



SOLUTIONS FOR LITHIUM BATTERY MANUFACTURING

FLOORING, PASSIVE FIRE PROTECTION,
SEALING AND BONDING

illbruck

Flowcrete

Nullifire

Vandex

TREMCO

Dryvit

Nudura

TREMCO

Construction Products Group

SAFETY AND DURABILITY FOR YOUR BATTERY MANUFACTURING FACTORIES

As an architect, contractor or developer for controlled research and manufacturing environments in lithium battery manufacturing facilities, the project must meet the requirements and specifications of the customer, as well as the state-of-the-art standards and norms.

Tremco CPG Europe can support you with professional, high performance and easy to apply holistic solutions such as resin flooring, sealing and bonding, fire protection and much more that are designed to meet the challenging requirements of clean/dry rooms. Characteristics such as impermeability against water, humidity and air, ESD approved, biologically resistant, low particle emission and low outgassing behaviour can be factored in with such recommended solutions.

As well as your project benefitting from our deep know-how in building physics and decades of experience from countless projects, as a manufacturer we will support you from concept design through to application. Impress your clients with efficiency and cost-effectiveness and hand over projects that amaze with their outstanding safety, durability and energy efficiency.

A family of construction product solutions under one roof



Sealing, Bonding & Insulation



Flooring



Passive Fire Protection



Concrete Repair & Waterproofing



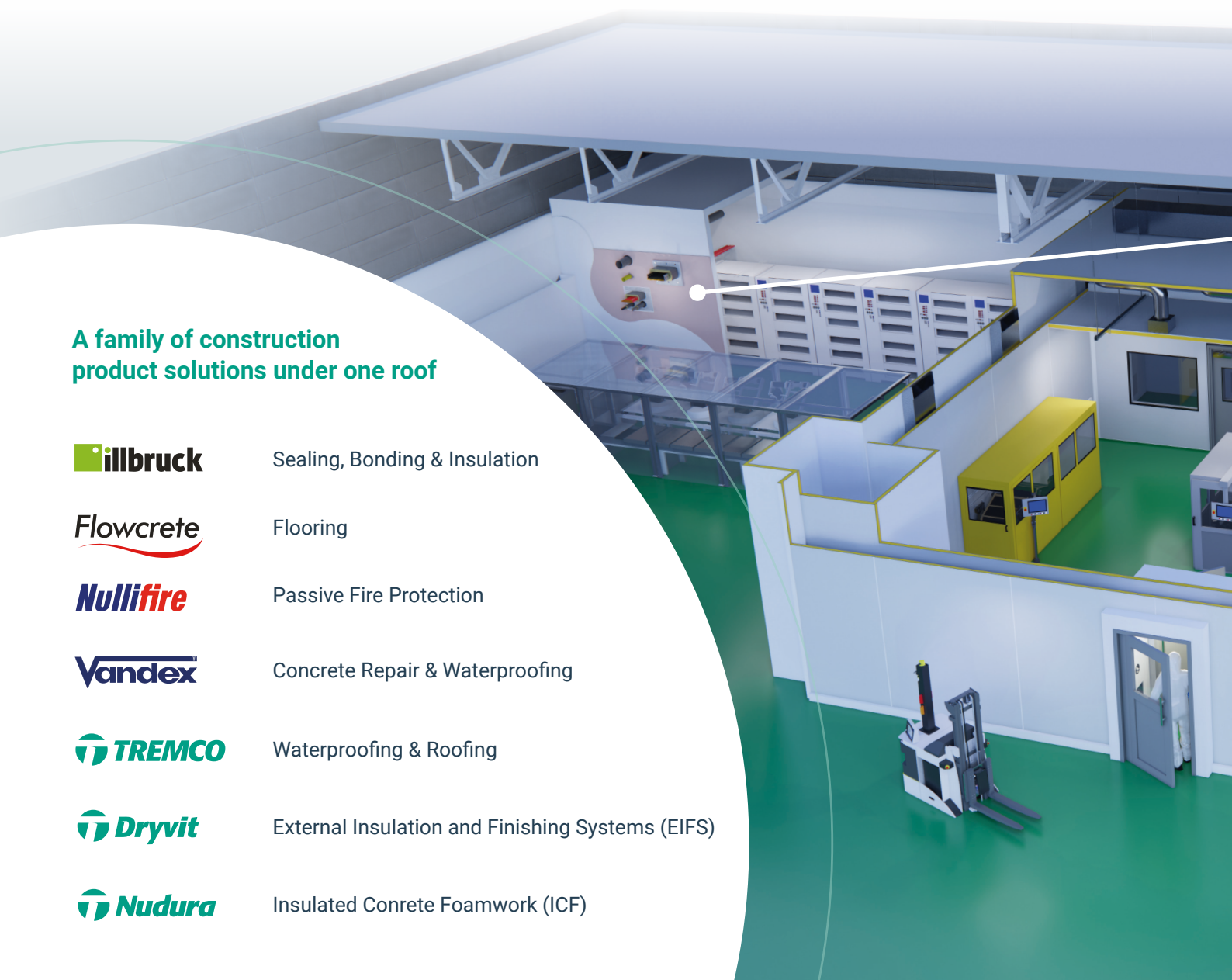
Waterproofing & Roofing

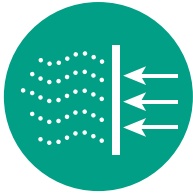


External Insulation and Finishing Systems (EIFS)



Insulated Concrete Foamwork (ICF)





Dry environment Dew point -40 °C

Ensuring vapour tightness in environments with extremely low dew points of -40 °C.



AGV Circulation

Designing flooring systems that generate low body voltages for use with AGV traffic.



Cleanroom

Offering low particle emission materials suitable for cleanliness classes ranging from ISO 4 to ISO 8



Safety

Providing solutions for protected ATEX areas that are at risk of flammable and explosive hazards. Safe environment for handling chemicals such as NMP or Pure Lithium material.



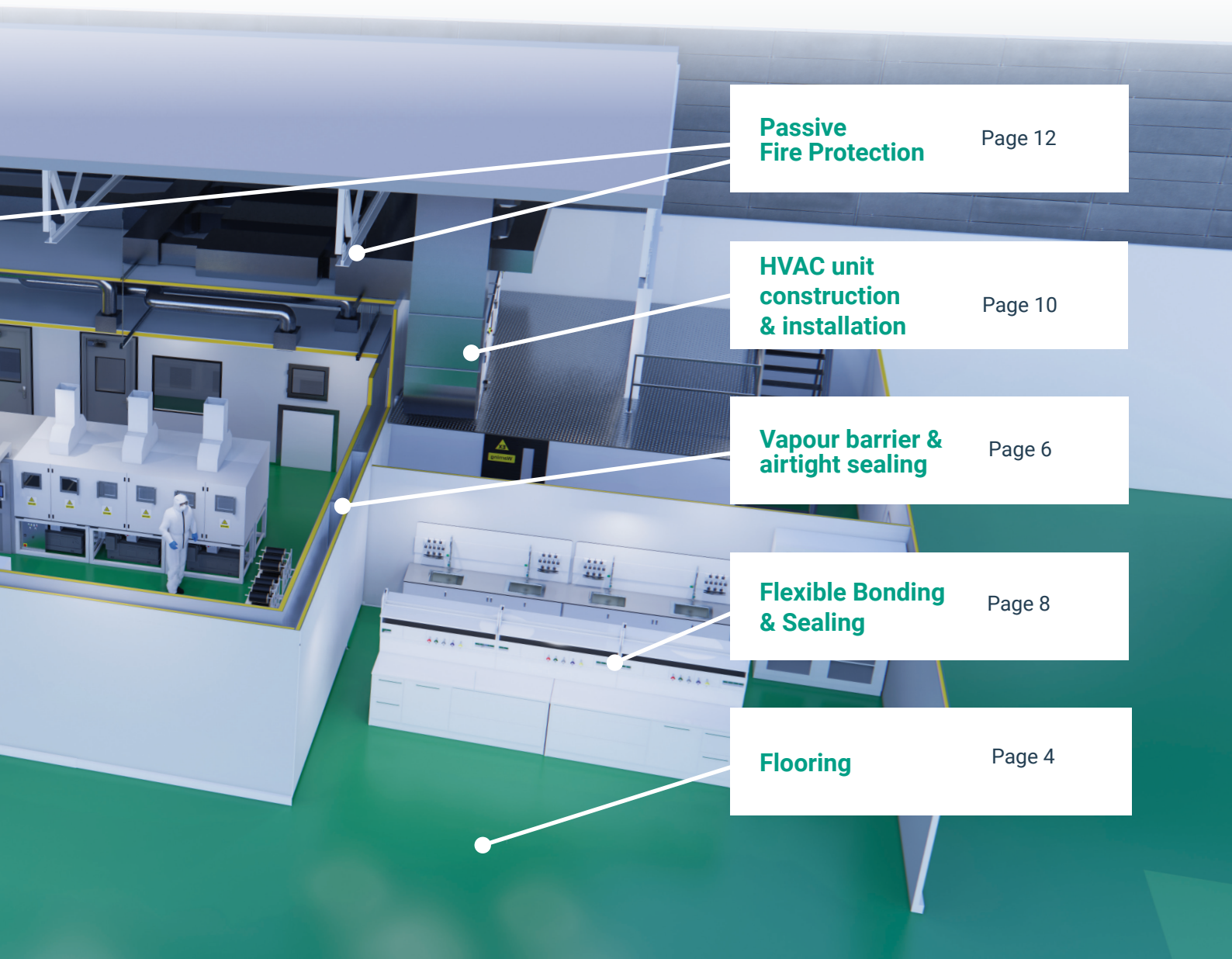
Innovative Systems

Compatible product solutions for durable results.



Certified Products

Meets the requirements of EN ISO 846 (method A & C) as well as VDI 6022 (Hygiene requirements for ventilation and air-conditioning systems). Indoor Air Certificate by the Sentinel Haus Institut.



Passive Fire Protection

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HVAC unit construction & installation

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Vapour barrier & airtight sealing

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Flexible Bonding & Sealing

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Flooring

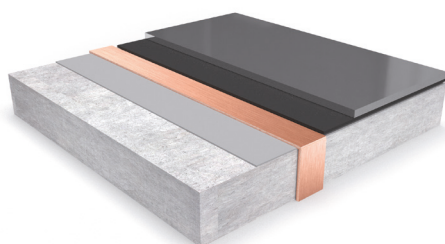
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Product Highlights

ESD flooring systems are

- Seamless, eliminating dirt or dust traps
- Durable and can withstand heavy traffic and abrasion
- Easier to clean and maintain
- Highly resistant to chemicals
- Aesthetic: A range of colors and finishes
- Anti-static: Suitable for the traffic of AGV



Peran ESD SL

An anti-static, self-smoothing resin floor finish that is easy to clean.

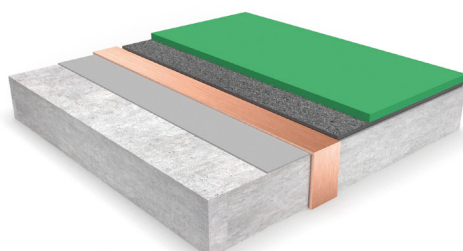
Typical thickness: 2.5mm

Application Areas:

- Dry process environments
- EPAs, ESD protected areas
- Production areas, including ATEX and/or AGV circulations
- Cleanrooms and dry rooms

Benefits:

- Anti-Static: Meets EN IEC 61340 and EN 1081 requirements
- Hygienic: Provides a seamless finish that is easy to clean and maintain
- Durable: Ideal for areas with sustained medium to heavy foot traffic
- High load strength
- Attractive: Enhances the appearance of working environment



Flowfresh ESD SL

A self-smoothing, static controlling, medium duty, resin floor finish with exceptional wear resistance, chemical resistance and temperature resistance up to 75°C.

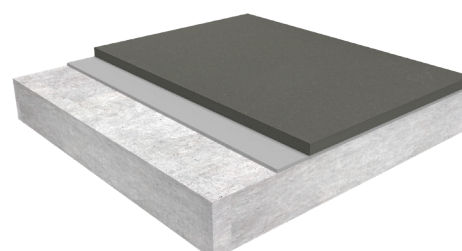
Typical thickness: 2 to 3 mm

Application Areas:

- Wet and dry process environment
- Suitable for accidental spillage of NMP
- Suitable for traffic of heavy AGV
- Production & storage areas, including ATEX
- Cleanroom and dry room

Benefits:

- Anti-Static: Meets EN IEC 61340 (Rg<1GΩ) and EN 1081 (Rg<1MΩ) for electrical properties
- High chemical resistance to most solvents and acids, organics, and inorganics
- Very high abrasion resistance to protect against heavy duty processes
- Very high load strength and wear resistance: Holds against impact, traffic and chemical attacks.
- Hygienic: Provides a seamless finish that is easy to clean and maintain



Flowfresh SL (2MM)

A self-smoothing, medium duty, resin floor finish with exceptional wear resistance, chemical resistance and temperature resistance up to 75°C.

Typical thickness: 2 to 3 mm

Application Areas:

- Wet and dry process environment
- Suitable for accidental spillage of NMP
- Suitable for heavy vehicle traffic
- Production & storage areas
- Cleanrooms and dry rooms

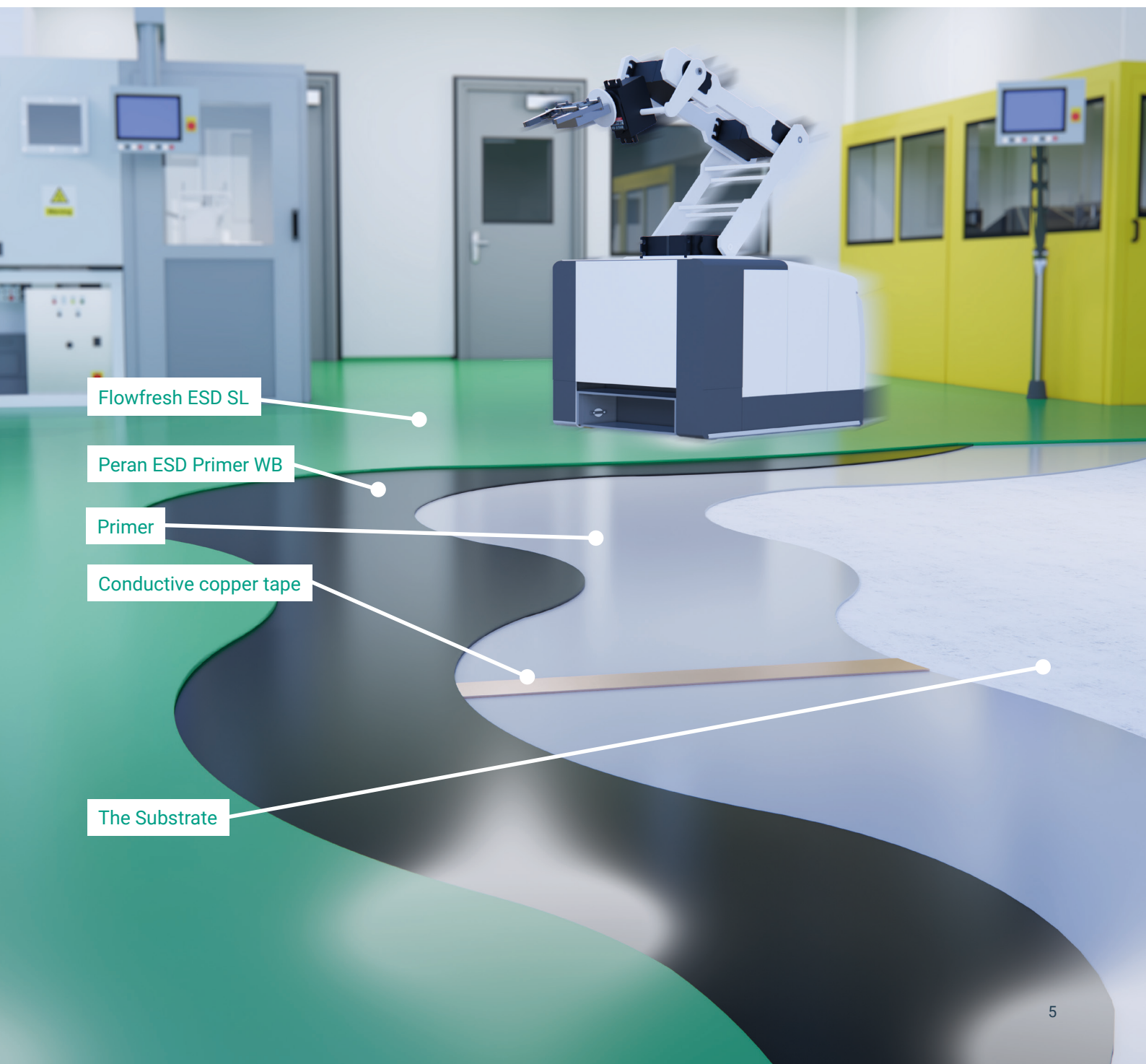
Benefits:

- High chemical resistance to most solvents and acids, organics, and inorganics
- Very high abrasion resistance to protect against heavy duty processes
- Very high load strength and wear resistance: Holds against impact, traffic and chemical attacks.
- Hygienic: Provides a seamless finish that is easy to clean and maintain

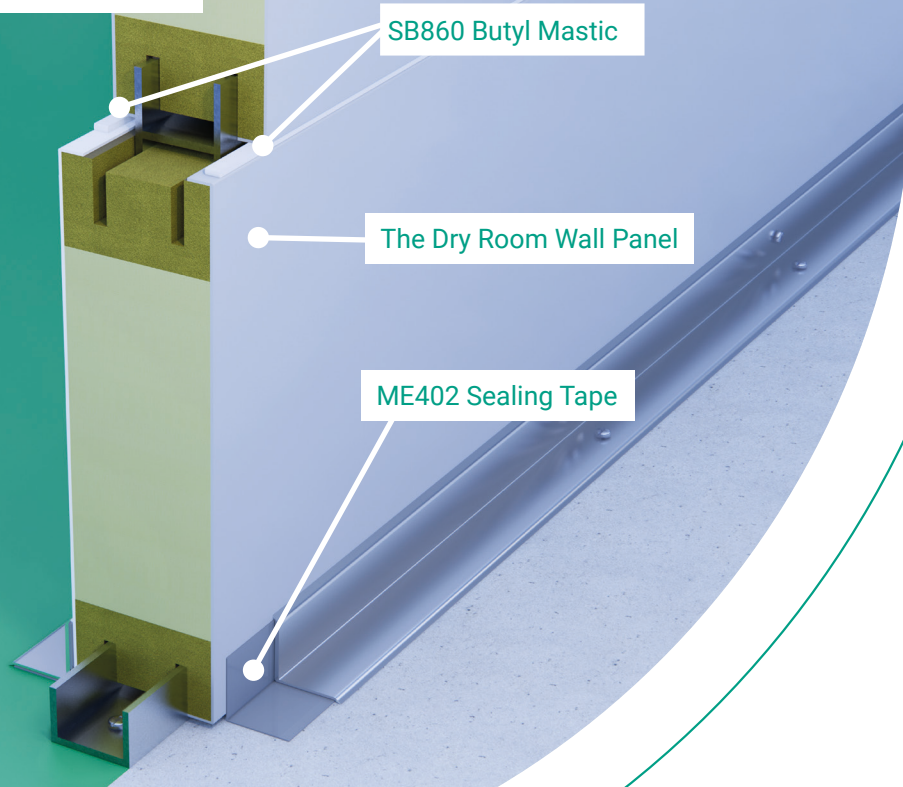
FLOORING

The floor is a prime site for electrostatic build up, as simply walking across its surface can lead to an ESD event. You can create an effective EPA by selecting a seamless resin floor to deliver the ultimate in static control. Our range provides solutions for

- Dry room and cleanroom environments
- spaces with AGV (Automated Guided Vehicles) circulation
- manufacturing and storage facilities that may involve chemical processing
- environments with explosive atmospheres (in compliance with the European ATEX directive)
- electrostatic protected areas (EPAs)



Application Highlights



Product Highlights

Less energy consumption due to air and vapour tightness for controlled room conditions. Our sealants and tapes offer high performance solutions that meet all current standards and building regulations for specialised applications.

Here you can find a few example products from our range.



ME403 Sealing Tape

High performance sealant tape which consists of a quality plasto-elastic butyl rubber adhesive / sealant doubled sided adhesion.

- High adhesive strength on many substrates
- Compatible with most usual films



ME402 Sealing Tape

High performance sealant tape which consists of a quality plasto-elastic butyl rubber adhesive/sealant applied to one side of an aluminised polyester tape.

- Tear resistant
- Weather and UV resistant
- Highly impermeable to water vapour and other gases
- Adheres without primer to many different substrates
- Simple, effective & easy to apply



SB860 Butyl Mastic

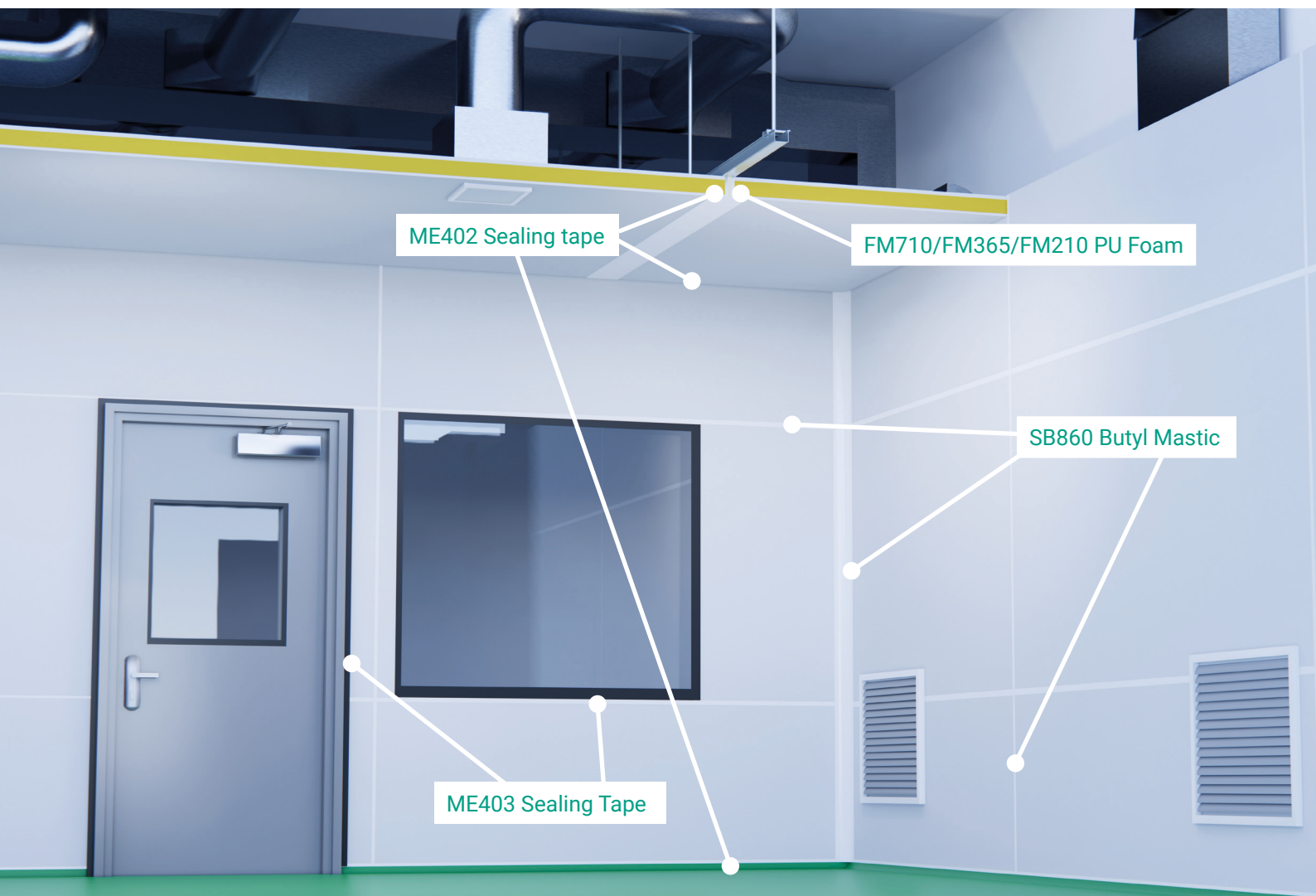
Butyl based sealant used for low movement static connection joints or as a sealant for watertight joints.

- Adheres to most building substrates.
- Excellent adhesion without primer on substrates such as aluminium, epoxy coatings, polyester, steel and wood.
- Paintable after film formation
- Does not migrate onto substrates

VAPOUR BARRIER & AIRTIGHT SEALING

For the special production process of lithium-ion batteries, preventing vapour and air transmission is key in dry rooms and cleanrooms. Our range of sealing products for horizontal and vertical joints create reliable impermeability against vapour, air and water for:

- Wall panel systems
- Demountable wall panels
- Partition walls
- Windows and doors
- Suspended ceiling components
- Wall/floor connection profiles
- Air showers



Application Highlights

Dry Room Wall Panel

SP610 Ventilation Seal

Peran ESD SL

Flowbuild Cove F

Floor substrate

Product Highlights

Our range of adhesives offers high performance solutions that meet all current standards and building regulations for specialised applications. This can include: laminating and post forming, bonding and laminating wood and plastics or simply bonding common materials like fabric or cork.

Here you can find a few example products from our range.



SP610 Ventilation Seal

Gun grade sealant based on illbruck hybrid technology for silicone free sealing in hygienically controlled environments.

- Wide adhesion spectrum, bonds to a wide range of metal, ceramic, plastic substrates - often without the need for primer
- Highly flexible, reduced risk of adhesion failure when subject to stresses caused by metal duct expansion and contraction
- Low VOC, silicone, isocyanate and solvent free with low odour
- Meets requirements of EN ISO 846 (Method A & C) and VDI 6022 (Ventilation & Air Conditioning)



FA810 Clean Area Silicone

Gun grade, silicone sealant that helps prevent a build-up of bacteria and fungi microbes.

- Tested according to EN ISO 846 A+C, meets requirements of VDI 6022
- Tested according to FDA CFR21§177.2600
- High resistance to microbial growth
- Will not degrade when subject to typical cleaning agents
- Meko-free, neutral cure



SP350 High Tack Pro

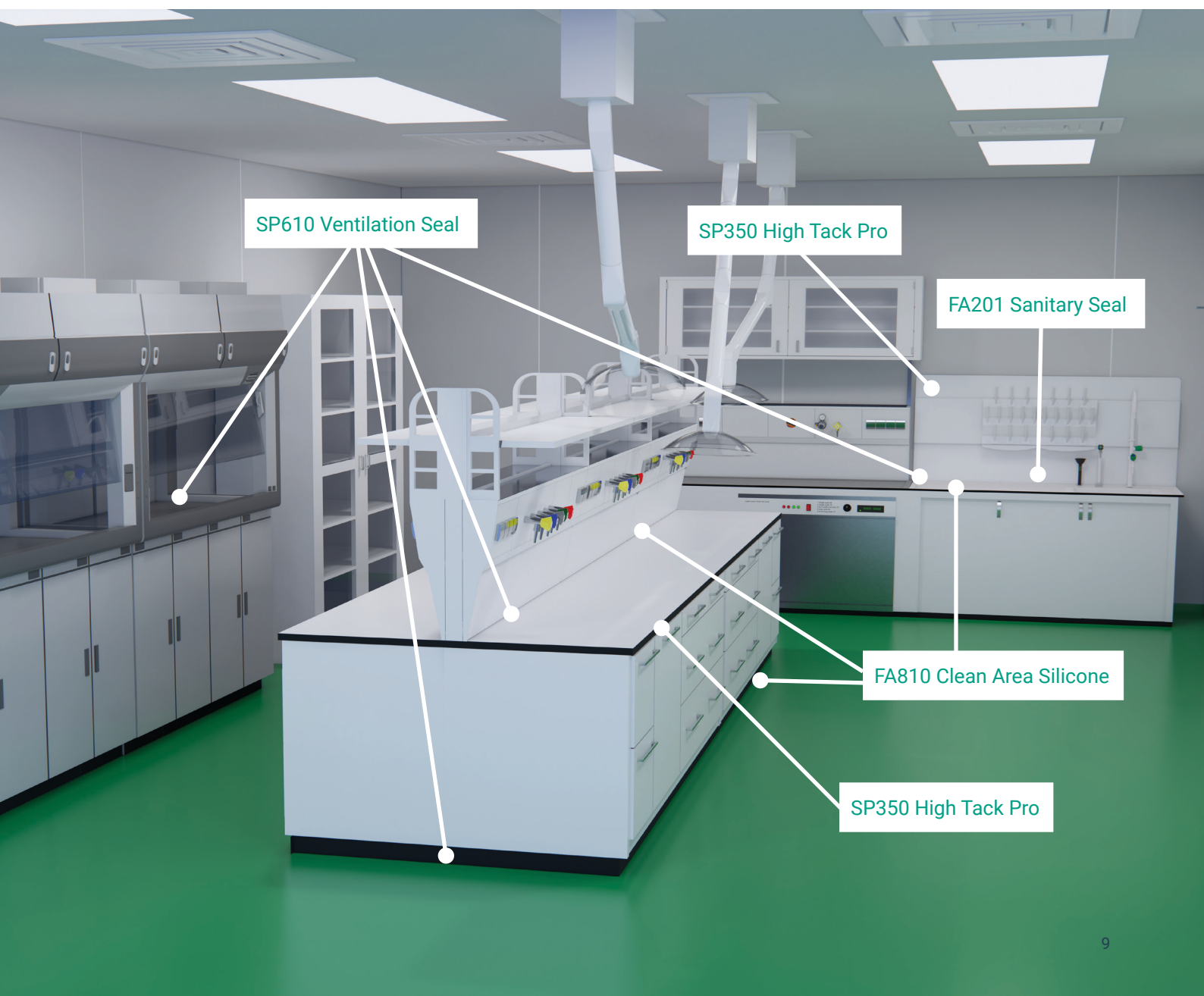
SP350 is a one component, non-sagging, elastic adhesive based on hybrid polymers.

- High initial grab and rapid development of final bond
- Formulation is solvent free, very low odour, and chemically neutral
- Instant grab can minimise the need for additional clamping or other mechanical supports
- Good resistance to light, weather and ageing - suitable for internal and external applications

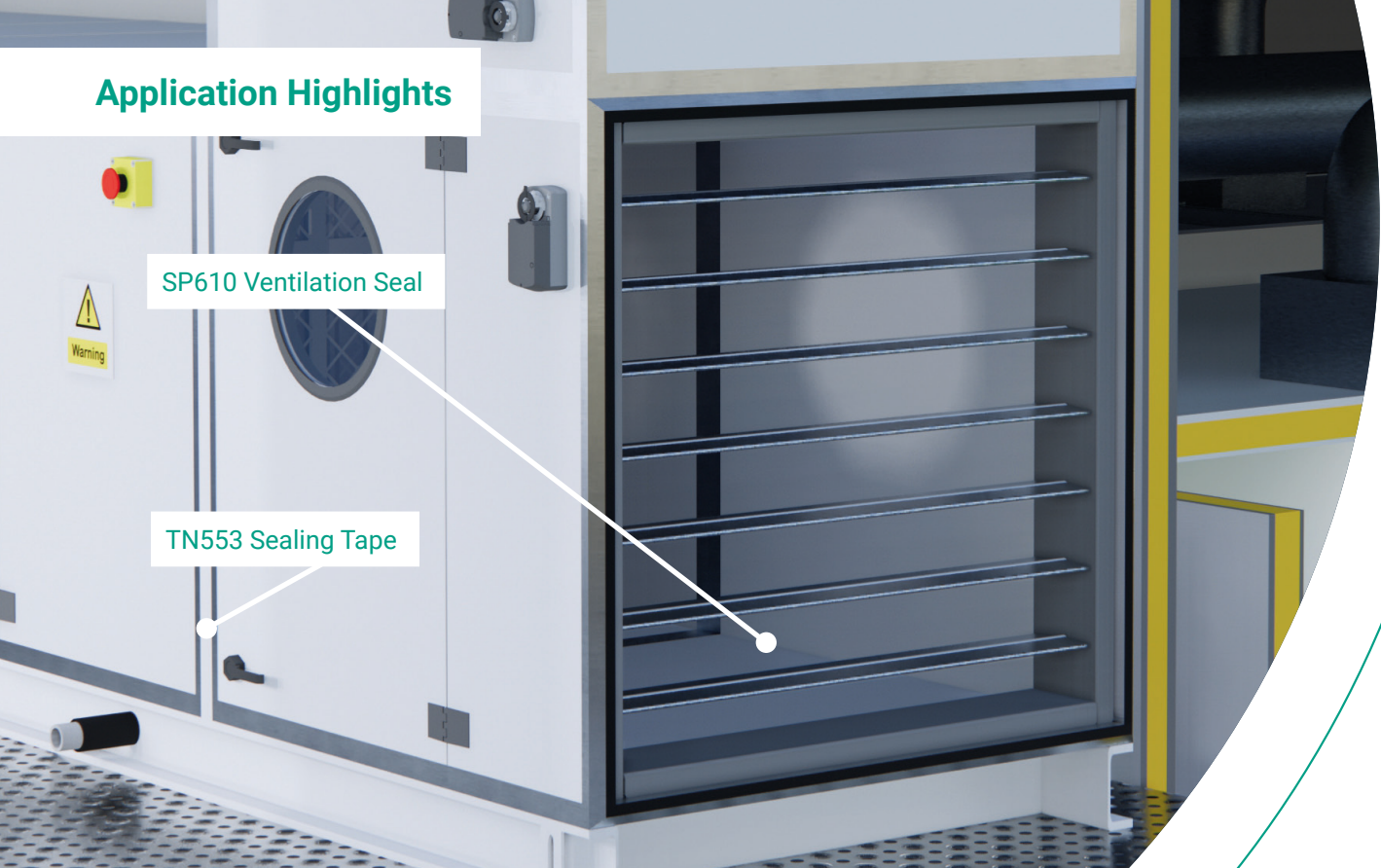
FLEXIBLE BONDING & SEALING

When doing the interior fit out of dry rooms and cleanrooms all joints must be properly sealed because contamination of the air and working surfaces cannot be tolerated. Flexible bonding is the right choice if a reduction of mechanical fixing is required for components or substrates. Applicable areas include:

- Panels and floor connections
- Worktops
- Laboratory furniture connections
- Areas where dynamic load transfer between assembled parts is required



Application Highlights



Product Highlights

- Certified, hygienic and proven airtight and decoupling sealing solutions.
- Optional high temperature resistant sealants for up to 300°C.
- Strong but flexible adhesives to support dynamic load transfer of metal parts.



SP610 Ventilation Seal

Gun grade sealant based on illbruck hybrid technology for silicone free sealing in hygienically controlled environments.

- Wide adhesion spectrum, bonds to a wide range of metal, ceramic, plastic substrates - often without the need for primer
- Highly flexible, reduced risk of adhesion failure when subject to stresses caused by metal duct expansion and contraction
- Low VOC, silicone, isocyanate and solvent free with low odour
- Meets requirements of EN ISO 846 (Method A & C) and VDI 6022 (Ventilation & Air Conditioning)



SP050 Multi Adhesive Pro

This is a multi-purpose sealant and adhesive based on illbruck's advanced SP polymer formulation.

- A more environmentally friendly alternative to traditional polyurethane adhesives - does not contain solvents or isocyanates and is very low odour
- Excellent adhesion to a wide range of materials including metals, glass, PVC and concrete
- Tack free in less than 30 minutes



TN553 Sealing Tape

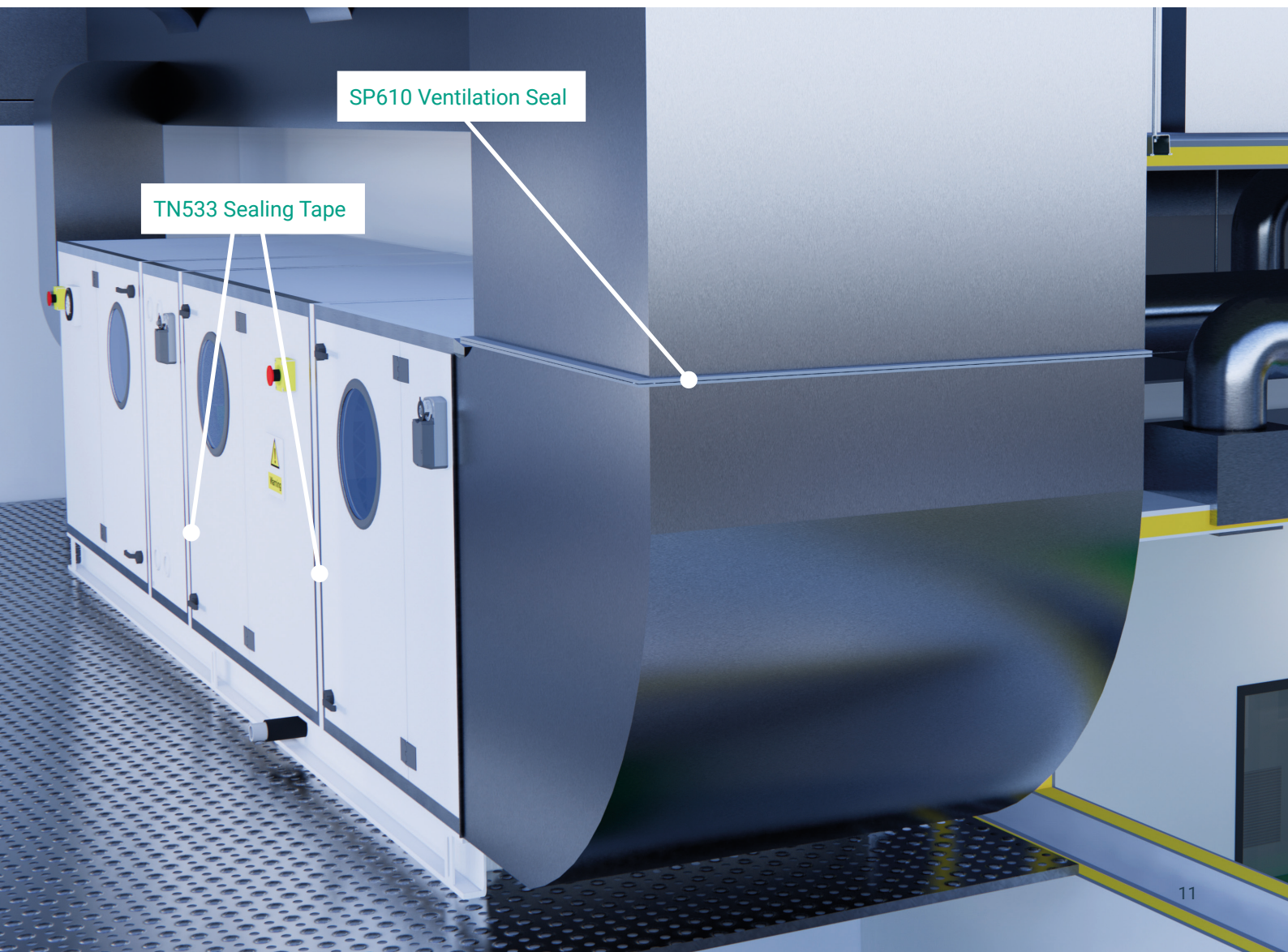
Self-adhesive PVC foam tape with pressure sensitive acrylic adhesive, supplied on an easy to use roll.

- Highly conformable grade of tape that easily accommodates rough or uneven joint surfaces
- Excellent insulation performance against shock, vibration and movement

HVAC UNIT CONSTRUCTION & INSTALLATION

Air-handling and air-duct units require airtightness, decoupling against vibration and must comply to hygienic requirements to operate reliably for a long period. In addition, some construction details could require the reduction of mechanical fixings. As an alternative to mechanical fixing illbruck flexible bonding solutions support dynamic load transfer of metal parts.

- Sealing/Decoupling: Modular component connections, condensation units, ventilation units, heat-exchanger, ducting
- High temperature sealing: heating systems
- Dynamic bonding: housing components, panels





A unique pigment guarantees traceability of products after construction phase.

Product Highlights

We offer a comprehensive range of fire stopping and steel protection solutions together with the technical advice and expertise.

- Intumescent coatings for structural steel protection (full system with primers, base coats and decorative top coats)
- Fire stopping products for linear joints and service penetrations



FB750 Coated Batt

Lightweight fire barrier comprising of a rock mineral fibre board with an uniquely identifiable ablative coating

- Up to 4 hours fire resistance - Tested to EN 1366-3 and BS 476 Pt 20/22
- Optifire® unique traceability identifier
- Acoustic & smoke sealing
- Air pressure tested up to 2000 Pa
- Suitable for use in flexible & rigid walls, rigid floors



FS702 Fire Resistant Acrylic Sealant

Water-based acrylic sealant which cures to give a firm but flexible fire seal

- Up to 4 hours fire resistance - Tested to EN 1366-4, EN 1366-3
- Up to 30% movement capability (during fire test)
- Suitable for flexible walls and rigid walls & floors
- Acoustics up to 55 dB
- Air seal up to 2,000 Pa



FP170 Pipe Collar

Comprises of a stainless steel shell and a reactive intumescent lining

- Up to 4 hours fire resistance - Tested to EN 1366-3
- Tested for use with combustible pipes, insulated non-combustible pipes, cable bundles and Bevox pipes
- Suitable on flexible rigid walls, rigid floors

PASSIVE FIRE PROTECTION

There is a need to have services running from the interior to the exterior in any closed environment. This could be doors, partitions, metal or plastic tubes for cables or wires and more. Fire stopping sealants around elements such as these must act with the same fire resistance as the wall, providing fire resistance at least equal to that of the building structure.

Nullifire provides solutions for all fire stopping needs for construction joints, pipe, cable and electrical penetrations on walls and floors.

Moreover, we offer the complete steel protection system for fire protection and decoration of structural steel.

Application Highlights



REFERENCES

Products and solutions from CPG Europe have been used in countless construction projects across the globe. Explore some of them here.

OBERSTEIRISCHE MOLKEREI, AUSTRIA

Dairy Processing.

Flooring: Flowcrete Flowfresh ESD SL

Load of 10t, AGV trafficable



**FRIEDRICH SCHILLER UNIVERSITY JENA,
INSTITUTE FOR INORGANIC AND ANALYTICAL
CHEMISTRY, GERMANY**

illbruck sealing and bonding solutions for clean areas.

Hygienic and chemically resistant sealing of base joints and countertop joints. Silicone-free sealing of fume cupboards.



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PHARMACEUTICALS LTD,
SWITZERLAND**

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solutions for clean areas**

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