



Food & Beverage Manufacturing Services Guide



Introduction

With a strong technical and chemical background, our focus since 2012 has been on high quality flooring and drainage for the food and beverage manufacturing sector.

Over time, our offering has evolved into provision and coordination of a wider range of associated products and services, with the constant focus being our food, beverage, and pharmaceutical clients.

While we maintain a keen passion for premium flooring systems – our SteriFloor range – our growth has resulted in us managing complete production area upgrades and repurposing projects. Our goal is to do more to assist the companies and personnel that have tested and proven us, and this book is part of that aim.

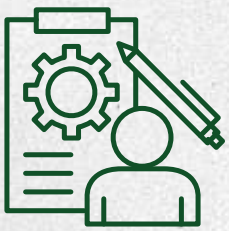
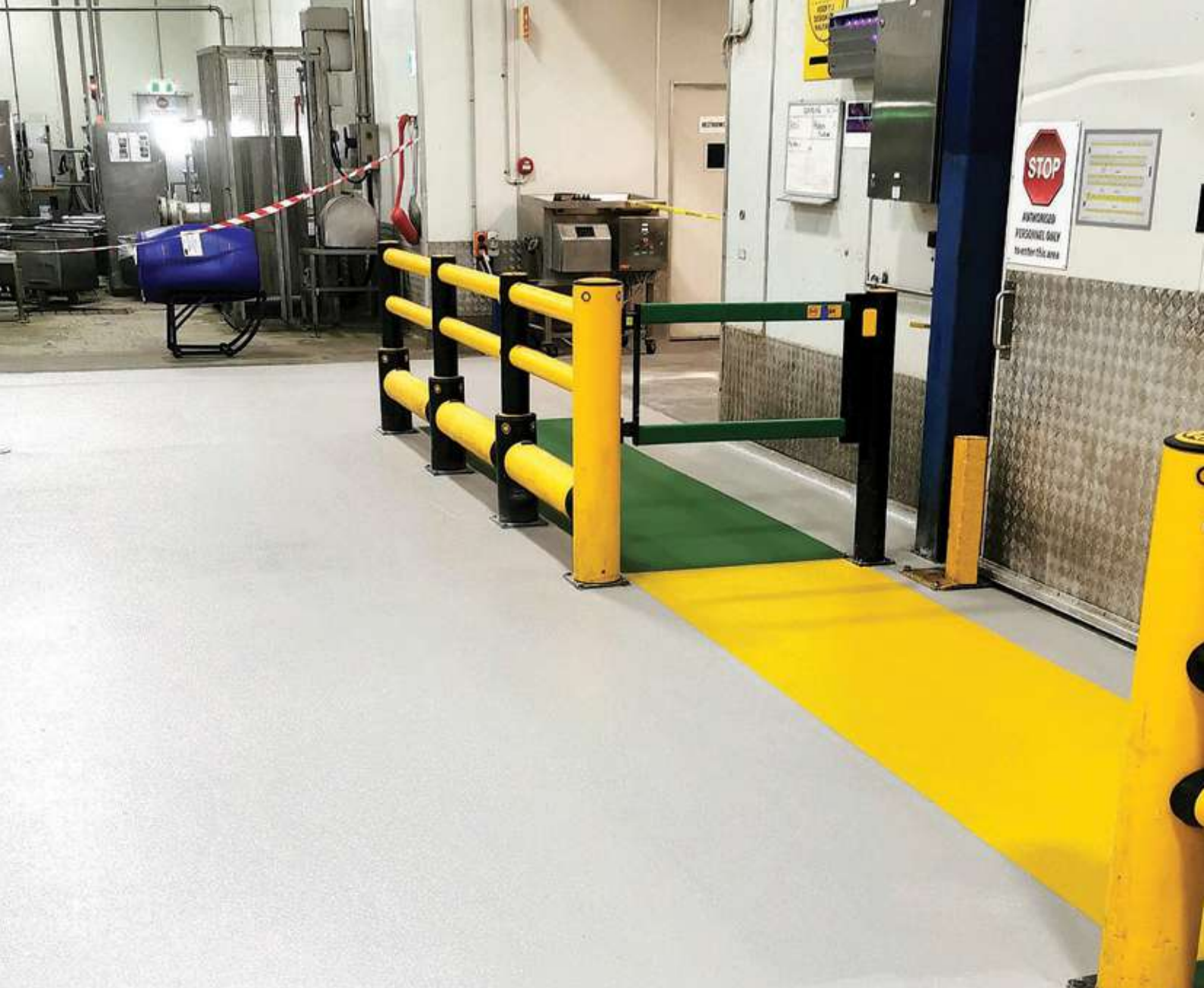
Our offering will continue to evolve.

But our focus on providing the best solutions for our clients in the food, beverage and pharmaceutical industry will never change.




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Project Management & Services



Our focus is the internal structural elements of manufacturing facilities from floors to walls to ceilings/ roof, and including the services conveyed through or mounted on those structures.

While we can assist with installation of plant and machinery, our preference is to play a supporting rather than primary role in that area. This is simply so that we can focus on doing what we know best for our clients.

An appreciation of the importance of production hours and the high cost of 'down-time' drives us to continually improve the way we manage projects to ***deliver optimal upgrades fast.***

Trades and professions that we are able to facilitate include:

1. Surveying - condition reports/ audits, drainage, flooring, and 3D scanning
2. Project Management
3. Deconstruction and termination of services
4. Concreting, Drainage, Waterproofing
5. Flooring (epoxy/ polyurethane cement systems)
6. Cool-room panel wall and ceiling installation
7. HVAC, hydraulics/ plumbing, electrical, and other services

Read on to explore our capabilities within each of these trades and professions.

Consulting & Audits

Discovery

No two projects are the same within the food and beverage manufacturing industry. Every client has different goals to achieve, different concerns, and different objectives.

To discover this, we conduct on-site consultant visits. One of our consultants meet with you, to look at your project, analyse your needs, and understand the specific project requirements.

Following the initial site visit, we set out the project and work collaboratively with key stakeholders to develop possible solutions. We typically meet on site to discuss solutions, or conduct zoom meetings.

After the ideal project solution has been decided on, we detail this in our 'ProjO', which is shared with our client for further review and discussion. Ultimately, the ProjO will set out the agreed scope and will form the basis for the budget/proposal.

Audits

Subject to so many standards and requirements, facilities in the Food & Beverage Industry struggle to keep up. With our thorough understanding of this industry, we have in-house capability to conduct on-site audits to set out and make you aware of specific upgrades and improvements that need to be carried out to prevent being picked up on or fined by authorities.

A typical 'Consultancy Audit' involves:

- Site Overview
- Breakdown of each area for improvement (with images)
- Priorities based on safety and hygiene risks
- Recommendations for each area
- Budget Estimates



Surveys & 3D Drawings

Surveys and audits typically go hand in hand, depending on the project. To thoroughly understand the challenges at your site, the surveys may include:



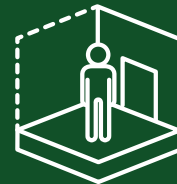
1. Condition Reports

Detailing the current condition of the site or specific areas along with recommendations



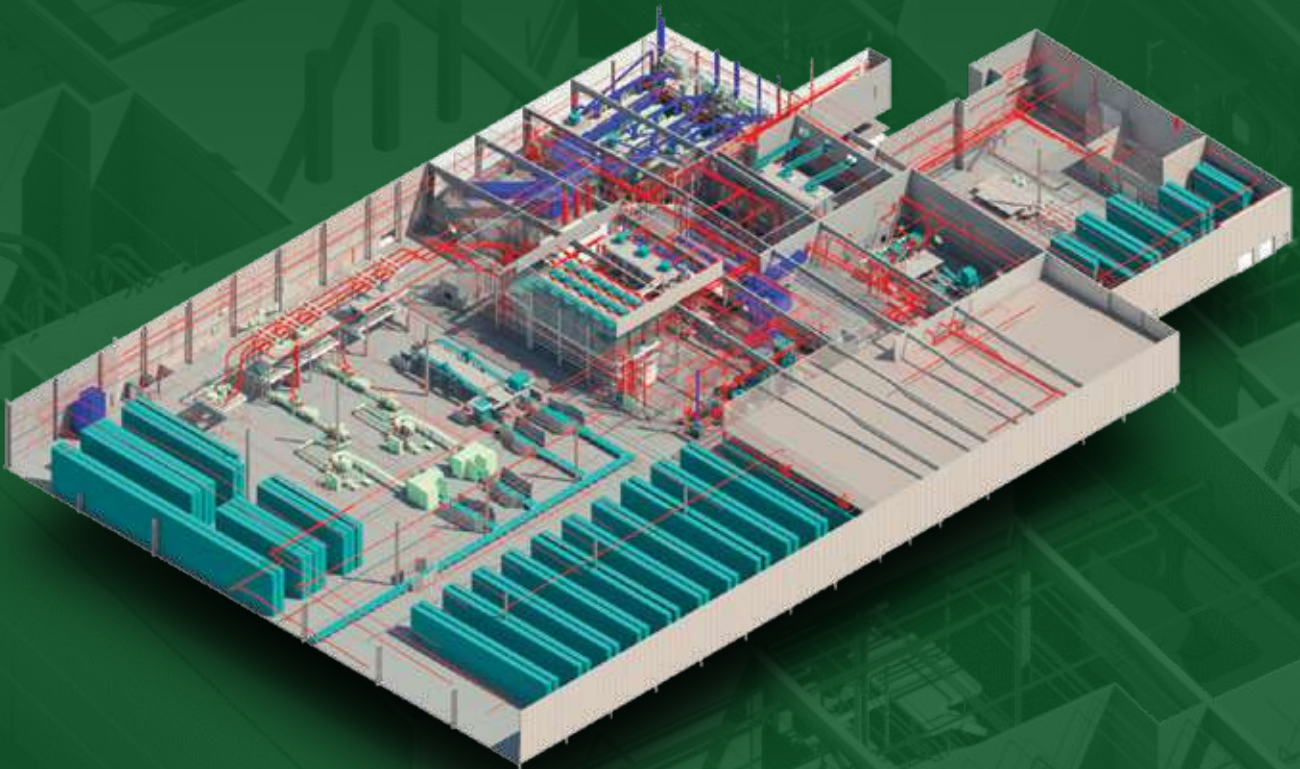
2. Drainage surveys

Excellent for understanding the layout and condition of the existing sub-floor drainage in view of determining practical solutions moving forwards



3. 3D surveys

Particularly useful for large repurposing projects, these surveys are converted into virtual walk-through presentations that can then be used to visually develop and 'test' the proposed new layout for flow and practicality.



Food-Safe Segregation

Internal construction work is a necessity within food and beverage manufacturing facilities, however it is difficult for works to be carried out without it being a disruption to production. When upgrades and improvements are being carried out, the majority of production lines must continue to operate.

One of the major concerns for food manufacturers in carrying out construction works is dust control and contamination. Not only can it be dangerous for workers within the facility, but can contaminate products as well as damage equipment.

Using food-safe segregation walls is the ideal solution in this scenario. Whether you require full floor to ceiling dust-protection, or just segregation to stop employees entering the area where new construction is happening, there are plenty of options available.

Floor to Ceiling Protection:

To accommodate for the various needs within the food manufacturing environment, we offer a range of floor to ceiling wall solutions that form a tight seal around ducts, pipes and steel work, providing a dust tight seal. This is an excellent solution for internal construction or flooring upgrades within food manufacturing facilities, as it prevents cross contamination, contains dust, and has the ability to manage temperature and stop drafts, ideal for floor curing. This solution is easy to install, and easy to take down, and mean that large internal upgrades can be carried out while food production lines nearby can continue operating. This solution is designed and installed to suit any height, subject to inspection.

Solutions available for Floor to Ceiling protection include:



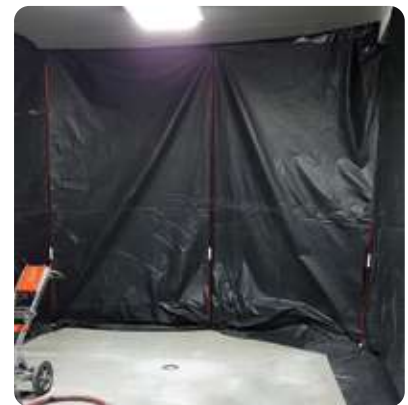
Building and Dust Screen

A temporary floor to ceiling screen that ensures a 99% dust tight seal. Quick, clean and flexible, this is the ideal protection if the works are near production lines, and food safety is a priority.



Poles & Sheet Screening:

A simple, easy to install, temporary floor to ceiling poles and polythene solution. Ideal for light construction work, as it prevents dust and odours from escaping into other areas.



Industrial curtain

A retractable floor to ceiling PVC curtain wall that provides temporary segregation of two areas. Prevents cross contamination, and protects employees from entering unsafe areas.

Pedestrian Protection:

Another option we provide is a wall barrier between construction and pedestrian-safe areas. This solution is ideal for facilities that are undertaking smaller upgrades with no risk to food production, but hazardous to employees working nearby. This solution is easy to install and remove, and means that essential upgrades can be done with minimal disruption to necessary manufacturing lines. If you require dust control however, the Building and Dust Screen protection is ideal for your needs.

Solutions available for pedestrian protection include:





Modular Partition: A part height or floor to ceiling (up to 5m) internal partitioning system that is available in a range of panel, support and stability options. A quick, easy, clean and flexible installation, this solution offers excellent temporary segregation to protect employees from entering unsafe areas.

Steel Partition Wall: A fixed, part height steel partition available in a variety of finishes. Typically used in manufacturing environments to segregate open areas and create enclosed site offices, clean rooms and pedestrian walkways.






Deconstruction & Termination of Services

Deconstruction and termination of services in hygiene critical environments can be very risky in terms of food health and also the health and safety of workers in the area. The following checklist condensed checklist provides a guide:

| Description | Hazards and Notes | Profession / Trade |
|--|--|--|
|  <p>Waste management</p> | <p>Works should be serviced by bins or skips placed as near as possible without interfering with production or other works</p> <p>Depending on the work planned, skips may also be needed for recyclable materials such as metals, plastics, etc</p> | Typically the project manager/ coordinator |
|  <p>Plumbing - water, hot water, waste water</p> | <p>This is one of the largest areas to manage in many factories. Access to 'as-built' plans can be a great help, showing the existing plumbing lines. If the site uses a regular plumber for maintenance work, his or her advice and cooperation will be a practical advantage.</p> <ul style="list-style-type: none"> ▪ Water (unheated) - before terminating plumbed water to an area of works, ensure that other areas or works aren't being fed by the same line. ▪ Hot water - before terminating, consult with site engineers to ensure the heating system won't be negatively impacted. Termination must be done with extra care so that burns from hot water exposure are avoided. ▪ Waste water - 'as-built' plans are very important when altering or terminating waste water plumbing, especially if sub-floor. Unregulated releases of waste water into the sub-soil can attract large fines/ penalties from environment protection authorities, so careful prior assessment and planning is always money well spent | Plumber HVAC Technician/ Engineer |
|  <p>Electrical</p> | <p>The risks associated with termination of electrical services can't be overstated and must always be managed by licensed electricians. As with plumbing, 'as-built' plans will be a great help along with the regular electrician or electrical team used for maintenance works.</p> <p>Safe termination will normally start at the mains or sub-mains and will often involve the use of electrical lockouts (LOTO) installed by the electrician. Only then can the cabling at the area of the works be safely checked and terminated, again by a licensed electrician.</p> <p>https://electricalfactory.com.au/product/twin-lockout-tagout-kit/</p> | Electrician Electrical Engineer |
|  <p>Cool-room panel walls and ceiling</p> | <p>Many older factories still have cool-room panelling that has an EPS (expanded polystyrene) core that will most likely be highly flammable. Removal of this type of panelling is often practically not difficult, but the risk of fire is significant. The answer mainly lies in careful planning, using experienced trade-persons, and risk mitigation by using 'spotters' and ensuring access to fire extinguishers.</p> <p>Management of the waste panels needs to be looked at with respect to the type of panel and available recycling facilities. In some regions, insulated panels can be recycled, while in others, the panel is regarded as normal industrial/ construction type waste</p> | Cool-room panel installers |



| Description | Hazards and Notes | Profession / Trade |
|--|---|--|
|  <p data-bbox="209 1216 363 1308">Air conditioning / ventilation</p> | <p data-bbox="395 1088 1230 1245">Often the ventilation/ air conditioning will be shared over several areas or rooms within the same facility, so effective isolation of the system in the area being upgraded is essential. Ducting can normally be safely and readily capped or terminated, but left in situ (typically in the roof space) for reuse if required.</p> <p data-bbox="395 1265 1198 1357">Failure to properly look after the ventilation system can result in contaminated air being carried from one area of the facility to another, leading potentially to food contamination.</p> | <p data-bbox="1278 1088 1422 1180">Air conditioning engineer</p> |
|  <p data-bbox="236 1532 336 1563">Lighting</p> | <p data-bbox="395 1408 1209 1532">As per general electrical (above), 'as-built' plans will help to determine how the lights are supplied with electricity, and therefore how they can be safely taken off line. Commercial lights can be expensive modular units, so reuse should be considered well.</p> | <p data-bbox="1289 1408 1410 1440">Electrician</p> |
|  <p data-bbox="229 1738 343 1769">Concrete</p> | <p data-bbox="395 1615 1230 1706">At times, deconstruction in view of an area being repurposed will involve removal of sections of the concrete floor. Some key elements to bear in mind are:</p> <ol data-bbox="395 1727 1230 2040" style="list-style-type: none"> <li data-bbox="395 1727 1230 1883">1. Services including electricity, water, waste water, and gas maybe installed in the concrete floor. 'As-built' plans are a good guide, but if in any doubt, the DBYD (Dial Before You Dig) service should be used. At times, a concrete scan may be needed, especially if the facility is old with limited available records. <li data-bbox="395 1904 1230 1962">2. Concrete cutting and removal tends to be noisy, this can generally be managed either with out of hours work or by use of acoustic shields. <li data-bbox="395 1982 1230 2040">3. Dust will inevitably be generated and needs to be proactively managed by temporary dust extraction and capture | <p data-bbox="1267 1615 1433 1720">Concreter Concrete Saw operator</p> |

■ **Concreting, Drainage, Coolroom Panel Walling & Ceilings**

Repurposing projects often involve changes to the floors and other concrete elements such as hobs and bunds. Our team takes pride in concrete work that's strong, precise, and looks excellent.

Drainage is often an integral part of the floor in hygiene critical facilities, and our scope will typically include supply and installation of the new drains, and also falls (slope) created to the drains. We work with our clients to determine the most appropriate drainage solution including type/s of drain and grate, and filtration system. Take a look at our Drainage section below 'Fluid Drainage & Management' to learn more.

Walls and ceilings are also fundamental structural elements, and pre-finished insulated panels are ideally suited, so long as the core of the panels has adequate, certified fire retardant properties. Following two significant food factory fires within the last decade, insurers have been strongly encouraging the use of PIR or Mineral Fibre core panels.





HVAC, Hydraulics/Plumbing, Electrical, Other Services

As part of our project management capabilities, we work with engineers and industry experts to facilitate suitable and efficient HVAC (heating, ventilation, and air-conditioning), plumbing, and electrical systems in the area repurposing project.

By partnering with leading, experienced experts and suppliers, we're able to offer cutting edge solutions for safe, comfortable, and highly efficient workplaces.

Flooring Design & Installation

Floor Design

There's no one-size fits all when it comes to flooring in the food and beverage manufacturing industry. Each facility has it's own challenges, and it's own objectives. It's important to understand that while we offer a suite of solutions designed for this industry, we are not limited to this range, and each of the solutions are customisable to your requirements.

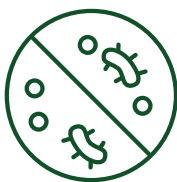
SteriFloor

With so many regulations to meet and standards to uphold, flooring in the food and beverage manufacturing industry can be a difficult task to master. With liquids, food waste, acids and chemicals constantly in contact with the floor, resistance to not only these, but thermal shock, as well as preventing slips on the floor is vital.

Bacteria growth on the floor is also a challenge to many food manufacturing facilities. One critical danger of bacteria growing on the floor is the risk of the bacteria becoming airborne when high pressure hosing is carried out, spreading the bacteria onto other critical surfaces.

Our SteriFloor suite of flooring solutions was born out of a passion to meet the typical food manufacturing floor challenges while actively fighting bacteria growth on food manufacturing floors. The SteriFloor range has been designed to tackle multiple challenges within this industry, with each product containing our world-leading antimicrobial technology, designed to last the lifetime of the floor.

About the range:



**Actively
Antimicrobial**



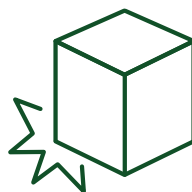
**Chemical
Resistant**



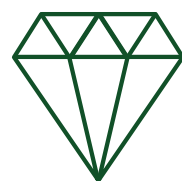
**Slip
Resistant**



**Odourless
Application**



**Thermal Shock
Resistant**



**Durable and
Long-lasting**

Comparing the range:

| Chemical | Schützend | Stärke | Beschützen | Keimfrei | Schnell | Sauber |
|------------------|-----------|-----------|------------|-----------|-----------|-----------|
| Acetic acid 5% | Excellent | Excellent | Excellent | Excellent | Excellent | Excellent |
| Acetic acid 10% | Good | Excellent | Excellent | Good | Excellent | Good |
| Acetic acid 20% | Good | Good | Good | Fair | Good | Fair |
| Butyric acid 10% | Good | Excellent | Excellent | Fair | Excellent | Fair |
| Citric acid 50% | Good | Excellent | Excellent | Good | Excellent | Good |
| Lactic acid 15% | Good | Excellent | Excellent | Fair | Excellent | Fair |
| Oleic acid | Excellent | Excellent | Excellent | Excellent | Excellent | Excellent |

| Mineral Acids | Schützend | Stärke | Beschützen | Keimfrei | Schnell | Sauber |
|---------------------------|-----------|-----------|------------|----------|-----------|--------|
| Concentrated hydrochloric | Fair | Good | Good | Fair | Good | Fair |
| Nitric acid 5% | Good | Excellent | Excellent | Good | Excellent | Good |
| Nitric acid 20% | Good | Good | Good | Fair | Good | Fair |
| Nitric acid 35% | NR* | Fair | Fair | NR* | Fair | NR* |
| Phosphoric acid 15% | Excellent | Excellent | Excellent | Good | Excellent | Good |
| Phosphoric acid 35% | Excellent | Excellent | Excellent | Good | Excellent | Good |
| Phosphoric acid conc. | Fair | Fair | Fair | *NR | Fair | *NR |

| Fats, Oils & Solvents | Schützend | Stärke | Beschützen | Keimfrei | Schnell | Sauber |
|----------------------------|-----------|-----------|------------|-----------|-----------|-----------|
| Animal fats | Excellent | Excellent | Excellent | Excellent | Excellent | Excellent |
| Ethyl alcohol | Good | Good | Good | Excellent | Good | Excellent |
| Kerosene | Good | Excellent | Excellent | Excellent | Good | Excellent |
| Lubricating oils | Good | Excellent | Excellent | Excellent | Good | Excellent |
| Aromatic & ketone solvents | Fair | Fair | Fair | Good | Fair | Good |
| Petrol unleaded | Good | Excellent | Excellent | Excellent | Good | Excellent |
| Skydrol | Good | Good | Good | Good | Good | Good |
| Vegetable Oils | Excellent | Excellent | Excellent | Good | Excellent | Good |

| Water-based Chemicals | Schützend | Stärke | Beschützen | Keimfrei | Schnell | Sauber |
|--------------------------|-----------|-----------|------------|-----------|-----------|-----------|
| Ammonium hydroxide 20% | Excellent | Excellent | Excellent | Excellent | Excellent | Excellent |
| Ferric chloride 10% | Excellent | Excellent | Excellent | Excellent | Excellent | Excellent |
| Salt solutions 10% | Excellent | Excellent | Excellent | Excellent | Excellent | Excellent |
| Sodium hyperchloride 16% | Good | Good | Good | NR* | Good | NR* |
| Sodium hydroxide 20% | Excellent | Excellent | Excellent | Good | Excellent | Good |

To learn more about what flooring solution is best for your needs, take a look at our brochure 'A Solution for Every Room in the Food Manufacturing Industry.'



SteriFloor Colours



Y24 Straw



G24 Fern Tree



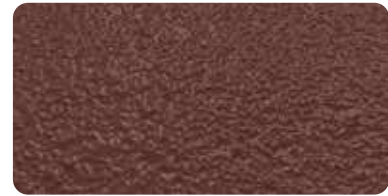
G13 Emerald



Y14 Golden Yellow



R14 Waratah



N63 Red Oxide



N35 Light Grey



N65 Graphite Grey



N61 Black

Note: This is only our most common range of colours – there are plenty more available. To see other colours, please ask us.

SteriFloor Cleaning

It is important to understand that epoxy flooring and polyurethane cement solutions handle stresses differently. In our suite of solutions, we have four polyurethane cement systems, and two epoxy solutions. To understand which chemicals and acids your floor can tolerate, check out the comparison table below:

| System | Durability | Installation Time | Cleanability | Chemical Resistance | Abrasion Resistance | Suitable Areas |
|-----------------------|------------|-------------------|--------------|---------------------|---------------------|---|
| SteriFloor Schützend | ◆◆ | Medium | ◆◆ | ◆ | ◆◆ | Warehouses, Food Packing Areas |
| SteriFloor Stärke | ◆◆◆ | Fast | ◆◆ | ◆◆◆ | ◆◆◆ | Wet & Dry Production Areas, Coolrooms, Freezers |
| SteriFloor Beschützen | ◆◆◆ | Very Fast | ◆ | ◆◆◆ | ◆◆◆ | Food Processing Areas, Heavy Traffic Areas |
| SteriFloor Schnell | ◆◆ | Very Fast | ◆◆ | ◆◆ | ◆◆ | Processing Areas, Warehouses, Packing Halls |
| SteriFloor Keimfrei | ◆◆◆ | Fast | ◆◆◆ | ◆◆◆ | ◆◆ | Clean Rooms, Laboratories |
| SteriFloor Sauber | ◆◆◆ | Fast | ◆◆◆ | ◆◆◆ | ◆◆◆ | Commercial Bakeries, Flour Mills |

Coving

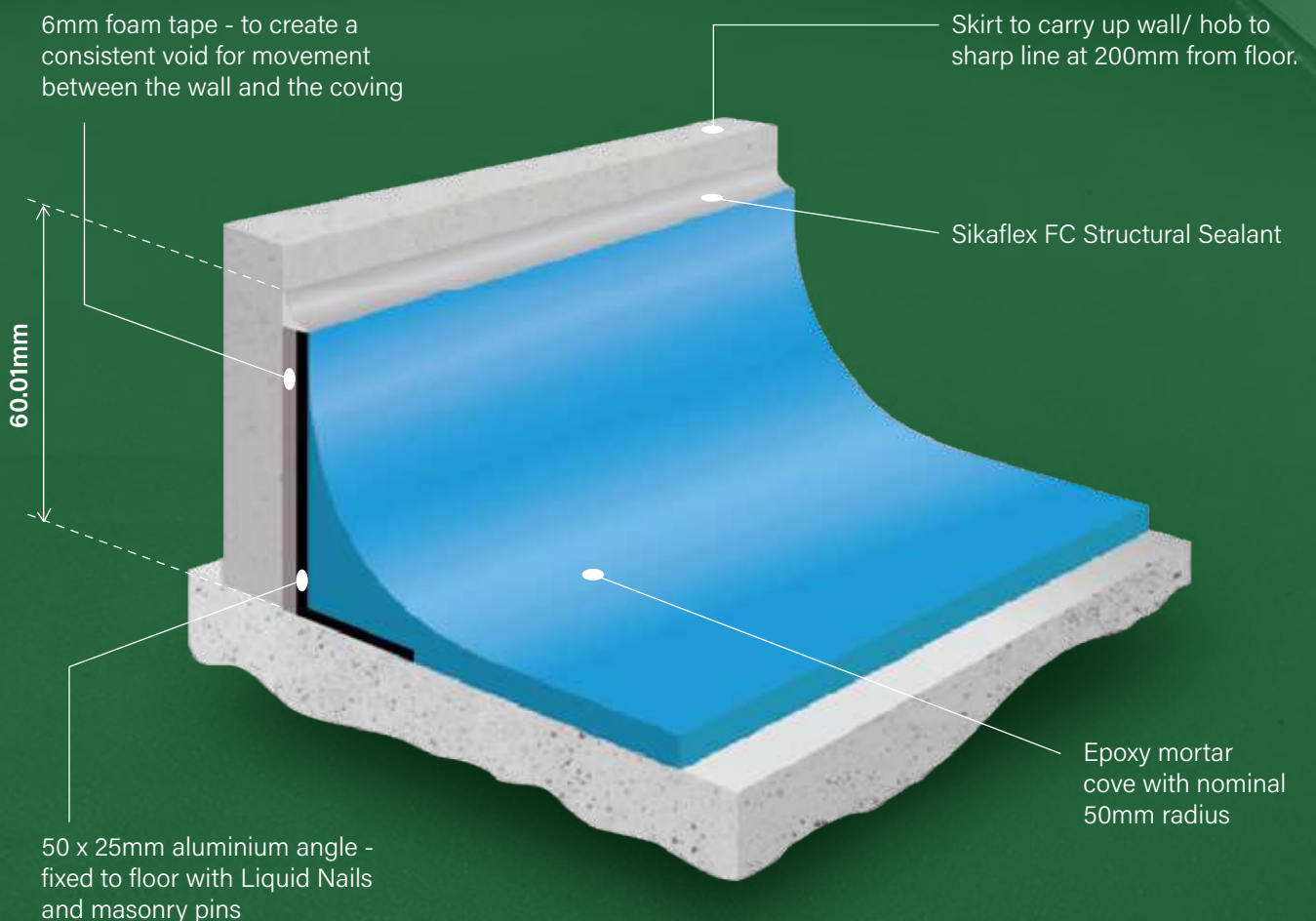
Coving is a curved, sealed finish, that closes the gap between the floor and the wall, providing a waterproof surface to protect the wall. Being a curved surface, coving allows for easy cleaning, and provides no room for bacteria to grow.

Our unique coving solution has been developed over years of working in the food and beverage manufacturing industry, after seeing many coving solutions fail under the pressure of these manufacturing environments.

SteriCove Features:

- Prevents water seeping under the wall
- Easy to clean & maintain
- Eliminates cracks and bacteria growth
- Meets stringent regulatory requirements
- Expansion joint between cove and wall to allow for movement of the floor

Coving Detail where differential floor/ wall movement is expected





Product Offerings

Hygiene

Maintaining extremely high hygiene standards is critical in food and beverage manufacturing facilities.

As such, clean rooms, washrooms and hygiene areas must be functional, easy to use, and efficient. At Allied Finishes, our experience in designing, building and upgrading cleanrooms is extensive. We understand what works, what's necessary, and the extra features that increase hygiene and efficiency.

While we typically manage complete hygiene room upgrades and refurbishments, we also supply the following items by themselves:

- Boot racks
- Gowning Benches
- Hand-wash stations
- Boot-wash stations
- Additional hygiene room ancillary products

Read on to explore the options for each of these products.



Boot Racks

Designed and made in Australia for safe, efficient storage of boots within change rooms.

Available in wall mounted or free-standing.



#H1001



#H1002

Standard Features:

- Available in modules holding from 12 to 48 boots
- Australian made stainless steel construction
- Ideal for drying after cleaning
- Stainless steel castors on free-standing modules
- Free-standing modules available in double sided

Options:

- Wall mounted boot rack – 12 to 48 boots
#H1001
- Free-standing boot rack – 12 to 48 boots
#H1002



Hand-wash Stations

With hygiene being one of the most critical aspects in a food manufacturing facility, ensuring there are enough efficient, easy to use and strategically placed hand-wash stations available is essential.

We offer a variety of hand-wash stations, all customisable to your needs.



Knee-operated sink

Available modules:

- Standard sink, single or up to 6 station design
- Knee-operated sink, single or up to 6 station design
- Sensor-operated sink, single or up to 6 station design
- Automatic hand washer
- Integrated Dyson Airblade Tap



Gowning Benches

Premium Australian-made gowning benches designed for footwear change points in clean rooms and gowning rooms.

Supplied to required length, with or without shoe rack.



#H2001

Standard Features:

- Premium quality 316 grade stainless steel
- Designed & manufactured in Australia
- Continuously welded design

Options:

- Standard gowning bench #H2001
- Gowning bench with shoe rack #H2002

Both products supplied to required length.

Most popular length is 200cm, with a width of 35cm, and height of 45cm.



Gowning Racks & Storage

Gowning racks & storage units are ideal for keeping change rooms and clean rooms neat and tidy.

Our stainless steel cabinets are designed and made in Australia, and are completely customisable to your requirements.



#H3001

Standard Features:

- Premium quality 304 stainless steel
- Free-standing or wall-mounted options
- Available with a removable hanger or non-removable hanger

Options:

- Free-standing gowning rack (supplied to required length) #H3001
- Wall-mounted gowning rack (supplied to required length) #H3002
- Free-standing gowning cabinet (supplied to required length) #H3003
- Wall-mounted gowning cabinet (supplied to required length) #H3004



Boot-wash Machines

Preventing the contamination of food by careful and thorough sanitation of the staff, production rooms and equipment is essential.

Boot wash machines and boot sanitation machines not only make it safer for staff to walk, but provide additional hygiene measures to prevent food waste from being carried throughout the facility.

We offer a number of boot-wash machine options, depending on the foot traffic and hygiene requirements.

Standard Features:

- Manufactured from high-grade stainless steel
- Prevents cross-contamination from boots
- Ideal for hygiene-critical manufacturing environments

Options:

- Shoe Side Cleaner – single or double
- Walk-through Sole Cleaner
- Built-in Model



Additional Hygiene Room Ancillary Products

Furnishings & Accessories

- Waste bin
With handy swing lid
W: 410mm D: 310mm H: 750mm
#H4001
- Paper dispenser
Suitable for 600 pcs paper towel
W: 270mm D: 135mm H: 350mm
#H4002
- Metal soap dispenser
900mL capacity
W: 115mm D: 115mm H: 250mm
#H4003
- Plastic soap dispenser
900mL capacity
W: 115mm D: 115mm H: 250mm
#H4004
- Document holder
Floor or wall model
W: 600mm D: 500mm H: 300mm
#H4005



#H4001



#H4002



#H4005



Safety

In the busy, fast paced environments food manufacturing facilities present, protecting employees, machinery and equipment is essential.

To bring your traffic management plans to life, we offer a range of safety solutions to ensure your facility is as safe as possible.

Our aim is to reduce risk, minimise cost, while safeguarding operations.

As with our hygiene product range, we typically design, supply and install, however we also supply the following products by themselves:

- Handrails, Barriers and Gates
- Bollards
- Wall protection
- Stair safety solutions

In addition to these items, we provide line-marking services, to maximise the safety of employees at your site.

Traffic Management Plans

A traffic management plan documents and helps to explain how risks will be managed in a manufacturing environment. They typically include:

- Designated pedestrian and traffic routes
- Travel paths for vehicles, including entry and exit points or traffic crossing other streams of traffic
- Where and how often powered mobile plant and pedestrians interact
- Layout of barriers, walkways, signs and general arrangements to warn and guide traffic around, past or through the main manufacturing areas.
- The responsibilities of people expected to interact with traffic at the workplace
- Instructions or procedures for controlling traffic including in an emergency
- Implementing and monitoring the effectiveness of the traffic management plan

Having worked in the Food and Beverage manufacturing industry for over a decade, our knowledge and understanding of traffic management is extensive. Our consultants have the expertise and experience to be able to develop traffic management plans, as well as guide the implementation of them.

Please reach out to our team today if you'd like to discuss a traffic management plan for your facility.

Handrails, Guardrails, Barriers, Gates

Keeping your employees safe at all times throughout your facility is of the highest importance.

Bringing to life your comprehensive traffic management plans will significantly reduce the risk of injury, reduce operating costs, and ensure your facility complies with the safety regulations.

Handrails:

Handrails are designed to prevent employees from falling. Typically installed on stairs, platforms, landings and other areas that present a fall risk.

Handrails are typically required for workers operating at least 1.2 metres off the ground.

Standard features:

- Can withstand over 200kgs of downward or horizontal force
- Smooth rail, but provides hands with grip
- Can be installed with or without a second rail below
- Fast and easy to install, ensuring no downtime is lost



#S3001

Guardrails:

Guardrails are ideal throughout food and beverage manufacturing facilities to prevent collisions between machinery and people. They define safe walkways, and restrict people to defined routes, to avoid accidents with forklifts and other machinery. Guardrails designate safe access and exit points, ensuring your facility can operate as efficiently and safely as possible.

Standard features:

- Can withstand 4.6 tonne vehicle at 8 Km/h
- Flexible solution that absorbs pressure from vehicles
- Hygiene seals eliminating ingress points
- Abrasion and corrosion resistant



#S3002

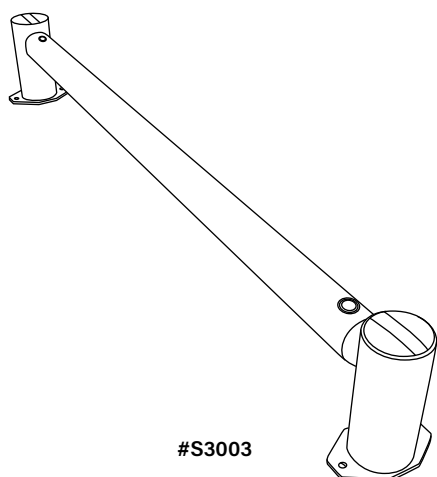


Traffic Barriers:

Traffic barriers are excellent for protecting buildings, machinery and equipment from impact damage. They provide visual guidance for drivers, and define and defend traffic routes. Traffic barriers avoid incidents and downtime, by protecting stationary machinery and equipment from moving vehicles.

Standard features:

- Can withstand 5.3 tonne vehicle at 10 Km/h
- Flexible solution that absorbs pressure from vehicles
- Hygiene seals eliminating ingress points
- Abrasion and corrosion resistant



#S3003

Gates:

Providing a safe entry and exit off designated paths into manufacturing areas is essential. Swing and slide gates ensure pedestrians stop prior to entering the area, ensuring they do not walk out in front of moving vehicles.

Standard features:

- Available in swing or slide
- Available widths from 800mm to 2000mm*
- Swing gate available in a double swing action
- Slide gates are space-optimised, ideal for tight areas

Options:

- Standard Swing Gate
#S3004
- Double Swing Action Swing Gate
#S3005
- Standard Slide Gate
#S3006

*Slide Gate available in 1000mm, 1500mm and 2000mm widths



Bollards

Bollards protect and safeguard machinery from impact damage of moving vehicles, while still allowing employee access to the area.

They are also great for providing a physical presence for access and guidance control for pedestrians and drivers.

Standard Features:

- Energy absorbing core
- Withstanding weight of up to 4.6 Tonne vehicle at 7 Km/h.
- Bright yellow to increase visibility
- 1200mm high

Options:

- Light Bollard (withstanding 3.6 Tonne vehicle at 7 Km/h) #S2001
- Cold-Storage Bollard (withstanding 3.6 Tonne vehicle at 7 Km/h) #S2002
- Heavy-Duty Bollard (withstanding 4.6 Tonne vehicle at 7 Km/h) #S2003



#S2001



#S2002



#S2003



Wall Protection

In the busy, fast-paced environments that food and beverage manufacturing facilities present, protecting your walls with appropriate panelling is essential for long term functionality and durability.

Aluminium Chequerplate Panelling:

Aluminium chequerplate wall panelling is an excellent solution that not only ensures the walls are protected, but provides seamless integration with coving, significantly reducing the risk of bacteria growth.

Why choose aluminium chequerplate panelling?

- Significantly reduces maintenance costs, by eliminating the need to repair and repaint wall surfaces
- Embossed chequerplate pattern conceals the effects of any surface damage caused by wheeled traffic (trolleys)
- Light weight, fast & easy to install and keep clean
- Food-safe, integrating with coving to remove any crevasses for bacteria to grow

Stainless Steel Wall Panelling:

Stainless steel wall panelling is similar to the aluminium chequerplate panelling, however is not embossed. It is ideal for wet rooms, such as washbays and changerooms, as it provides a secure, waterproof seal that not only stops water from seeping through walls, but provides a protective coating against moving equipment that could damage the area.

Why choose stainless steel wall panelling?

- Easy to clean and maintain
- Seamlessly integrates with coving, removing any crevasses for bacteria to grow
- Light weight, fast & easy to install



Stair Safety

The food manufacturing industry of Australia presents a face-paced, standards-conscience industry, fraught with risks and challenges like no other.

Stairs present additional challenges, particularly when they lead into or out of a production area. They can become slippery very easily, causing additional risks to stair safety.

Working in this industry, we've seen the challenges with stair safety, and understand the need for a safe, hygiene-friendly solutions that decrease the risks of slips, trips and falls down stairs.

We can provide

- Handrails
- Stair nosings
- Adequate lighting
- Non-slip coatings to stairs





Line Marking & Floor Graphics

Line marking and floor graphics are long term, cost effective solutions to assist with successfully implementing your traffic management plan, and increasing safety at your site.

The scope for line marking and floor graphics is very wide, depending on your site. Despite language barriers, they both clearly convey where an employee is allowed to go, and any areas that are restricted.

Standard options

- Green & Yellow line marking for pedestrian paths
- Orange/Yellow line marking for escape routes
- Black and Yellow path in chevron pattern for a shared zone
- Floor graphics such as arrows, indicators for exclusion zones, text, symbols





Fluid Drainage & Management

Proactive fluid management in many food manufacturing facilities is essential for efficient and safe operation of the facility.

1. The various components/ elements of a hygiene critical manufacturing facility must be considered and designed in conjunction with each other. The two primary elements of factory drainage tend to be the flooring and the actual drains:

Floors - need to be set with falls to drains. Typically, a fall of 1 in 100 is needed for consistent flow to drains without pooling or puddles. While a greater fall increases flow to drains, it can be detrimental when wheeled trolleys and forklifts are used.

Careful surveying of the floor and existing drainage system will greatly help with working out the best way to 'fall' the floor to the final drains.

At times, local 'water-sheds' formed using high strength epoxy mortar can provide area specific surface water guidance - see image of 'hump-bund' in Safety Yellow, directing waste water away from a foot path and towards an existing strip drain.

2. Drains - there are endless options available for type and style of drain, from point (gullies), to strip, and slot drains, each with their own particular strengths and weaknesses.
 - a) **Point drains or gullies** - these are often the best solution for confined rooms where all of the waste water can be drained to a reasonably central point.
 - b) **Slot drains** - these are channel drains that allow reception of waste water along a wide front, but are less visible than conventional strip drains. Two negatives that need to be considered are that by nature, the inside surfaces of the drain aren't easily accessed for cleaning, and also, the volume of fluids that can be conveyed tends to be limited.
 - c) **Strip drains** - these channel drains have proven themselves over decades of use in the food and beverage, and pharmaceutical manufacturing sectors. Available in a very wide range of configurations - width, depth, and length - and with a range of available grates, strip drains will often be the logical answer.

Separate to the production area, areas that need careful fluid management are the CIP station or room, the trade waste area, and banded zones such as for storage of chemicals, fermenting, etc.

Drains & Grates

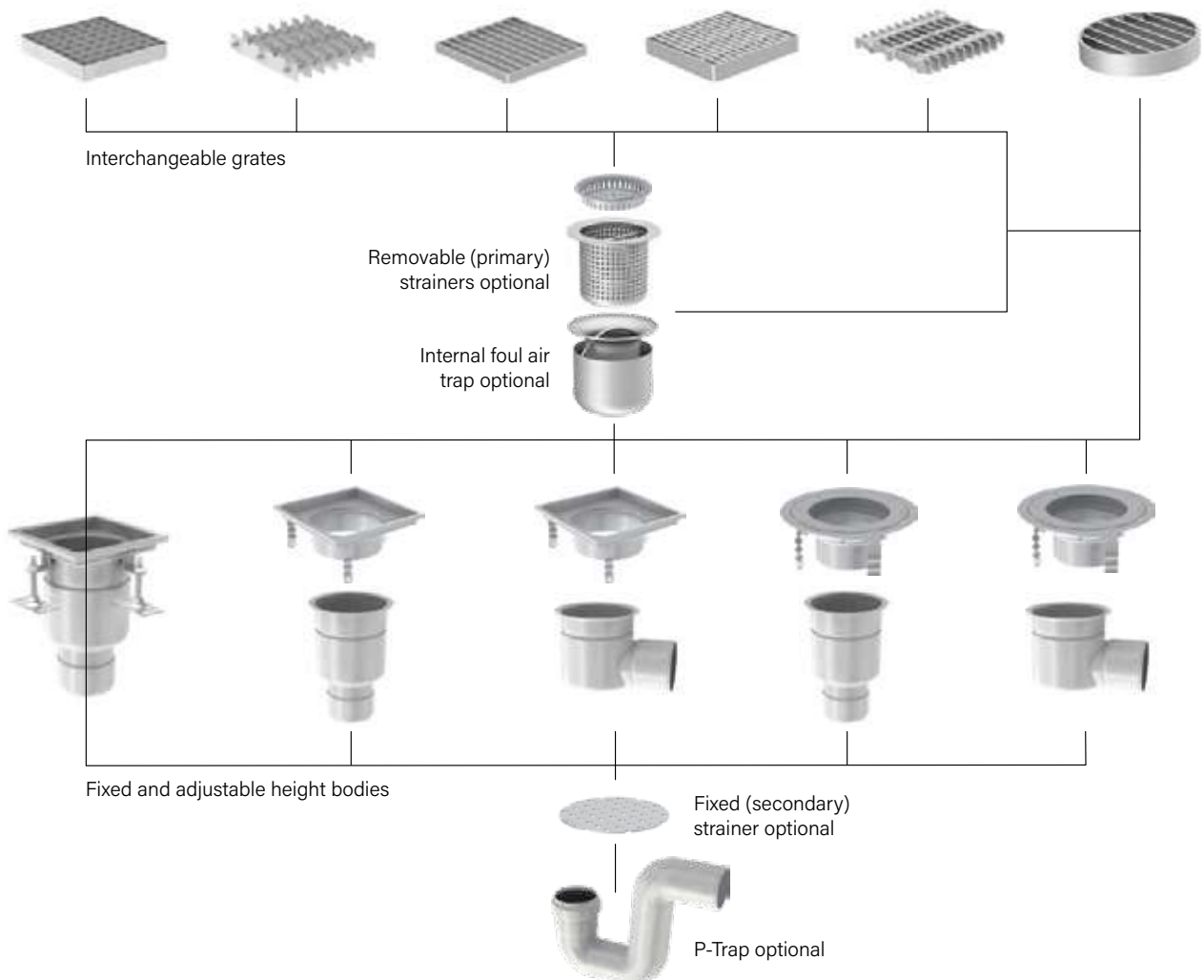
Drainage systems in food production facilities are under a lot of pressure due to high traffic, grease, fat, food waste and various chemicals from the cleaning procedures. Without an appropriate drainage system, wastewater can cause pipe blockages and major disruptions to services.

Drainage in this sector must be:

- Suitable & safe for forklifts to continue operating over without damaging the grates
- Fabricated out of 316 grade stainless steel, to meet food-grade standards
- Slip-resistant to ensure pedestrians can operate safely in the area

In this section, we show a selection of the drains regularly used, but encourage speaking with our technical consultants for project specific advice.

Point Drains (Gullies) - Fixed and adjustable height gullies



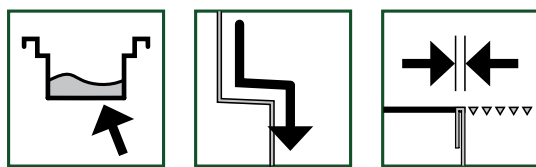
Strip Drains

Strip drains are highly versatile and configurable, allowing them to be engineered to suit most situations in hygiene critical processing environments. With both constant depth and sloped or falling floor channels, the following are the most common that we offer:

Flat based channels

Flat-Bottom Channel with Spigot or Drain Bowl Outlet

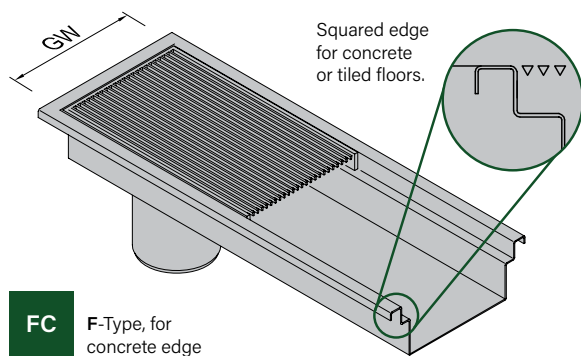
V-Bottom, fall to outlet with different top edge options for concrete or tiled floor finishes.



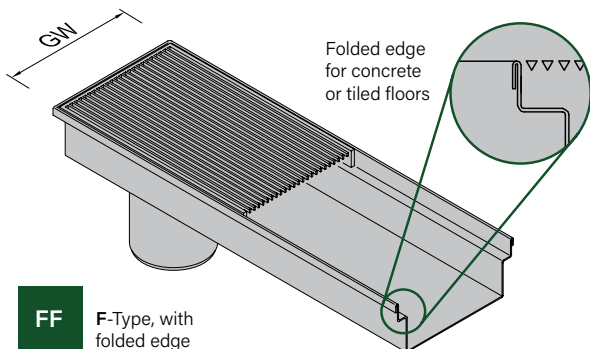
Flat-Bottom
Fall to Outlet

Hygienic & Self
Draining

Narrow Folded
Edge Option



FC F-Type, for
concrete edge

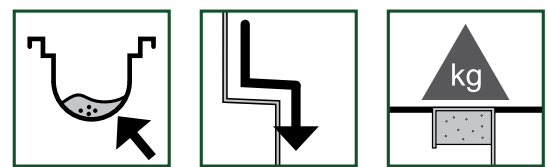


FF F-Type, with
folded edge

Curved based channels

Hygiene Channel with Spigot or Drain Bowl Outlet

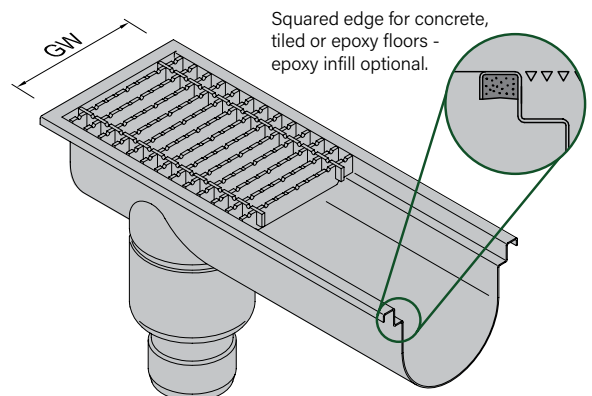
Round-bottom, fall to outlet with top edge for concrete, tile, epoxy or polyurethane cement floor finishes.



Round-Bottom
Fall to Outlet

Hygienic & Self
Draining

Epoxy Edge
Infill Option



HC H-Type, for
concrete edge

Why Hygiene?

Solids fall to the curved bottom of the hygiene channel and are pushed to the outlet easily with less water flow.

The consistent curve is easy to clean and grades towards the outlet.



Types of grates

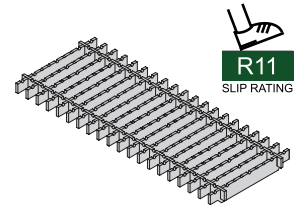
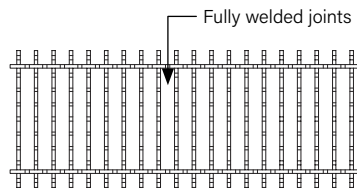
Type of grate is an important consideration including load rating, open area (proportion of total and dimensions of each opening), slip-rating, ease of removal for maintenance, and general aesthetics.

Load rating is an important consideration with drains and grates, and following the grate description we've included a section of AS 3996 Access Covers and Grates for convenient reference.

Frameless Ladder Grate

Material: 316 stainless steel, electropolished finish.
Surface: Half round notch.

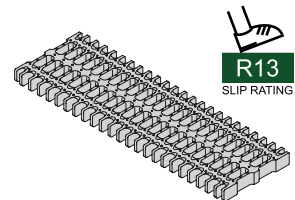
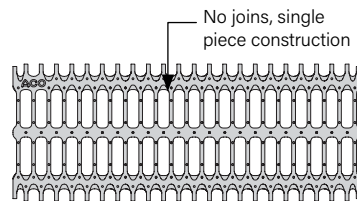
| GW | Load [±] | Product No |
|-----|-------------------|------------|
| 200 | 12,500 | AFFLG200 |
| 300 | 12,500 | AFFLG300 |
| 400 | 12,500 | AFFLG400 |



Cast Stainless Grate

Material: 304 stainless steel, electropolished finish.
Surface: Raised dimple pattern.

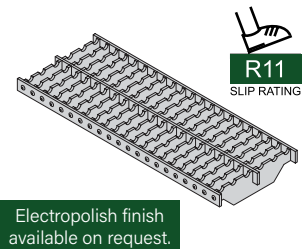
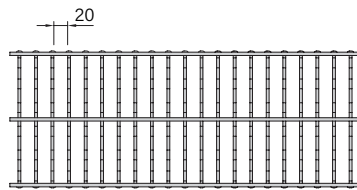
| GW | Load [±] | Product No |
|-----|-------------------|------------|
| 200 | | AFCSG200 |
| 300 | | AFCSG300 |



Ladder Grate

Material: 304 stainless steel, mill finish.
Surface: Half round notch.

| GW | Load [±] | Product No |
|-----|-------------------|------------|
| 200 | 12,500 | AFLG200 |
| 300 | 12,500 | AFLG300 |
| 400 | | AFLG400 |
| 500 | | AFLG500 |

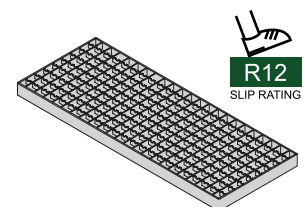
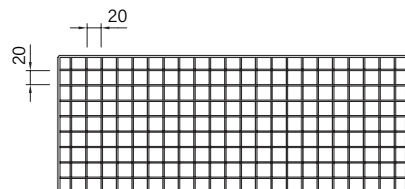


Mesh Grate

Material: 304 stainless steel, electropolished finish.
Surface: Half round notch.

| GW | Load [±] | Product No |
|-----|-------------------|------------|
| 200 | 1,500 | AFMG200 |
| 300 | 1,500 | AFMG300 |
| 400 | 1,500 | AFMG400 |
| 500 | 1,500 | AFMG500 |

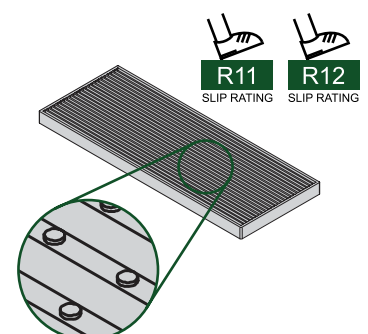
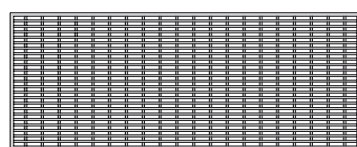
Item available on request, lead time likely



Wedge Grate (Heel Safe)

Material: 316 stainless steel, mill finish.
Surface: Raised dimple pattern.

| GW | Load [±] | Product No |
|-----|-------------------|------------|
| 200 | 1,500 | AFWG200 |
| 300 | 1,500 | AFWG300 |



Grate with a dimpled surface achieves a R12 slip rating across (transverse) & R11 with the bars (longitudinal).



Load Classifications - AS 3996

SECTION 3 DESIGN REQUIREMENTS

3.1 LOAD CLASSIFICATION

Access covers and grates shall be designated by classes A, B, C, D, E, F and G according to load capacity as set out in Table 3.1. Testing of covers and grates shall be in accordance with Section 4. The design loads as specified in Table 3.1 shall be used for testing.

The appropriate class for a cover or grate depends upon the place of installation. Some places of installation, relative to class, are outlined in Table 3.1. The selection of the appropriate class is the responsibility of the designer and where there is doubt the stronger class shall be selected.

TABLE 3.1 - Load Classifications of Covers and Grates

| Class | Typical use | Nominal wheel loading (kg) | Serviceability design load (kN) | Ultimate limit state design load (kN) |
|-------|---|----------------------------|---------------------------------|---------------------------------------|
| A | Areas (including footways) accessible only to pedestrians and pedal cyclists and closed to other traffic (extra-light duty) | 330 | 6.7 | 10 |
| B | Areas (including footways and light tractor paths) accessible to vehicles (excluding commercial vehicles) or livestock (light duty) | 2,670 | 53 | 80 |
| C | Malls and areas open to slow moving commercial vehicles (medium duty) | 5,000 | 100 | 150 |
| D | Carriageways of roads and areas open to commercial vehicles (heavy duty) | 8,000 | 140 | 210 |
| E | General docks and aircraft pavements (extra heavy duty - E) | 13,700 | 267 | 400 |
| F | Docks and aircraft pavements subject to high wheel loads (extra heavy duty - F) | 20,000 | 400 | 600 |
| G | Docks and aircraft pavements subject to very high wheel loads (extra heavy duty - G) | 30,000 | 600 | 900 |

NOTES:

1. Nominal wheel loads are given for guidance only. Consideration should be given to the type, size and pneumatic pressure of the load applied.
2. Class B design loads exceed AS 5100.2 requirements for footway loading.
3. Class D design loads exceed AS 5100.2 requirements for a W80 wheel load.
4. Class C units are based on an intermediate load.
5. The serviceability load is set at 2/3 of the ultimate limit state design load.
6. A force of 1 kN approximately equal to the weight of 100 kg.

Filter Basket (Basket Trap)

While the grates provide a basic filter depending on the designed open area, filter baskets are often very important in view of managing the waste water. Too coarse and blockages can be caused or the trade waste system can be overloaded, but if the filters are too fine, the tendency can be for operators to remove them altogether, thus allowing unfiltered waste water through to trade waste.

Items below for '200' Drain Bowls

Items below for '300' size Drain Bowls

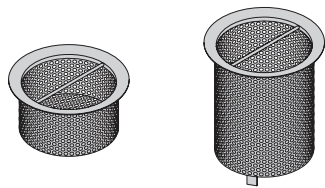
Filter Basket Options

Material: 316 stainless steel.

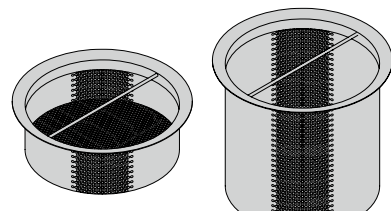
The mesh of the Filter Basket prevents solids in wash down waters from passing and possibly blocking the drainage beyond so this material can be disposed of appropriately.

Retaining Chain?

We can fix the basket to the drain bowl to prevent the basket being thrown away.



| | |
|---|---|
| FB | FBX |
| 'Standard' Height Filter Basket | 'Extended' Height Filter Basket |
| | Cannot be used with a Foul Air Trap (FAT). |
| Mesh: 3mm Hole: 3.25Ø Volume: 0.7L | Mesh: 3mm Hole: 3.25Ø Volume: 2.0L |

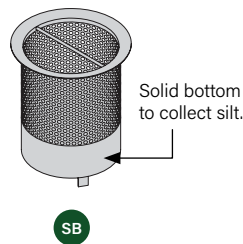


| | |
|---|---|
| FB | FBX |
| 'Standard' Height Filter Basket | 'Extended' Height Filter Basket |
| | Cannot be used with a Foul Air Trap (FAT). |
| Mesh: 3mm Hole: 3.25Ø Volume: 1.9L | Mesh: 3mm Hole: 3.25Ø Volume: 6.2L |

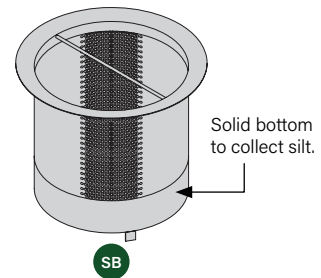
Silt Basket Options

Material: 316 stainless steel.

When wash down water contains fine or sand like solids, these particles fall to the solid bottom for collection and allow the water to overflow through the mesh and drain beyond.



| |
|---|
| SB |
| Dry 'Silt' Basket with Solid Bottom |
| Cannot be used with a Foul Air Trap (FAT). |
| Mesh: 3mm Hole: 3.25Ø Volume: 2.0L |



| |
|---|
| SB |
| Dry 'Silt' Basket with Solid Bottom |
| Cannot be used with a Foul Air Trap (FAT). |
| Mesh: 3mm Hole: 3.25Ø Volume: 6.2L |

Foul Air Trap (FAT)

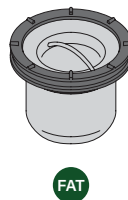
Removable Options

Material: 316 stainless steel with NBR seal.

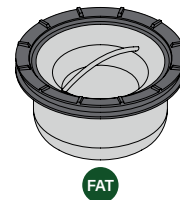
With the Foul Air trap removed, pipework beyond is clear for maintenance access.

Use instead of a P-Trap to reduce the IL depth of the outlet.

FAT must be used with a standard height Filter Basket in a standard height Drain Bowl (all sold separately).



| |
|--|
| FAT |
| Foul Air Trap (FAT) with NBR Sealing Ring |
| Seal Height: 75mm Flow Rate: 3.5L/sec |

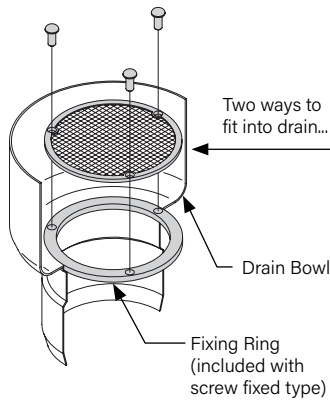


| |
|--|
| FAT |
| Foul Air Trap (FAT) with NBR Sealing Ring |
| Seal Height: 75mm Flow Rate: 4.6L/sec |

[†] Load ratings to EN1433 testing in kilograms (kg). Lesser values for solid wheel and moving wheel loads. Slip ratings tested to EN13036.

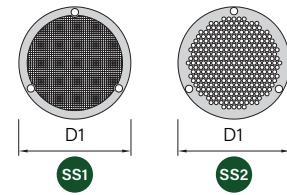
Secondary Strainer Option

Material: 316 stainless steel.



Strainer (Screw Fixed)
Secured with 3x torx screws to the Drain Bowl outlet. Screw Fixed available on request.

| Outlet OD | Aperture | Style | Product No | Open % |
|-----------|----------|-------|------------|--------|
| 110 | 3.2mm | SS1 | AFSSO110 | 42% |
| 160 | 3.8mm | SS1 | AFSSO160 | 43% |



Requirements for Trade Waste:

Some Water Authorities list 'Screw Fixed' Secondary Strainers as a standard requirement. Please ask if you're unsure.

Strainer (Clip-In)
With 3x support legs, no fixing ring required (not shown).

| Outlet OD | Hole Dia | Style | Product No | Open % |
|-----------|----------|-------|------------|--------|
| 110 | 3.2mm | SS2 | AFSSC110 | 36% |
| 160 | 3.8mm | SS2 | AFSSC160 | 41% |

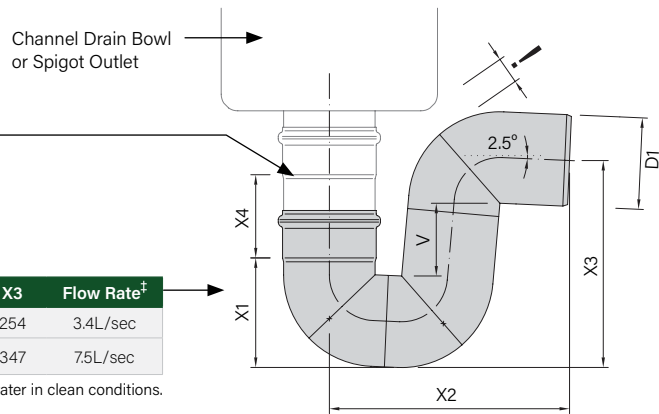
P-Trap Socket - Spigot

Material: 316 stainless steel, mill finish.
Ring Seal: EPDM x1 fitted.

| Riser | Product No | D1 | X4 |
|--|------------|-----|-----|
| A small vertical length may be required. Riser length sold separately. | AFPTRI110 | 110 | 225 |
| | AFPTRI160 | 160 | 345 |

| P-Trap | Product No | D1 | X1 | X2 | X3 | Flow Rate [†] |
|--|------------|-----|-----|-----|-----|------------------------|
| A small vertical length may be required. Riser length sold separately. | AFPT110 | 110 | 132 | 300 | 254 | 3.4L/sec |
| | AFPT160 | 160 | 190 | 403 | 347 | 7.5L/sec |

[†]Max rate based on a continuous flow of water in clean conditions.

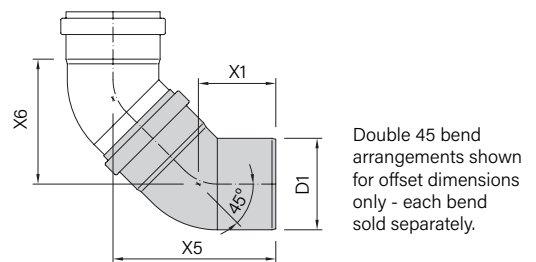


Bend 45° Socket - Spigot

Material: 316 stainless steel, mill finish.
Ring Seal: EPDM x1 fitted.

| Product No | D1 | X1 | X5 | X6 |
|------------|-----|-----|-----|-----|
| AFBS110 | 110 | 93 | 195 | 150 |
| AFBS160 | 160 | 131 | 269 | 200 |
| AFBS200* | 200 | 152 | 308 | 228 |
| AFBS250* | 250 | 177 | 362 | 273 |
| AFBS315* | 315 | 199 | 411 | 317 |

*Item available on request, lead time likely.



Mini Filter Basket

Material: 316 stainless steel

When use the Mini Basket?

With a collection volume of 300mL, the Mini Basket is used when solids are few in washdown water.

Suits items with a 110mm spigot outlet.



FB

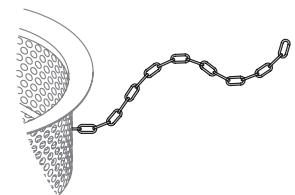
'Mini' Filter Basket
Suitable to selected 110mm spigot outlets.

Mesh: 3mm
Hole: 3.25Ø
Product No: AFMFB110

Retaining Chain

Material: 316 stainless steel

A Retaining Chain can be fitted between the Filter Basket and the Drain Bowl to prevent the basket being left out of the Drain Bowl or discarded.



Length: 700mm
Product No: AFRC100*

*Item available on request, lead time likely.





Bunded Storage Areas

Bunds are designed to contain spillages and leaks of liquids used, stored, or processed above ground and to facilitate clean-up operations.

As well as being used to prevent pollution, bunds are also used for fire protection, safety of workers, and product recovery.

There are multiple different types of bunds:

- Ramp bund
- Hump bund
- Square Bund


The net capacity of a bunded compound in a storage facility should be at least 120% of the net capacity of the largest tank. Take into consideration the capacity displaced by other tanks within the same bunded area and any foundations. Treat interconnected tanks as a single tank of equivalent total volume for the purposes of the bund design criteria.

For flammable liquids, bund capacity should be at least 133% of the net capacity of the largest tank. If an automatic fire sprinkler system is installed in or over any bunded tank or drum storage compound, the capacity of the bund should be increased either by a volume equal to the output from the sprinkler system for a period of at least 20 minutes, or to 133% of the capacity of the largest tank, whichever is greater.

Our bunding solutions are constructed out of impervious materials to ensure no liquid can seep through the bund walls or floors.

Allied Finishes specialise in safety and hygiene solutions for the food, beverage and pharmaceutical sectors of Australia. While initially specialising in flooring and drainage solutions, our product and service offering has evolved into providing additional hygiene and safety solutions; reducing production downtime to deliver uptime for our valued clients.

Get in touch today:

 1800 033 444

 helpdesk@alliedfinishes.com

 www.alliedfinishes.com