



- Safe Edge



- Step Cover



- Plate



- Ladder Rung Cover

DIN 51130 – the German methods (Also known as the ramp tests)

DIN 51130 is used for testing shoe-trafficked areas over a surface lubricant, where a person walks back and forth on a platform (in a laboratory). The angle of inclination of the test area is steadily increased until the person begins to slip. The angle at which the person slips is recorded and averaged out over a number of tests.

The higher the rating, the more may be considered anti-slip.

DIN 51130 then relates these R ratings to particular fields of use.

The DIN Classification (known as R Ratings) is as follows:

**Slip-
resistant
surface
R13**

*99% of Secutechnik products
meet DIN 51130 R13 Rating



	Angle of Inclination	Ramp Test Designation Code
	3° - 10°	R9
	10° - 19°	R10
	19° - 27°	R11
	27° - 35°	R12
	> 35°	R13

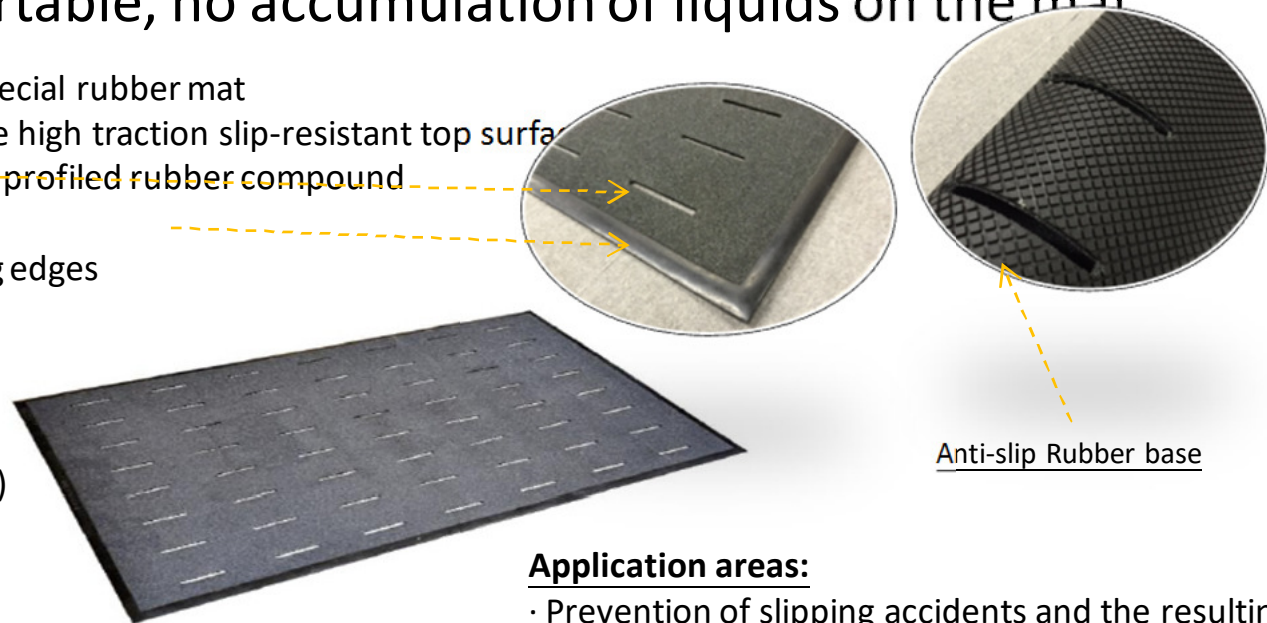
Double-sided Anti-Slip Mat

Double-sided non-slip, portable, no accumulation of liquids on the mat

- Both sides slip-proof special rubber mat
- 60-grit Aluminum-Oxide high traction slip-resistant top surface
- Slip-resistant base with profiled rubber compound
- Drainage slots
- Tapered trip-preventing edges
- Weight 10 kg
- Thickness 7 mm
- Colour: black

Properties

- Exceptional slip prevention R13 (DIN 51130)
- Anti-fatigue
- Temperature insulating
- Sound proofing
- Usable on nearly all substrates
- Very high wear resistance
- Largely chemical resistant & Mineral oil resistant
- Easy cleaning
- UV-stable
- Wide temperature range : -40 to +100 °C



Anti-slip Rubber base

Application areas:

- Prevention of slipping accidents and the resulting costs
- On smooth, wet floors or floors smeared with oil or grease
- For medium to high traffic
- In production areas
- Food processing
- Kitchens and canteens
- In front of machines, tables, packaging stations

Why “GRP” ?

Anti-slip Glassfibre Reinforced Plastic (GRP)

Key GRP Products:

1. Safe Edge
2. Step cover
3. Plate
4. Ladder Rung Cover

Types of Grade: 1) Medium 2) Heavy Duty

46 grit

12 grit

Extraordinary Benefits:

- Exceptional slip-prevention rated to R13 according to DIN 51130
- Easy mounting (simply drill individual holes)
- Or for gluing (with special adhesive)
- No specialist knowledge required
- Usable on all properly prepared surfaces
- Robust and hard material with low surface weight
- Extremely high wear resistance (approx. 5 Million crossings)
- UV-stable
- Corrosion resistant
- Non-conducting
- Flame retardant
- Can be walked on at once after installation

+120°C
Temperature-
range
-20°C



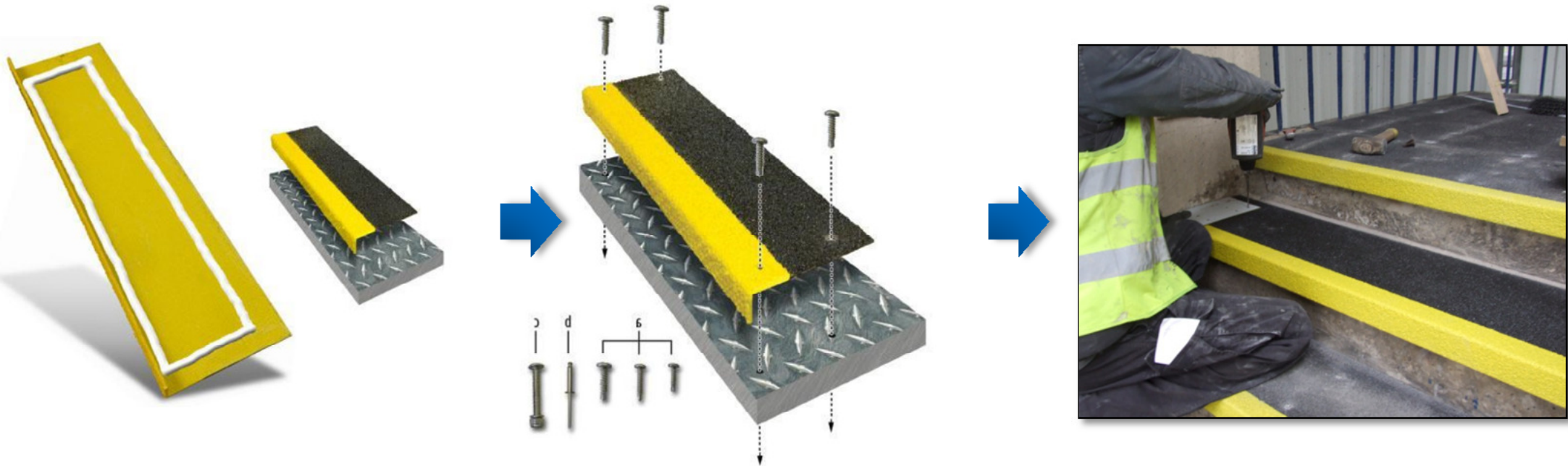
*GRP product can be applied on various surfaces

- Floors, Ramp Area, Staircase,
- Concrete, Tiles , Grating Area and Metal Checker Plate..etc



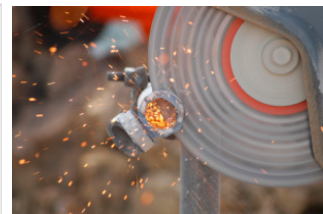
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Easy and Simple Installation:



Just simple installation!
It works for long even in outdoor application!

- Remarks: All GRP products can be cut with a diamond saw blade.



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CLP, Depot



HAECO

SECU^{TECHNIK}



CLP, Vehicle Fleet



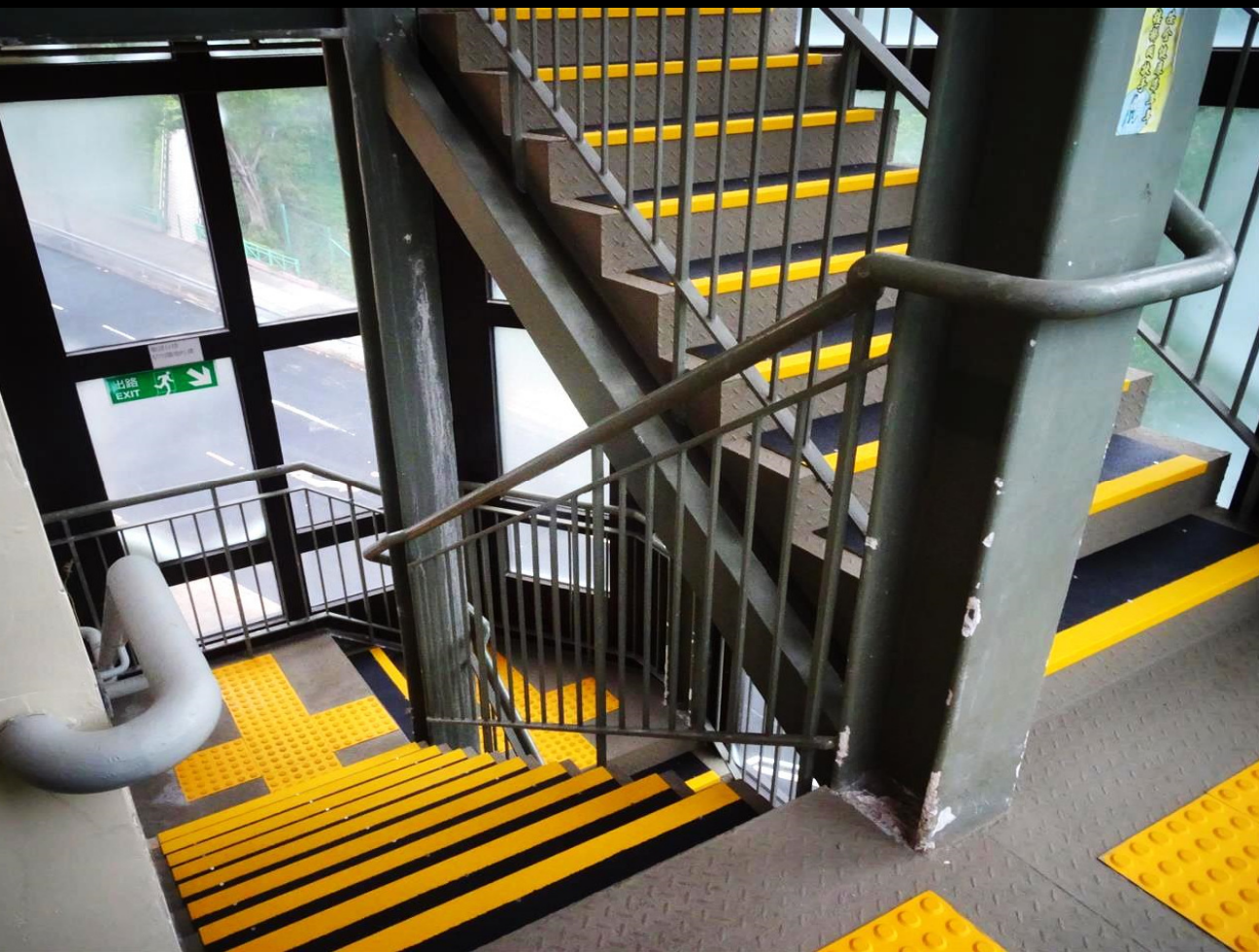
SECUTECHNIK



Coca-Cola, Logistic Truck

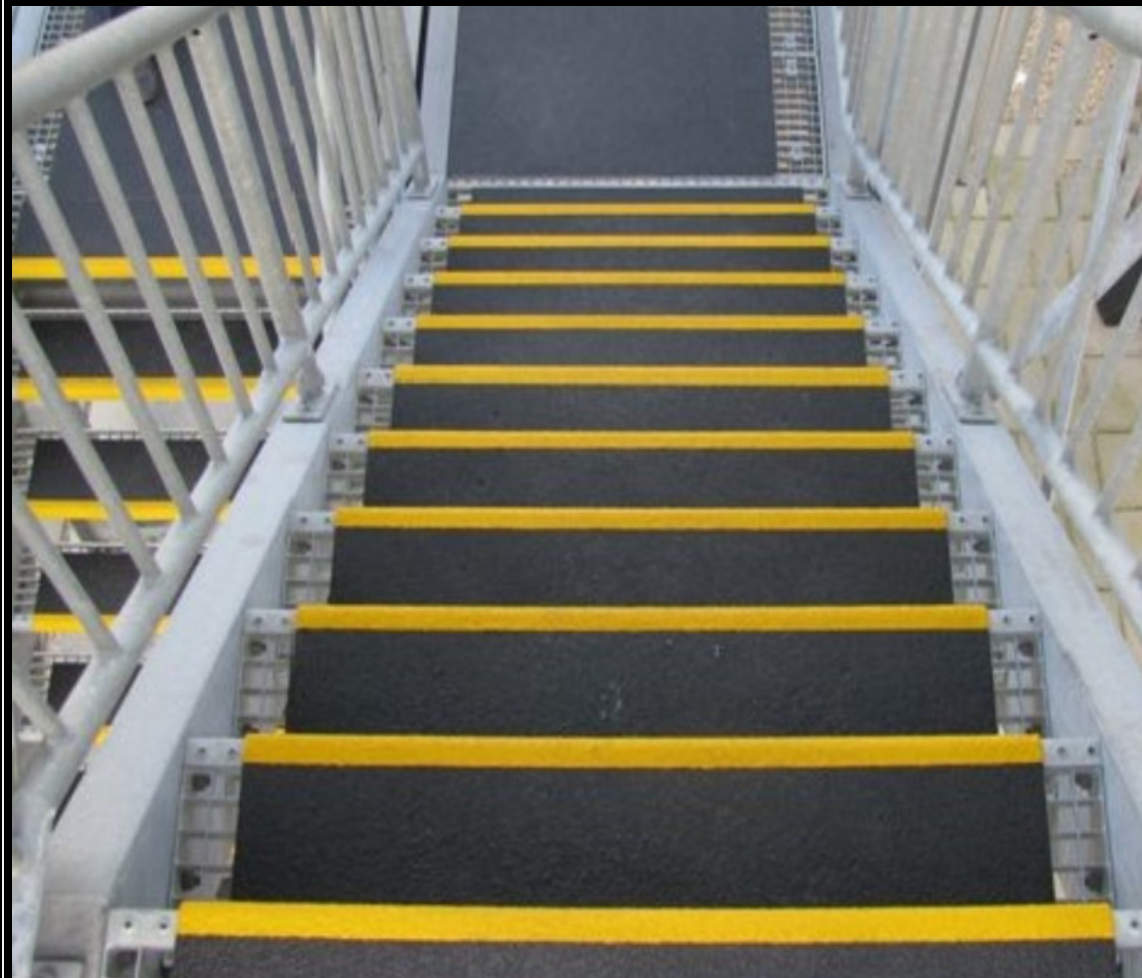


SECU TECHNIK



CLP, Depot

SECUTECHNIK



GRP Step Cover and Plates for Staircase Application

SECUTECHNIK



GRP Floor Strip



GRP Safe Edge

SECU TECHNIK



NTT Data Centre

SECUTECHNIK



GRP Cat Ladder Rung Covers

SECU TECHNIK



Royal Plaza Hotel, Restaurant Area



SECU TECHNIK



CLP, Depot



Thank You!

