

Introduction

Welcome to the fifth edition of the Excel Encyclopaedia. The first version was published back in September 2010 and received much acclaim for its educational and factual content.

The Encyclopaedia has been designed to provide consultants, M&E contractors, end users and installation partners with a thorough understanding of structured cabling and more importantly a complete insight into the Excel Structured Cabling Solution.

Written by key members of our technical and marketing teams, in this fifth edition we have added even more detail and updated much of the core content to ensure that you've got one trusted source of information.

The Excel Encyclopaedia is available in electronic format from the Excel website www.excel-networking.com to allow you to copy and paste the relevant information for your requirements, particularly in the Pre-Sales Support section which provides ready-made specification document templates to assist with complex bids. You can also link through to further information throughout the publication.

We hope that you find this to be a useful reference tool and we would welcome your feedback. Should you have any suggestions for content for future issues, simply email us at marketing@excel-networking.com



A handwritten signature in black ink, appearing to read 'A Percival'.

Andrew Percival
Managing Director

The Importance of Cabling

A network is only as good as its weakest link. In the highly complicated world of network and IT infrastructure, this may be an over simplification of matters, but it is nevertheless true.

If your cabling infrastructure is not designed, installed and, in the first instance, built from components that can cope with the demands of now and the foreseeable future, your investment in hardware – from servers, through routers and switches, to client devices – is wasted and your business suffers. Many surveys over recent years have confirmed that more than 50% of network failures are due to problems with the installed cabling.

The life expectancy of your cabling infrastructure is far greater than that of any of the hardware that will connect to it. You must therefore plan well, think ahead and consider your choices carefully when deciding upon, not just the type and standard of structured cabling for your business, but also the brand you choose.

A well designed, correctly installed, standards-compliant structured cabling system, backed by a comprehensive warranty programme, is the best way of protecting your investment and allowing for future needs.

Introducing Excel

Excel is a world-class premium performance end-to-end infrastructure solution – designed, manufactured, supported and delivered – without compromise.

The Excel brand, owned by Mayflex, is driven by a team of industry experts, ensuring the latest innovation and manufacturing capabilities are implemented to surpass industry standards for quality and performance, technical compliance and ease of installation and use. Our emphasis is on compatibility and standards compliance 'from cable to rack', reliability and product availability. The Excel solution is totally scalable and is suitable for the smallest installation to the largest.

The meteoric rise of the brand reflects a growing demand worldwide for a reliable, standards-compliant, readily available, structured cabling and racking system. Excel is able to deliver this mix through a growing base of distributors and integrators across the region, which combine to make the brand an increasingly viable option.

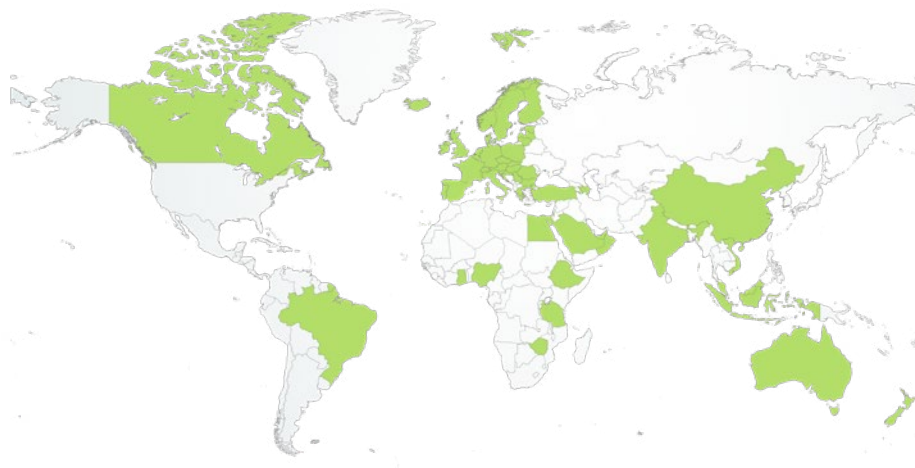
Excel is the complete trusted solution. Since the brand was launched to the UK market in 1997, Excel has enjoyed formidable growth and is sold in over 80 countries throughout the world.

In 2019 Excel was the first cabling brand to eliminate the use of single use plastic in our product packaging, which equates to saving a staggering 16 million single use plastic bags every year.

We hold in excess of £5M worth of Excel stock at our 90,000 sq ft warehouse facility in our Birmingham HQ, with 1200+ pallet locations and nine computerised lean lifts, which allow the orders to be picked and packed quickly and efficiently.

Just down the road from our Birmingham HQ, we have a 64,500 sq ft rack assembly, storage and shipping area, dedicated to the range of Excel Environ racks.

With a focus on system performance, independent verification and a 25-year product and application warranty, when installed by an accredited Excel Partner, it's easy to see why this is the system of choice across so many organizations and different vertical markets.



 Countries supplied by Excel

Excel Features and Benefits

Excel provides numerous technical and commercial benefits - why not compare Excel to other cabling systems and suppliers and see how they compare?

Items shown with an * may not be currently available outside of the UK.

Products	Excel	Alternative
CPR Compliant - Copper and Fibre exceed the required standard	✓	
Complete end-to-end Copper, Fibre and Rack Solution	✓	
Copper Structured Cabling System in a choice of, Category 8, Category 7 _A , Category 6 _A , Category 6 and Category 5e (screened & unshielded)	✓	
Pre-terminated Copper Solutions	✓	
Angled Toolless Jacks - ideal for high density applications	✓	
High density Solutions including the 0.5U and V Panel	✓	
Smallest Category 6 _A screened module on the market - Just 28mm in depth	✓	
The Category 6 _A U/FTP cable is just 6.7mm in diameter and allows the installation of 12% more cables in containment than a typical 7.1mm diameter product	✓	
Enbeam Fibre Optic System in a choice of Multimode and Singlemode	✓	
Enbeam MTP Fibre Optic Solution in a choice of Multimode and Singlemode	✓	
The Enbeam MTP offering is based around the US Conec Elite® connector	✓	
Enbeam Fibre Optic Pre-terminated Solutions	✓	
Blown Fibre Solutions in Multimode and Singlemode	✓	
Enbeam FTTx Solution	✓	
Fibre cleaning range	✓	
Enbeam Fibre Trunking	✓	
Environ Rack and Open Frames - wall, floor and server racks (up to 47U & 1200mm deep)	✓	
Environ CL Co-Location Racks	✓	
Environ Locking Solutions	✓	
Power Distribution Units (PDUs) – Standard, Modular and Intelligent	✓	
Single Residential Solution	✓	
Voice Cabling	✓	
Bespoke Engraved Labelling	✓	

Majority of products delivered in plastic free packaging using recycled and recyclable card and paper.



Quality Management	Excel	Alternative
25 Year Product and Application Warranty across all Copper, Fibre, Voice Systems and Racks	✓	
Third Party Verification from leading test houses and ETL	✓	
Category 6 and 6 _A carry both component and channel performance Third Party Verification	✓	
CPR compliant	✓	
ISO9001: 2015 Accreditation	✓	
ISO14001: 2004 Accreditation	✓	
Environmental Policy	✓	

X Introduction

Services	Excel	Alternative
Online warranty application process	✓	
Warranty applications processed within 5 working days	✓	
Free Next day delivery to the UK mainland *	✓	
Choice of timed & same day deliveries *	✓	
Placement Plus Delivery Service - racks placed in final location & packaging removed *	✓	
Order between 8.00 a.m. and 8.00 p.m. for next day delivery in the UK *	✓	
Trade Counter at Birmingham UK Headquarters open 6am to 6pm *	✓	
Free labelling software	✓	
Bespoke engraved labelling service	✓	
Faceplate printing service	✓	
Rack Configuration Service – in-house built to specification service	✓	
In-house Pre-terminated copper and fibre service	✓	
Pre-Sales Support from product selection to design support	✓	
Cut to length cable service	✓	
Available throughout EMEA	✓	
Extensive Stock Availability	✓	
Partner Programme	✓	
Finance options *	✓	
Toolbox Training *	✓	
Audit Overview *	✓	



Speak to our Specialist Support Services team regarding pre-terminated copper and fibre, bespoke labelling and bespoke rack configuration.

excel
without compromise.

Marketing/Collateral Information	Excel	Alternative
Winner of the Network Computing 'Cabling Supplier of the Year' Award for 6 years in a row	✓	
Numerous reference sites - visit www.excel-networking.com/reference-sites for a full list	✓	
Case studies across multiple verticals	✓	
Comprehensive multilingual website www.excel-networking.com	✓	
Powerpoint and iPad partner slide presentations	✓	
Online Specification Sheet Generator	✓	
Branded Literature – Excel Partners can brand literature with logo and address details	✓	
Partner Area – includes warranty application and technical documentation	✓	
Literature – includes brochures, catalogues, specification sheets	✓	
White Papers	✓	
'How To' Videos	✓	
Blog	✓	
Installation Guidelines	✓	
Encyclopaedia Reference Manual	✓	
Third Party Verification Certificates	✓	
Excelerator Pre-terminated fibre configurator	✓	
Excel containment sizing calculator	✓	

The only cabling brand
to use plastic free packaging for the majority of its products



ENBEAM FTTx Solution



Visit www.excel-networking.com/fttx-solution for more details.



Excel Brand Values



- **Proven:** Standards compliant products, CPR compliant, with third party independent verification from test houses such as Force Technology , ETL and 3P.
- **Accepted:** Numerous reference sites across EMEA, including many major Bluechip organisations.
- **Compatible:** An end-to-end system supported by one company with one warranty providing support and peace of mind from racks to copper, fibre, residential & voice cabling systems.
- **Flexible:** From Category 3 through to Category 8 copper cabling and Enbeam fibre optical systems from conventional multimode OM1 to OM5 and Singlemode OS2 to pre-terminated high density MTP and highly flexible blown fibre systems, FTTx, Residential, Racks, Locking Solutions and Intelligent Power Distribution Units.
- **Reliable:** EMEA wide partner programme, 25 year warranty programme, pre and post sales technical support, 25 year plus product development programme, third party verification as standard on all key solutions.
- **Available:** Worldwide stock availability via Excel Distribution Partners for immediate delivery.
- **Plastic Free Packaging:** The majority of products are supplied in plastic free packaging made from recycled and recyclable card or paper, thereby removing over 16 million plastic bags (40 tonnes) of single use plastic from the supply chain each year.

CIBSE

CIBSE is The Chartered Institution of Building Services Engineers and sets standards and provides authority on building services engineering. It publishes Guidance and Codes which are internationally recognised as authoritative, and sets the criteria for best practice in the profession. CIBSE promotes the career of building services engineers by accrediting courses of study in further and higher education, by approving work based training programmes. Once qualified, CIBSE offers engineers a range of services, all focused on maintaining and enhancing professional excellence throughout their career.



Excel is accredited to provide a series of courses covering different aspects of structured cabling for use by CIBSE members within the Continuing Professional Development (CPD) programme.

The free of charge Excel courses are designed to enhance the skill levels of Building Service Engineers and Consultants who either have a basic grounding in the installation of structured cabling solutions or are just starting to build their expertise. Their modular format allows the structure of the training to be specific to the delegates' requirements and covers: Cable Capacity in Trunking, Data Networks, Data Trunking, Data Networking Standards, PoE and IT Infrastructure for Building Management Systems and Smart Building Integration, among other topics.. The courses are delivered throughout the UK.

CIBSE members can find out more about the range of courses available from Excel by visiting the CPD Directory at www.cibse.org or can email cibse@excel-networking.com for further information.

ENVIRON

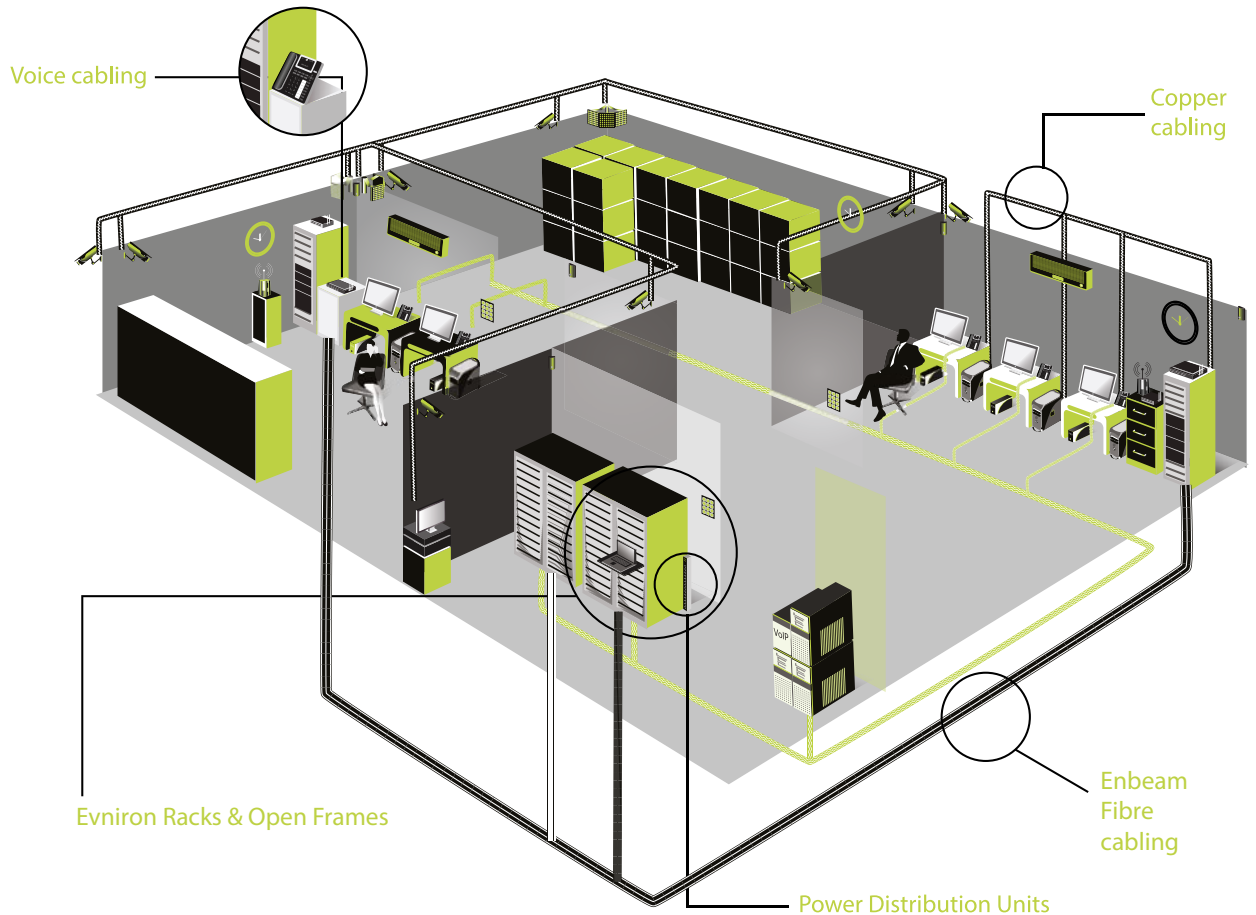
When compromised performance is not an option our rack solutions deliver style, flexibility and specification options each and every time. With integral cable management, doors to encourage maximum ventilation, up to 1300kg load bearing, free next day UK delivery and 25 year warranty, you can be sure you are getting the best in performance when you choose an Environ rack from Excel.

excel
without compromise.

See more in Section 13 of the
Excel Encyclopaedia V5

Excel System Offering

Excel offers one of the market's most comprehensive cabling solutions, including:



Copper

- Category 3 UTP
- Category 5e U/UTP and F/UTP
- Category 6 U/UTP and F/UTP
- Category 6_A U/UTP, U/FTP and F/FTP
- Category 7_A S/FTP
- Category 8
- Pre-Terminated Solutions

Fibre

- Enbeam Internal/External Grade Cable
- Enbeam Patch Cords and Pigtailed – ST, SC, LC
- Enbeam Connectors and Adaptors
- Enbeam Patch Panels
- Enbeam MTP
- Enbeam Blown Fibre
- Excelerator Pre-Terminated Solutions
- Enbeam FTTx Solutions

Residential

- Cables and Patch Leads
- Patch Panels
- Enclosures
- USB, HDMI, SVGA Cables
- AV Inserts

Voice

- Internal Grade Cabling
- External Grade Cabling

Racks & Open Frames

- Environ® CR (Comms) Racks
- Environ® ER (Equipment) Racks
- Environ® SR (Server) Racks
- Environ® CL (Co-Location) Racks
- Environ® OR (Open) Racks
- Environ® WR (Wall Mount) Racks
- Environ® Locking Solutions
- Accessories
- PDUs – Standard, Modular and Intelligent

Throughout the Encyclopaedia we will provide you with in depth information across the complete Excel solution. To find out more details and part number information simply visit www.excel-networking.com

Excel Manufacturing Facilities

Excel products are manufactured in ISO 9000 factories to meet European quality standards. The products are manufactured and tested to strict guidelines ensuring a consistent level of performance, designed to exceed the relevant standards.

The following photographs have been taken at three of our approved Excel manufacturing facilities:

Watch the processes at our manufacturing facilities 

Copper production
Physical foam PE Machine



Copper production



High frequency network analyser



Patch Panel Assembly Line
100% Testing



Fibre Panel Production



Pairing Machines



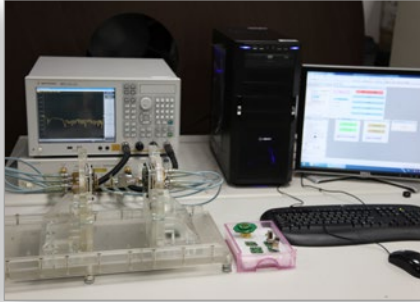
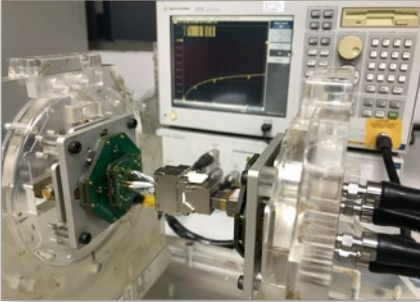
Semi-finished Product
Insulation Wire



Keystone Jack Inspection



Cat 6 6A Connecting Hardware Tests



Cat 6A Channel Alien Crosstalk Test



Environ House



100 Grosvenor Road, Birmingham, B6 7NA

Our state-of-the-art Environ House warehouse, assembly and office facility was opened in June 2019, located just 0.5 miles from the Excel House head office in Birmingham, UK. Four times the size of the original Environ House, the new facility provides 64,500 square feet of warehousing space, including 4,000 square feet of additional office, training and demonstration space, which are fully kitted out with the Excel structured cabling solution.

The multi-million pound investment allows our warehouse and logistics teams to have direct control of all operations under one roof, with plentiful storage space to grow with our projected growth for the next 10 years.

One of the key operations carried out in the Environ House facility is our Environ racks and cabinets configuration, with a specialist team on-site building racks to create a comprehensive stock profile, as well as providing our specialist support services which include racks pre-installed with kit requested by customers prior to delivery to site. All being under one roof ensures a smooth process and helps to achieve our fast delivery times.

Warehouse Management System

In 2020, we implemented our new Warehouse Management System (WMS) to support our growth and service offering in 2021 and beyond. Following a number of months of design, build and rigorous testing of both the system and associated processes to ensure a smooth transition, the new system went live in December 2020.

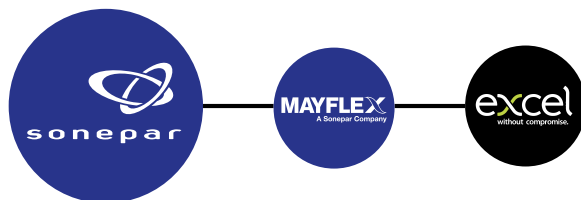
The system brings a multitude of benefits, including:

- **Improved picking flow** – Making the picking process far quicker and more efficient for the Warehouse Team, helping us to achieve a greater number of lines picked per hour, all of which helps us to get our customers' orders into transit quicker
- **Stock holding improvements** – The new system allows us to maximise our stock holding and storage capacity to a far more effective level, helping us to ensure stock availability is the best it can be
- **Picking accuracy improvements** – With the implementation of scanning at point of picking, the new system ensures that our team can only pick the item/quantity on a customer order, helping us to significantly reduce any errors attributed to both incorrect item and quantity-based errors



Excel's Pedigree

The Excel brand is owned by Mayflex who are part of the Sonepar Group.



Why Mayflex?

All together. Products, Partners, People, Service – Mayflex brings it all together.

Mayflex lead the way in the distribution of Converged IP Solutions. We use our specialist knowledge and experience to bring together best in class infrastructure, networking and IP security solutions to create a compatible, feature rich, value for money offering to meet the demanding needs of business types and sizes across all sectors.

Working together with VARs, Installers, integrators, and specifiers we provide support through pre-sales, product selection, commercial flexibility and technical know-how to enable the delivery of truly converged solutions which provide businesses with advanced, scalable, cost effective and reliable IP based communications networks and building management systems.

With revenues in excess of £130 Million, our resources ensure the constant development of the Excel product portfolio and the ability to hold the majority of Excel products in stock for immediate despatch.

In April 2015 Mayflex was acquired by Sonepar, an independent family-owned company with global market leadership in B-to-B distribution of electrical products and related services. Sonepar has €24 billion of revenue and is represented by 145 entities operating in 48 countries on five continents with 48,000 associates.



Excel House, Birmingham UK

Mayflex Middle East and Africa

Our Middle East and Africa (MEA) office is based in the international hub of Dubai in the United Arab Emirates. Located in Jumeirah Lakes Towers, serviced by a team of 14, consisting of Sales, Technical Support, Sales Support, Finance and Logistics. Supporting customers across the region, the experienced team focus on projects across many verticals, including, hospitality, government, retail, commercial and residential.

Customers are serviced by a global 3rd party logistics facility located in the Jebel Ali Free Zone, which is situated next to the Jebel Ali port, the biggest and busiest port in the Middle East. The 3rd party warehousing facility utilised by Mayflex is a 24/7 operation, with a stockholding of 144,000 m3 equating to 130,000 pallet locations. Services provided by the 3PL include warehousing and distribution, land transport, freight services and customs & other government related business support. The 3PL also offer Specialist Support Services which includes, floor & wall cabinet assembly and cable cutting. A local collection facility is also available to Dubai based customers.

Excel acknowledges the provenance of all trade names, brand names and registered names or marks referred to within the Encyclopaedia.

Excel Resources

Whitepapers

<https://excel-networking.com/downloads/whitepapers>



We have a comprehensive range of whitepapers written by our technical experts, designed to keep you up to date with the relevant standards and any technical developments that effect the installation of structured cabling.

[View online](#)

Technical Notes

<https://excel-networking.com/downloads/technical-notes>



From time to time we will publish technical notes that will bring your attention to something specific to Excel or a relevant industry topic. These are short summary documents that highlight the key facts that you need to be aware of.

[View online](#)

Case Studies and Reference Sites

<https://excel-networking.com/downloads/case-studies>



Our end customers are numerous across all verticals and all over the world. Our case studies for specific projects are all available to read on our website. They can be useful to get an understanding of the scalability and flexibility of the Excel solution, and to find out how the products were installed in similar environments to your upcoming projects.

If you are interested in producing a case study about your recent Excel installation, we have a simple online form that you can complete with as many details as possible about the installation. Once you submit the form, our Marketing team will review the information and then look to schedule in writing the first draft and we will advise you of the anticipated completion

date via email. As soon as the draft is approved and finalised, our design team will produce a final version, which will be distributed to all relevant parties via email and promoted on the Mayflex and Excel communication channels.

Case Studies are produced for a small selection of Excel installations. However, all previous projects where Excel has been installed are listed on our website. This page includes a selection of category filters that can assist you in narrowing down the search results, so you can create a list that is specific to your needs. Once you have got the list that you need, the table of search results can be simply highlighted, copied and pasted to be included in your tender and specification documents.

[View online](#)



Configurators and Tools

Tender Response Generator

<https://excel-networking.com/tools/tender-response-generator>



Tired of collating specification sheets one by one for your upcoming projects? Interested in a tool that does the hard work for you? Now you can create your own tender response documents with Excel in just a few simple steps

Watch our video to see
how it works!

View online



Excel Excelerator

<https://excel-networking.com/configurators>



Excel's Excelerator is a range of pre-terminated fibre systems including distribution, break-out and mini break-out cables and MTP solutions. You can use the Excelerator configurator to help you design the cable that you want to use, producing drawings of your solution and requesting a quotation – all within minutes.

View online

Containment Sizing Calculator

<https://excel-networking.com/configurators>



Containment sizes may be calculated based on the: dimensions of the containment, diameter of the cable and fill ratios. Our simple spreadsheet configurator will help to guide you with regards to calculating your containment sizing requirements.

View online

CPR: Declaration of Performance Certificates

<https://excel-networking.com/dop-list>



If you're looking for a Declaration of Performance (DOP) certificate for a particular Excel product, you can visit the Excel website and find a complete list of certificates available to download. Simply use the search tool at the top of the page to find your specific part code, or browse by category using the drop-down menu.

View online

Excel and the Environment

Corporate and Social Responsibility

At Excel we recognise that good CSR embraces all aspects of sustainable development and the way we affect people through our business operations. We build our business for the long term by balancing social, environmental and economic considerations in the decisions we make. We are committed to ensuring that our business is conducted in all aspects according to rigorous ethical, professional and legal standards, by:

- Continuous improvement in our Corporate and Social Responsibility strategy
- Encouraging our business partners to strive for matching performance
- Acting in a socially responsible way
- Continually improving our performance and meeting all relevant legislation
- Encouraging our staff to be mindful of the effect of their actions on any natural resource

Supply Chain Code of Conduct

For the above reasons Excel is committed to ensuring that its suppliers adhere to the highest standards of ethics. Suppliers are therefore required to demonstrate that they provide safe working conditions where necessary, treat workers with dignity and respect, and act ethically and within the law in their use of labour.

We work with our suppliers to avoid complicity in human rights violations related to our own operations and our products.

Environmental Policy

Businesses operating in today's challenging environments have many important issues to consider, including the economic, environmental and social impact they are having on the world around them.

At Excel, we strive towards having the best practices in place to help with our environmental and corporate responsibilities. These include:

1. Comply fully with all relevant environmental legislation, regulations and other relevant requirements.
2. Identify the significant environmental impacts of our business and review them on an ongoing basis to ensure they are still relevant to our business model and locality.
3. Work with our supply chain to ensure minimum waste where possible.
4. Provide the framework for setting and reviewing environmental objectives and targets, including the reuse, recycle and reduction of all waste.
5. Document, communicate and improve awareness of environmental matters to our employees and supply partners only.
6. Ensure that we retain our ISO 14001 Certification on an ongoing basis.
7. Commit to continual improvement aimed at enhancing the environmental performance, protection of the environment and prevention of the pollution.

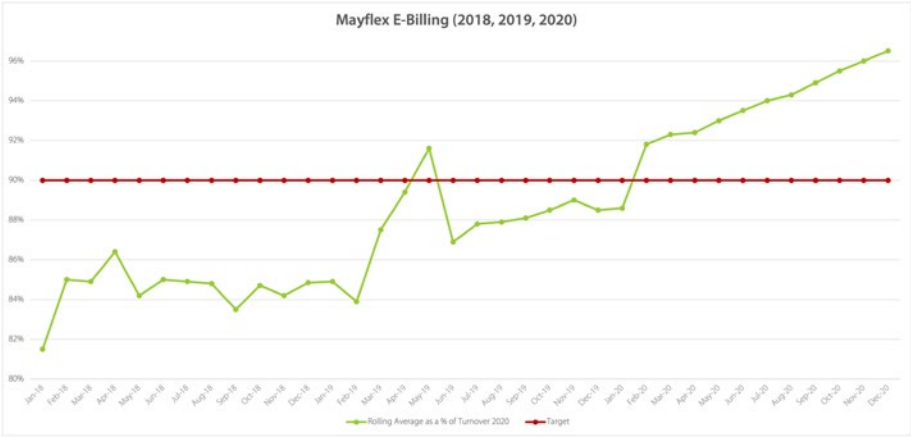
Excel Environmental Objectives, Targets and Initiatives

As part of the adoption of the holistic and process approach, Mayflex has established its environmental objectives at relevant functions and levels as well as embedded most of the actions related to the environmental objectives in its top-level processes, by taking into account:

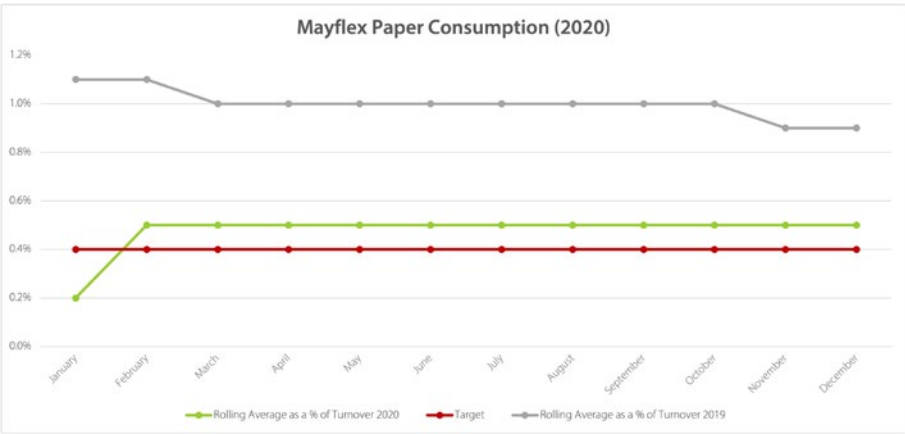
- Its significant environmental aspects and related impacts as per Environmental Aspects Impacts document
- Its compliance obligations as detailed in Interested Parties document
- Its risks and opportunities as detailed in Internal External Issues

Our long-term environmental objectives are pursued through short term targets and process-related initiatives:

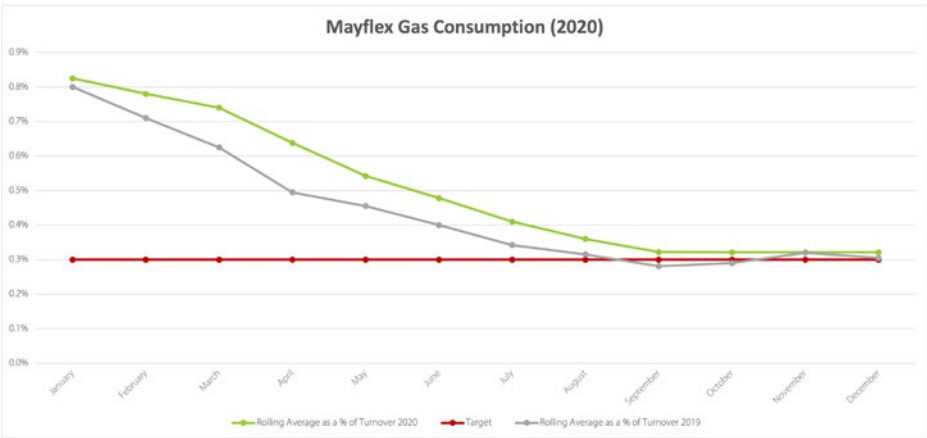
- Increase electronic invoicing to 90% of overall invoices raised
*In previous years it used to be "Increase electronic invoicing to 35% of overall customer base" - **Achieved!***



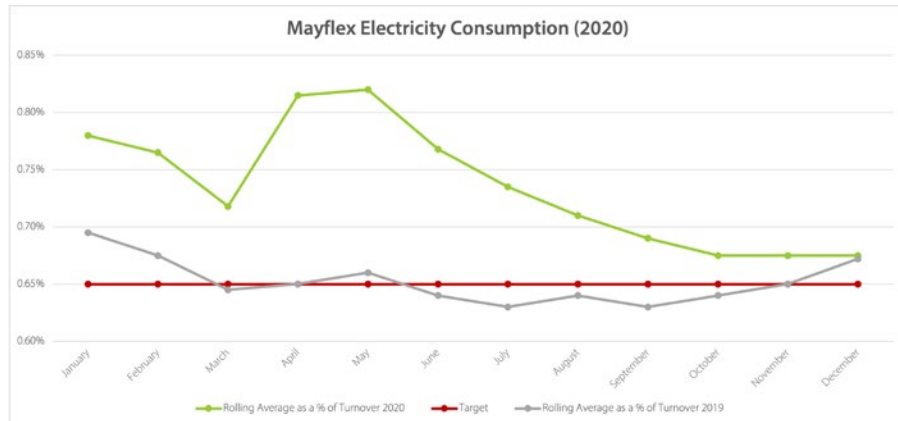
- Increase level of orders received through the web Y-o-Y by 20%
- Yearly paper consumption to be kept at or below 0.004% of the overall turnover
*In previous years it used to be 0.014% - **Achieved!***



- Yearly gas consumption to be kept at or below 0.30% of the overall turnover
*In previous years it used to be 0.65% - **Achieved!***

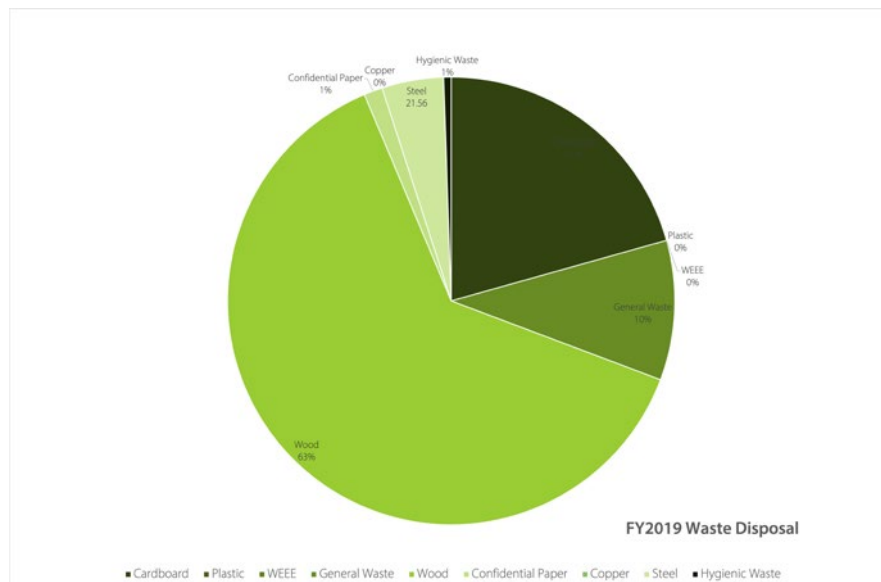


- Yearly electricity consumption to be kept at or below 0.65% of the overall turnover



Measurement to be monitored and evaluated yearly within Management Review:

- Waste to Landfill to be brought to be 0%



REACH and ROHS Compliance

Both REACH and ROHS are regulations of the European Union aiming at the protection of human health and the environment from the risks that can be posed by certain chemicals and hazardous substances. Excel is fully compliant with the above regulations and has put in place appropriate measures to ensure compliance for its supply chain.



View online

The Excel brand is owned by Mayflex and therefore falls under the Mayflex Quality Management System ISO 9001:2015

https://mayflex.com/sites/default/files/downloads/iso9-cert_20200923.pdf



View online

The Excel brand is owned by Mayflex and therefore falls under the Mayflex Environmental Management System ISO 14001:2015

https://mayflex.com/sites/default/files/downloads/iso_14001_cert_20171023.pdf