

Sector Guide

FOOD & BEVERAGE

ENGINEERING THE FUTURE IN COMPOSITES

www.treadwellgroup.global

Let Treadwell Help You Release the Power of Engineered Composites on Your Next Project



 Manufactured from premium isophthalic and vinylester resin systems.



Longer service life, less maintenance, and life cost savings as compared to other materials.
Allows better and viable components into the associated framework.



High Strength

- Manufactured by automated pultrusion process.
- Utilises high glass-fibre content and results in unparalleled product consistency.
- Compression moulding and vacuum moulding processes are used.



Pre-fabricated to eliminate field fabrication and make installation quick and easy. Solutions include all necessary accessories.



Customised System

Our experienced technical team customises designs to meet project specific load requirements.

Durability

- Highly durable.
- Greater resistance to breaks and twists which ensure better longevity.
- Reduce the harmful effects of added tension on the surface and reliving the framework.



UV XX Protection

Exterior coatings and stabilisers provide UV protection and ensure long service life.

Light Weight

- Strength-to-weight properties of FRP reduce loads on tank walls and floors.
- Ease cover removability and installation. Can be transported anywhere easily and installed seamlessly.



- Aesthetically pleasing flat covers.
- Eliminate confined-entry issues.
- Provide protection for equipment located on top of the cover instead of below.

No Dissimilar Metals

Eliminates issues surrounding dissimilar metals



Contents

C (144)

14/1 / 1/

04	What You Get When You Work with Treadwell
05	Bespoke & Specialised Projects - Our Process Explained
06	Why Choose Treadwell?
08	EX-Series [®] FRP Grating
10	Grating Clips
11	Case Study – SPC Food Solutions
12	Case Study – Milk Processing Plant
14	RailEX [®] ROUND Tubular Handrail
15	RailEX [®] ROUND Overview
16	RailEX [®] ROUND Stanchion Kits & Handrail Parts
18	EX-Series [®] LadderEX [®] FRP Ladders
19	LadderEX [®] Retract-A-Stiles
20	Case Study – Safety Ladders for Milk Plant
21	SAFE-SERIES [™] Anti-Slip Safety Solutions
22	Catering & Hospitality Matting
23	HYGI-MAT
24	KWIK-KLEEN +
25	Our Partners

. . .

. .

... -

...



Quality is at the forefront of Treadwell's working practices. With over 15 years of manufacturing to the highest quality standards, Treadwell prides ourselves on our reputation for implementing strict quality control measures, and strives to supply products that surpass customers expectations. The company works on a policy of 'continuous improvement'.



Treadwell is conscious of the impact it has on the environment and its associated responsibilities. The company is committed to ensuring its operations satisfy legal obligations and other responsibilities. Treadwell remains committed to sustainability.

Disclaimer: The information contained in this Treadwell design guide herein supplied is as a service to our customers and is intended to be used only as a general guide. It is not a substitute for proven engineering practices and designs.

What You Get When You Work with Treadwell

Specialised Online Tools

Conveniently located online, our selection tool allows users to fill in selection criteria based on each product brand we carry and will recommend a product suitable to your needs. Our product information has been imprinted on the tool to provide ease of outline and inspiration to architects, engineers, designers and other users. Users can also find all our product files in PDF, DWG, STEP etc. files to download for each of our products.

Visit our website at https://www.treadwellgroup.com.au/ treadspec/ to try out these online specifier tools.





Friendly & Professional Design Support

Whether you're looking to upgrade or completely revamp your infrastructure assets, we can help support your design services across all stages of your project lifecycle. Our qualified and experienced engineering team have provided turnkey as well as purely design-based projects. With a knowledgeable team, we are able to provide solutions to fit your requirements.

Cutting Edge Technical Information

Treadwell has a LEAN manufacturing facility, approximately 4000m² under one roof. Our automated CNC equipment, including state-of-the-art 90,000 PSI waterjet cutting system and beam line ensures minimal material wastage, and as such, eliminates excessive costs. Our internal design engineering department is able to provide design expertise and sign off engineering in all states of Australia (RPEQ and NT certified), and an on-site Quality Assurance team to perform the necessary checks.





With our well-established partnerships with logistics partners across Oceania, complemented by our own fleet of trucks and trailers in Australia, we are able to deliver your projects across the region efficiently and effectively on time and in full.



Bespoke & Specialised Projects -Our Process Explained

COMPLEX TURNKEY PROJECTS

Shipping is undertaken upon completion and our team follows through with you to ensure seamless delivery.

Treadwell receives an enquiry from you, our customer.

Final detailing and production commence following sign-off or approval of submitted design.



COMPLETE "Fit & Forget" SOLUTIONS

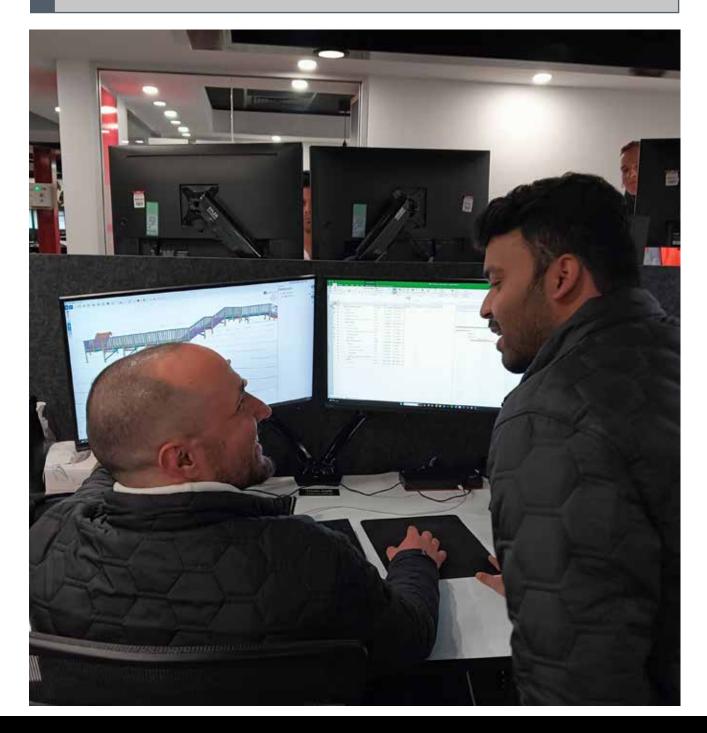
An initial consultation is arranged with our specialists to qualify your requirements and establish solution options.

Upon acceptance of our quotation, design and engineering commences and modelling and general assembly drawings developed.

A budget quotation is developed by Treadwell and presented.

Why Choose Treadwell?

Our team of engineers are available to support your design requirements by providing technical expertise and specifications.
 Our products are tested and meet relevant compliant codes where required.
 We offer solutions based on practical calculations and data, providing the optimum products for your application.
 We are an established name in Australia for providing durable and dependable FRP solutions.



Warrnambool, Victoria - Midfield Milk

-111

aum



What is **EX**-Series **FRP Grating?**

Treadwell's GratEX® moulded FRP grating is a high strength, single piece construction mesh panel product. Treadwell offers both standard panel sizes as well as the option of custom panels made to order from your drawings, or alternatively, drawings provided by Treadwell's drafting department.

Cost effective GratEX[®] panels allow for effective on-site fabrication/trimming whilst ensuring that wastage is minimised. Load bearing bars in both directions allow for use without continuous side support and so contribute to cost effectiveness. GratEX® offers all the benefits available with grating made from other materials plus a host of superior benefits unequalled by steel or other metal alternatives.



GratEX® Surface Options

Anti-Slip Surface (Standard). This surface is most **Concave Surface.** This is preferred for environments commonly used in industrial applications. It is very where by-products are commonly caught by hard wearing and boasts an extremely effective serrations, and is hence very often utilised by the coefficient of friction (NATA laboratory test report food industry. This surface option can also be used available). Unlike serrated steel, the anti-slip surface for guarding options to allow safe handling/ contact. does not impact load carrying capacity.

Plain Surface. This is a stock option that is widely utilised for guarding and architectural features in a variety of applications. Whilst the aesthetics of the product are improved, the anti-slip properties are not as profound as the other options available.





Treadwell EX-Series[®] FRP Grating

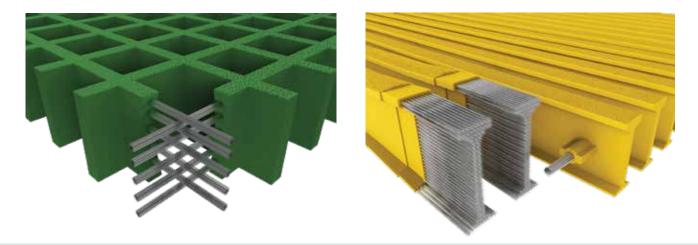
Treadwell EX-Series[®] Fibreglass Reinforced Plastics (FRP) grating products are recommended for areas where physical properties are paramount to design and longevity. Treadwell offers an extensive range of FRP grating products, two of which are highly utilised in the rail industry. There are key differences to take note of. The information below outlines the key differences and the ideal scenarios in which the different types of grating are to be utilised.

GratEX[®] Moulded FRP Grating

The perfect solution for areas where excessive amounts of penetrations (i.e. for piping) call for traditional uni-directional spanning products. This greatly increases the costs when using traditional materials, like steel. FRP grating maintains strength and integrity even with multiple penetration cut outs, while keeping costs low.

GridEX[®] Pultruded FRP Grating

The ultimate choice for areas where extremely high loadings, or larger spans present a challenge. Such applications include wide walkways, or where equipment needs to be installed on top of grating.



Please consult our EX-Series[®] Grating Product Guide for more information.



GratEX® Clip - Tops

STANDARD M	MINI MESH M	MINI MESH M (SLOTTED)	С	L
Hole Diameter: 8mm Material type: 316 st/st Threaded hole: N/A	Hole Diameter: 6mm (8mm for GTX- 502525M1) Material type: 316 st/st Threaded hole: N/A	Hole Diameter: 6mm Material type: 316 st/st Threaded hole: N/A	Hole Diameter: 6mm Material type: 316 st/st Threaded hole: Yes	Hole Diameter: 6.5mm Material type: 316 st/st Threaded hole: N/A
10	17	17		1

D	E	w	S	0
Hole Diameter: 8.5mm, 7mm Material type: 316 st/st Threaded hole: N/A	Hole Diameter: 8mm Material type: 316 st/st Threaded hole: N/A	Hole Diameter: 8mm Material type: 316 st/st Threaded hole: N/A	Hole Diameter: 8mm Material type: 316 st/st Threaded hole: N/A	Hole Diameter: 8mm Material type: 316 st/st Threaded hole: N/A
				6

Clamp Underside

J - UNIVERSAL	J - MINI-MESH	Н
Hole Diameter: N/A Material type: 316 st/st Threaded hole: N/A	Hole Diameter: N/A Material type: 316 st/st Threaded hole: N/A	Hole Diameter: 8mm Material type: st/st Threaded hole: Yes

G	U	v	т
Hole Diameter: 6mm, 8mm Material type: st/st Threaded hole: Yes	Hole Diameter: 8mm Material type: 316 st/st Threaded hole: Yes	Hole Diameter: 8mm Material type: 316 st/st Threaded hole: N/A	Hole Diameter: N/A Material type: 316 st/st Threaded hole: N/A
G	Ì		

Case Study – SPC Food Solutions



PROJECT INFORMATION		
Project Category:	Food Processing Facility	
Scope of Work:	Supply FRP stair treads and landings	
Treadwell Products:	EX-Series [®] GratEX [®] FRP Square Mesh Stair Treads and Landings, HygiGR8 [®] FRP Grating panels, and associated fasteners	

An Australian food manufacturer, SPC holds an impressive brand portfolio with brands known globally. They develop and deliver food solutions that inspire generations of chefs with the goodness of Australian grown and made produce. SPC has enabled the food service industry with customised solutions across a wide range of products and ingredients.

As part of upgrading efforts at their food production facility in Victoria, Treadwell was engaged to supply stair treads and customised grating panels.



Treadwell's Solution:

	_	
1		
	-)	
	\smile	

Treadwell Ex-Series[®] GratEX[®] FRP Square Mesh stair treads are constructed with the solid leading edge nosing as a single component. This increases the rigor and sturdiness of the entire leading edge.

2 EX-

EX-Series[®] GratEX[®] FRP Square Mesh panels were used as the platform decking and stair landings, customised to suit the application and project requirements.

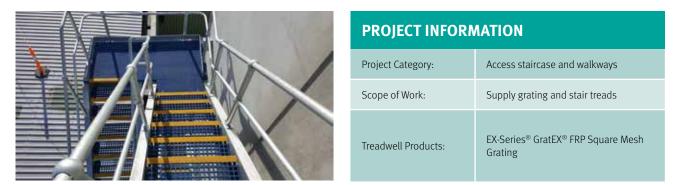


HygiGR8[®] grating range was developed to serve the food and beverage industry, and is the ideal solution to prevent particles being trapped between structural support and grating. Incorporating a unique combination of solid top and open grating, this grating was successfully installed as decking for the walkways.



Grating panels and stair treads are prefabricated, allowing for quick installation with minimal downtime.

Case Study – Milk Processing Plant



A 100% Australian owned and operated, this group of companies has established themselves as heavyweights in the meat and dairy industry. Their years of experience and strong relationships forged with the Australian farming community assure quality and dependability of their products.

One of their divisions include a milk processing plant with an annual capacity of 300 million litres of raw milk. Headed by a highly experienced team, this dairy company provides a state-of-the-art factory and is the newest of its kind in the southern hemisphere. Treadwell was engaged to supply FRP grating and stair treads for this milk plant.



Treadwell's Solution:



GratEX[®] FRP grating is lightweight and strong, making it ideal to be installed in weight loading sensitive areas while being able to function as required.



Treadwell has the capabilities to easily cut GratEX[®] grating panels to the required size and shapes to fit the intended application.



The GratEX® FRP Square Mesh grating was customized to meet the aesthetic and practical requirements of the structure.



FRP is simply fabricated and modified on site. This means there is no need for any hot works permit.



Being lightweight and easy to install, FRP is very manageable during construction.



Given the nature of FRP, any system utilising it is virtually maintenance free, keeping maintenance costs to a minimum.



FOOD & BEVERAGE

What is RailEX[®] ROUND Tubular Handrail?

Treadwell's RailEX[®] ROUND Tubular Handrail is an industrial rated composite handrail system which combines strength, durability and versatility meaning the system is ideal for use in numerous applications in a vast range of industries. Treadwell can supply RailEX[®] as either components or as fabricated handrail panels ready for installation.

Smart Transposable Designs

Unlike traditionally welded alternatives, Treadwell FRP handrail system disposes the need for drafting, engineering and onsite fabrication while minimising installation costs. Treadwell's safety handrail systems can be adapted or extended with additional components, or cut to size onsite. Pre-engineered kits are supplied as a series of components with simple assembly instructions. With our clients in mind, Treadwell aims to minimise the cost of maintenance and repairs, and damaged components easily with readily available parts and stock.

Simple Zero Weld Assembly

As an added benefit, fibreglass handrail kits are assembled using a simple, zero weld construction method; reducing the chances for corrosion activation. Treadwell's RailEX[®] designs and fittings effectively eliminate the need for specialist trades, hot works permits, fire spotters and welding protection to finished surfaces. Our selection of FRP increases safety conditions for installers by eliminating toxic fumes, welding in wet areas and fire risk hazards.

Developed by Treadwell with the input of designers, and plan operators, this system offers you all benefits of traditional guardrail systems without the inherent problems - corrosion, welding and hot works permits for onsite modifications. This unique system is a first to be tested and conform with Australian Standards AS 1657. RailEX[®] is the **'Fit & Forget'** handrail system.

RailEX[®] Features and Benefits vs. Traditional Alternatives

	RailEX®	Stainless Steel	Galvanised Steel	Aluminium	Timber
Chemical Resistance	••••	• • • •	•	• • •	• • • •
Strength	• • • • •	••••	• • • • •	••••	••
Lightweight	••••	•	•	••••	••
Electrical Resistance	••••	•	•	••••	••••

Materials of Construction

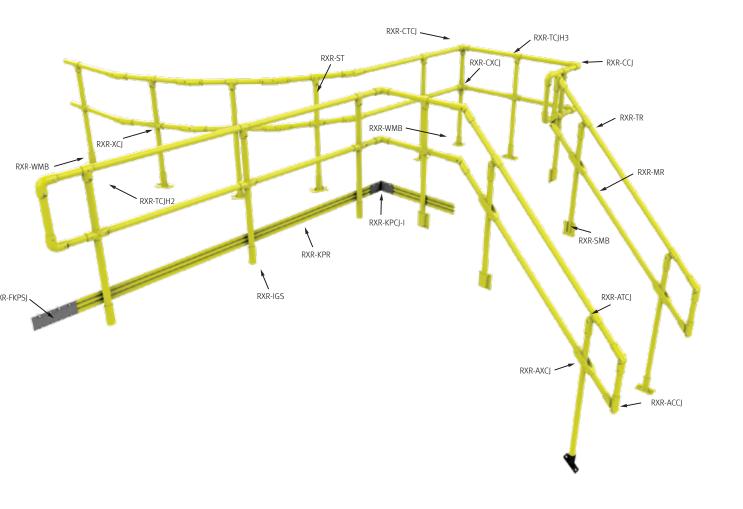
RailEX[®] FRP handrail is constructed from fibreglass rovings combined with a blend of thermosetting resin systems. All of the resins used in the production of EX-Series[®] products contain UV inhibitors and fire retardant additives.







RailEX[®] **R**OUND Overview

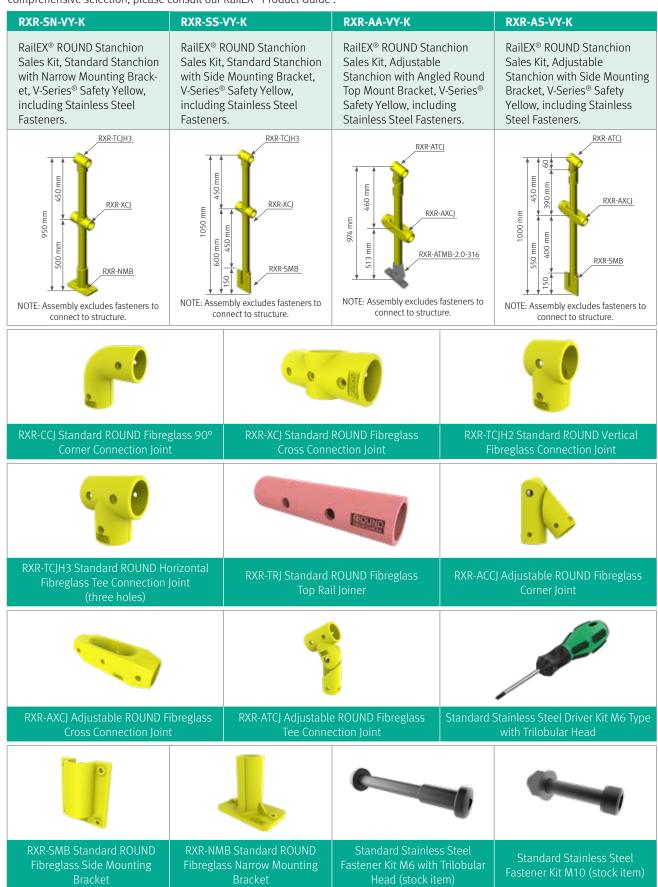


Please consult our RailEX[®] Handrail Installation and Product Guides for more information.



RailEX® ROUND Stanchion Kits & Handrail Parts

Treadwell has created options of RailEX[®] handrail stanchion kits. This ensures that all the required parts are included, making for easy planning and installation. Please note that the list below is just a selection of our most popular handrail assemblies. For a more comprehensive selection, please consult our RailEX[®] Product Guide .



CALL 1800 246 800 | sales@treadwellgroup.com.au | treadwellgroup.com.au



What is EX-Series[®] LadderEX[®] FRP Ladders?

LadderEX[®] is the superior alternative to metallic ladders and cage systems, providing excellent corrosion resistance and electrical transparency. Even in complete immersion applications, Treadwell's fibreglass ladders have outlasted aluminium and steel, and required little or no maintenance.

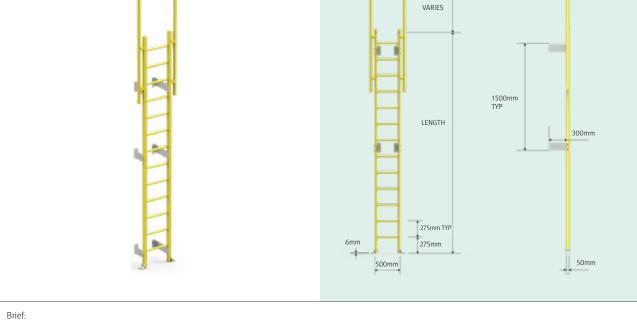
Our products in this range are made from superior fibreglass which offers unparalleled advantages, leaving behind alternatives that are metal or steel based. Our ladders and ladder cage systems are produced using a premium grade polyester resin system with flame retardant and ultraviolet (UV) inhibitor additives. A vinylester resin system is available upon request for additional corrosion resistance. Standard side rails and cages are in safety yellow. The rungs are a pultruded fibreglass polyester tube with a fluted, non-skid surface.

LadderEX[®] fibreglass ladder systems are fabricated and designed with FRP according to AS 1657-2018. The pultruded parts are produced with a fire retardant polyester resin which meets the ASTM E-84 test for flame spread of 25 or less and contains a UV inhibitor. The colour is in standard OSHA safety yellow though colour matching can be provided.

Ladders are shop assembled and may be pre-drilled and prepared for field attachment with standoff clips and/ or base brackets systems.

The LadderEX[®] product range can easily be integrated into any existing platform or structure. It can come in a variety of configurations to suit any purpose as well.

LadderEX[®] Standard Ladder with ROUND Grab Stiles



650mm

In instances where there is a requirement for extra security above 1.5m, Treadwell can supply standard access ladders without returns with a round grab stile.



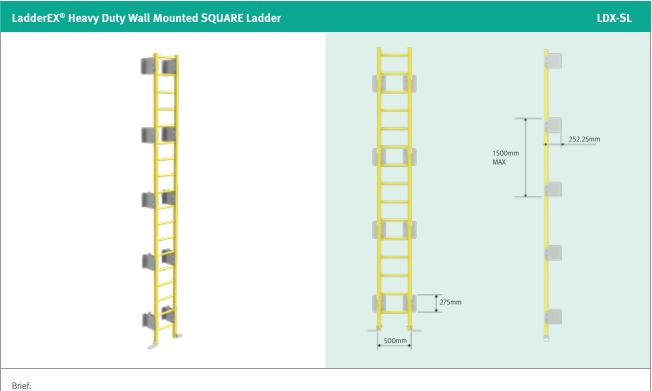
LDX-RG



CALL 1800 246 800 | sales@treadwellgroup.com.au | treadwellgroup.com.au

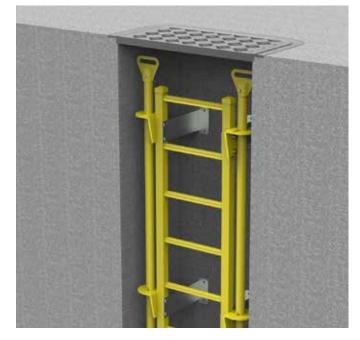


TREADWELL



For industrial and other heavy duty purposes, Treadwell supplies a more durable and robust heavy duty wall mount and floor mounts (if required) for that added safety factor.

RETRACT-A-STILES



What are LadderEX® Retract-A-Stiles?

LadderEX[®] Retract-A-Stiles offer convenience, flexibility, and enhanced safety, especially in confined spaces. Constructed from corrosion-resistant FRP, they require minimal maintenance. Easy to install, they ensure safety at heights with ergonomically designed handles for superior grip and robust fixing brackets for strength and versatility.

LadderEX[®] components are modular, allowing numerous ladder and access configurations to meet specific site requirements. We can easily integrate your needs into any Retract-A-Stile design.

To comply with AS 1657 standards, ladders must be at least 1700mm long, with stiles extending at least 1000mm above the top landing. The gap between ground level and the first rung should be no less than 90% of the spacing between other rungs.

While Treadwell strives to ensure compliance with AS 1657, bespoke solutions may sometimes result in non-compliant products. In these cases, client approval to proceed is considered consent to supply non-compliant goods or services.

Case Study – Safety Ladders for Milk Plant



Our client undertook a complete mechanical plant design for a milk plant in New South Wales. This included three large tanks with top access safety platforms; this was to allow for easy installation and removal of large aerator mixers. Their design included ladders and ladder cages to provide safety to personnel using the roof mounted manhole access. These ladders also needed to be lockable to prevent non-permitted access.

Treadwell was engaged to provide the FRP ladders, ladder cages and handrails.



Treadwell's Solution:

LadderEX[®] is the choice alternative to metallic ladders and cage systems, providing superior corrosion resistance and electrical transparency.



LadderEX[®] ladders and cages are produced using a premium grade resin system with flam retardant and ultraviolet inhibitor additives.



For added safety, the ladder rungs are designed to be non-skid.



FRP is simply fabricated and modified on site. This means there is no need for any hot works permit.



Being lightweight and easy to install, FRP is very manageable during construction.



Given the nature of FRP, any system utilising it is virtually maintenance free, keeping maintenance costs to a minimum.

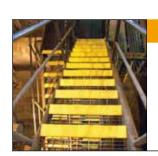
FOOD & BEVERAGE

TREADWELL



SAFE-SERIES Industrial Anti-Slip Solutions

Anti-Slip Safety Solutions



StairSAFE[™]

Long wearing, anti-corrosive, nonslip nosing designed to re-profile the leading edge of any step are the characteristics of StairSAFE[™].



CableSAFE™

CableSAFE[™] creates a safe walkway over exposed pipes, cables, wires and conduit. With a durable anti-slip surface, CableSAFE[™] provides a safety bridge for foot traffic over these areas, avoiding slips, trips and falls.



RungSAFE[™]

The abrasive grit surface eliminates the very high possibility of slips from access ladders, avoiding serious ramifications. The surface, while ideal for the negation of slip issues, has been developed so as not to damage bare skin.



 $\mathsf{DeckSAFE}^{\scriptscriptstyle \mathsf{M}} \quad \text{is} \quad \mathsf{the} \quad \mathsf{ultimate}$ solution for slippery ramps, decks, catwalks and landings. Designed to reduce the risk of slips, trips and falls in areas where oil, water and other forms of liquids are present, DeckSAFE™ greatly reduces risks.

EASY INSTALLATION

Heavy duty industrial fixings for all applications. Surface for rungs normally applied by using a polyurethane adhesive glue system.

OPTIONAL DEPTH AND LENGTH

Available in four standard depths, 50mm, 75mm, 100mm and 300mm. Custom depths are also available up to 300mm. Available in any length up to 3,250mm.

SAFETY

Heavy duty grit layer provides an ideal anti-slip surface; likewise, safety yellow offers enhanced visibility.

CHEMICAL RESISTANT

Designed to handle most chemicals. Please refer to our Chemical Resistance Guide, found in our SAFE-SERIES[™] Product Guide.

posed.

ZERO TRIP RISK

Smooth bullnose, sloped on an 85° inclined plane ensures no trip risk is

ROBUST CONSTRUCTION

Specially formulated resin systems and metallic available on request.

CATERING & HOSPITALITY MATTING

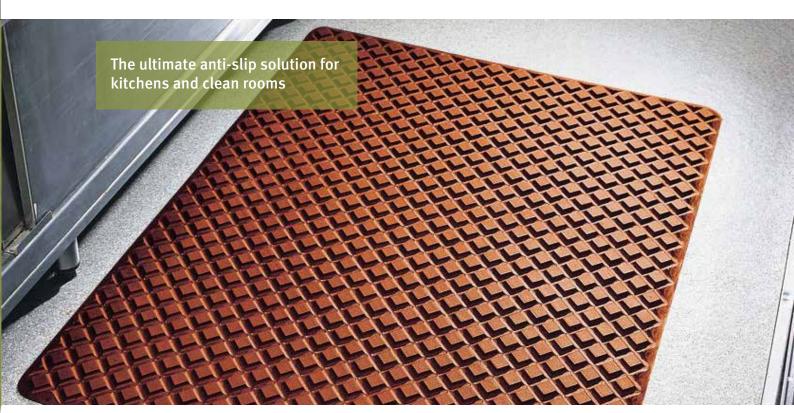
Work Well Mats has a range of anti-fatigue safety matting designed specifically for bars, kitchens and food processing environments that is second to none.

Work Well Mats' exclusive range includes AQIS approved mats, as well as extremely lightweight mats for ease of cleaning.

FOOD & BEVERAGE

TREADWELL

HYGI-MAT



FEATURES

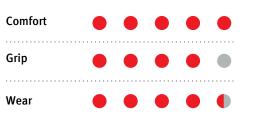
- Superior matrix design allows drainage of water, oil and general debris.
- 50 mm enlarged ramp reduces slips, trips and falls.
- Underside suction cup profile provides anti-fatigue cushioning and holds mat firmly in place.
- Highly formulated rubber stops hardening and cracking over time.
- Uniquely designed for ease of cleaning.



Underside suction cup profile provides anti-fatigue cushioning and holds mat firmly in place

SPECIFICATIONS		
Warranty	Three year limited warranty	
Sizes	0.9 m x 1.5 m standard	
	0.9 m runner	
	1.2 m runner	
	Custom sizes available – contact us on 1800 246 800	
Colour	Black grease-resistant	
	Terracotta grease proof	
Formulation	Natural grease-resistant rubber	
	Grease proof nitrile/SBR compound	
Applications	Wineries, Restaurants and Food Processing	

PRODUCT RATING



SIZING





KWIK-KLEEN +



FEATURES

- Closed cell sponge rubber construction provides an ٠ excellent solution to fatigue.
- Hygienic anti-microbial agent properties inhibit growth of ٠ bacteria - this impregnated agent cannot rub off or stain, and will withstand the rigours of industrial cleaning.
- Raised texture 'crisscross' grip surface provides ٠ excellent slip resistance.
- Ideally located drainage orifices provide a perfect • underfoot anti-slip product for commercial food preparation areas and kitchens.
- Lightweight construction allows for ease of handling, ٠ cleaning and moving.
- Mats can be commercially laundered or simply washed ٠ with just hot soapy water – no need to bother with chlorine any longer.
- Lightweight construction allows for ease of handling, ٠ cleaning and moving.

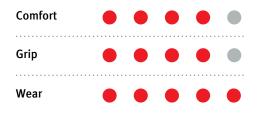


Closed cell sponge rubber excellent solution to fatigue



SPECIFICATI	ONS
Warranty	Three year limited warranty
Sizes	0.9 m x 1.5 m
	0.9 m runner
	1.5 m runner
	Custom sizes available – contact us on 1800 246 800
Colour	Standard black
Foundations	Natural compounded rubber
	Grease-resistant nitrile compound
Applications	Kitchens, Bars and Dishwasher Areas

PRODUCT RATING



CUSTO



Our Partners









Material Availability

We have established extensive stockholdings in Australia, ready to be fabricated or shipped according to your project requirements. With offices and warehouses located throughout

Australia, shipment to site can be quickly arranged.

Our in-house design and engineering teams have exceptional CAD capabilities. Our factory features top of the range automated CNC equipment allowing project requirements to be quickly fulfilled.

Strathalbyn, South Australia - Factory & Warehouse

-

and the second

1

THE .

1

- AV.

Australia

SOUTH AUSTRALIA

ADELAIDE (HEAD OFFICE & WAREHOUSE)

58 DEEDS ROAD NORTH PLYMTON, SA 5037

STRATHALBYN (FACTORY & WAREHOUSE)

22 DUNREATH ROAD STRATHALBYN, SA 5255

VICTORIA

MELBOURNE (BRANCH OFFICE & WAREHOUSE)

37 MACAULAY STREET WILLIAMSTOWN, VIC 3016

NEW SOUTH WALES

SYDNEY (SERVICED OFFICE)

SUITE 9, 35-36 EAST ESPLANADE MANLY, NSW 2095

WAGGA (BRANCH OFFICE & WAREHOUSE)

13 CHESHIRE ST, WAGGA WAGGA, NSW 2650

QUEENSLAND

BRISBANE (SERVICED OFFICE)

OFFICE 32, 59 ALBANY CREEK ROAD ASPLEY, QLD 4034

WESTERN AUSTRALIA

PERTH (BRANCH OFFICE & WAREHOUSE)

UNIT 2, 4 ELMSFIELD ROAD MIDVALE, WA 6056

TASMANIA

BURNIE (DISTRIBUTION CENTRE)

28-30 BRICKPORT ROAD COOEE, TAS 7320

New Zealand

NORTH ISLAND

PALMERSTON NORTH (OFFICE & WAREHOUSE)

36 RATANUI STREET AORANGI, FEIDLING 4775



