MULTI-LAYER COMPOSITE PIPE

Technical Standards and Approvals

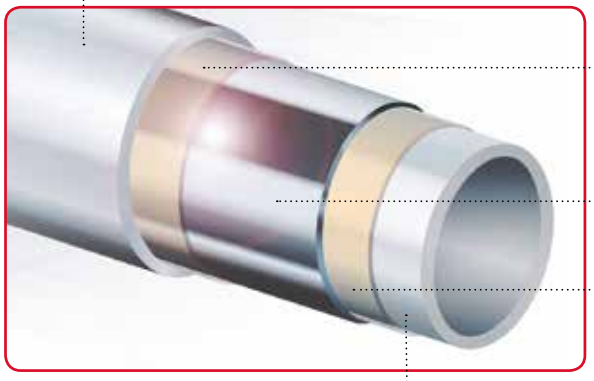
Use:
- Drinking water installation
- Radiator connection
- Underfloor heating

Standards:
- DIN EN ISO 21003
- DVGW W542

Approvals:
- SKZ A 462
- DVGW DW-8501 BU0326
- BS 6920
- WRAS

Pipe Composition

Maincor Multi-Layer Composite Pipe is made up of multiple layers (PE-RT / AL / PE-RT) as follows:



Outer Layer - Polyethylene raised temperature (PE-RT) plastic coat: protects the aluminium core and allows the outer shell to be coloured without contaminating the water.

Adhesive Layer - Interface zone between the outer PE-RT layer and the aluminium core. Bonds the materials together and prevents shear slippage.

Aluminium Layer - Thin layer of overlap welded aluminium which forms a 100% oxygen barrier to protect against corrosion and allows the pipe to have the 'formstable' characteristic.

Adhesive Layer - Interface zone between the inner PE-RT layer and the aluminium core. Bonds the materials together and prevents shear slippage.

Inner Layer - Inner layer of clear PE-RT. Inert and does not affect the water in any way. Allows for a smooth wall surface to reduce pressure drops for water flow.

Pipe Sizes

The pipe is available in straight 5m lengths from 16-63mm and in various coil sizes from 12-32mm. The availability of long pipe coils allows wastage to be kept to a minimum on site.

Quality Control

The pipe is manufactured in premises that are ISO 9001:2008 certified (quality management) and ISO 14001:2008 certified (environmental management). Manufacturing takes place in Germany to International Standards Organisation approved process, environmental and quality standards.

Self-monitoring in the form of constant control of the production line as well as external monitoring by an independent testing institute, guarantee adherence to all requirements for applicable pipe standards.

MULTI-LAYER COMPOSITE PIPE

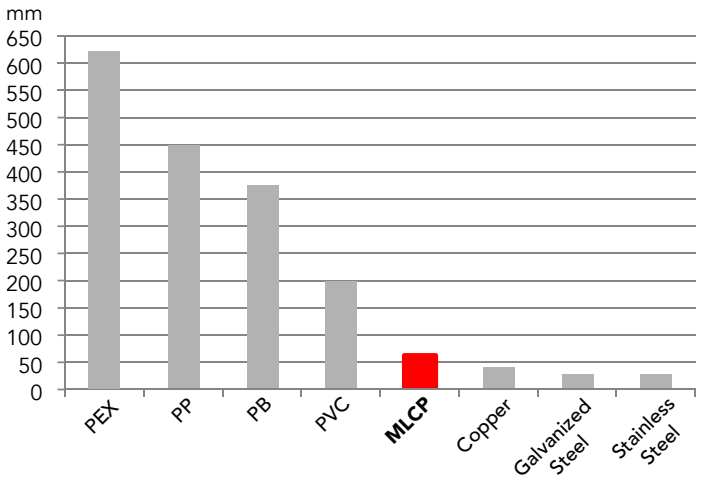
MLCP Data Summary

External diameter	mm	16 x 2	20 x 2.25	25 x 2.5	32 x 3	40 x 4	50 x 4.5	63 x 6
Internal diameter	mm	12	15.5	20	26	32	41	51
Aluminium thickness	mm	0.20	0.24	0.30	0.35	0.60	0.60	0.60
Length of coil	m	Various	100	50	50	-	-	-
Length of bar	m	5	5	5	5	5	5	5
Pipe weight	kg/m	0.105	0.148	0.225	0.320	0.650	0.778	1.200
Volume of water	l/m	0.113	0.189	0.314	0.531	0.803	1.32	2.041
Roughness of pipe	k (mm)	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
Thermal conductivity	W/(m x K)	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Coefficient of thermal expansion	mm/m x K	0.025	0.025	0.025	0.025	0.025	0.025	0.025
Bending radius (manual)	mm	(5 x D) 80	(5 x D) 100	(5 x D) 125	-	-	-	-
Bending radius (mechanical)	mm	(4 x D) 64	(4 x D) 80	(4 x D) 100	(4 x D) 128	-	-	-
Mounting distances θ = 70°C	m	0.80	0.90	0.90	0.90	-	-	-
Horizontal	m	1.20	1.30	1.50	1.60	1.30	1.50	1.60
Vertical	m	1.50	1.60	1.80	1.80	1.60	1.80	1.80

Thermal Expansion Considerations

Pipe expansion due to temperature changes needs consideration, particularly on long lengths of pipe. When laying MLCP, changes in length due to heating have to be taken into consideration. These changes in length must be able to happen without damaging the pipe and without making unwanted noise.

In small heating and sanitary systems, this expansion can be absorbed by changing the direction of the pipes. Expansion joints and/or fixed points should be installed in long runs of pipe (from approx. 20m in length). Please take any prior advice into consideration in your planning, conception and layout.



Linear expansion (mm) = coefficient of linear expansion (mm/m x K) x temperature difference (K)

The coefficient of linear expansion for the Maincor MLC pipe is:

α = 0.025 mm/m x K

Example, 50m length and a 50°Δt

50 x 0.025 x 50 = 62.5mm

The above graph shows the expansion of MLCP in comparison with other pipes. The expansion of the pipe is based on a 50m length and a Δt of 50°K

MULTI-LAYER COMPOSITE PIPE

MLCP Flow Rates at 60°C

Pressure Loss m(hd)/m	12mm kg/s	16mm kg/s	20mm kg/s	25mm kg/s	32mm kg/s	40mm kg/s	50mm kg/s	63mm kg/s	Velocity m/s
0.008	0.011	0.026	0.052 (0.3m/s)	0.105	0.214	0.375 (0.5m/s)	0.731	1.313	
0.009	0.012	0.028	0.056	0.112	0.229	0.401	0.781	1.402	
0.010	0.013	0.030	0.060	0.119	0.243	0.425	0.828	1.487	
0.011	0.013	0.031	0.063	0.126	0.256	0.449	0.874	1.569	
0.012	0.014	0.033	0.066	0.132	0.269	0.471	0.918	1.647	
0.013	0.015	0.034	0.069	0.139	0.282	0.493	0.960	1.722	
0.014	0.015	0.036	0.072	0.145	0.294	0.514	1.000	1.795	
0.015	0.016	0.037	0.075	0.150	0.305	0.534	1.040	1.865	
0.016	0.017	0.039	0.078	0.156	0.317	0.554	1.078	1.934	
0.017	0.017	0.040	0.081	0.161	0.328	0.573	1.115	2.000	(1.0m/s)
0.018	0.018	0.042	0.084	0.167	0.339	0.592	1.151	2.065	
0.019	0.018	0.043	0.086	0.172	0.349	0.610	1.187	2.128	
0.020	0.019	0.044	0.089	0.177	0.359	0.628	1.221	2.190	
0.021	0.019	0.045	0.091	0.182	0.369	0.646	1.255	2.250	
0.022	0.020	0.047	0.094	0.187	0.379	0.663	1.288	2.309	
0.024	0.021	0.049	0.098	0.196	0.398	0.696	1.352	2.423	
0.026	0.022	0.051	0.103	0.205	0.417	0.728	1.414	2.534	
0.028	0.023	0.054	0.107	0.214	0.434	0.759	1.474	2.640	
0.030	0.024	0.056	0.112	0.223	0.452	0.789	1.531	2.743	
0.032	0.025	0.058	0.116	0.231	0.468	0.818	1.588	2.843	
0.034	0.026	0.060	0.120	0.239	0.485	0.846	1.642	2.940	(1.5m/s)
0.036	0.027	0.062	0.124	0.247	0.500	0.873	1.695	3.035	
0.038	0.027	0.064	0.128	0.255	0.516	0.900	1.747	3.128	
0.040	0.028	0.066	0.132	0.262	0.531	0.926	1.798	3.218	
0.042	0.029	0.068	0.135	0.269	0.546	0.952	1.847	3.306	
0.044	0.030	0.069	0.139	0.277	0.560	0.977	1.895	3.392	
0.046	0.031	0.071	0.143	0.284	0.574	1.002	1.943	3.477	
0.048	0.031	0.073	0.146	0.290	0.588	1.026	1.989	3.560	
0.050	0.032	0.075	0.149	0.297	0.602	1.049	2.035	3.641	
0.052	0.033	0.076	0.153	0.304	0.615	1.073	2.080	3.721	
0.054	0.034	0.078	0.156	0.310	0.628	1.095	2.124	3.799	
0.056	0.034	0.080	0.159	0.317	0.641	1.118	2.167	3.877	
0.058	0.035	0.081	0.163	0.323	0.654	1.140	2.210	3.953	
0.060	0.036	0.083	0.166	0.329	0.666	1.162	2.252	4.027	
0.062	0.036	0.084	0.169	0.335	0.679	1.183	2.293	4.101	
0.064	0.037	0.086	0.172	0.342	0.691	1.204	2.334	4.174	
0.066	0.038	0.088	0.175	0.347	0.703	1.225	2.374	4.245	
0.068	0.038	0.089	0.178	0.353	0.715	1.246	2.414	4.316	
0.070	0.039	0.091	0.181	0.359	0.726	1.266	2.453	4.385	
0.072	0.040	0.092	0.184	0.365	0.738	1.286	2.491	4.454	
0.074	0.040	0.093	0.187	0.371	0.749	1.306	2.529	4.522	
0.076	0.041	0.095	0.189	0.376	0.760	1.325	2.567	4.589	
0.078	0.041	0.096	0.192	0.382	0.772	1.344	2.604		
0.080	0.042	0.098	0.195	0.387	0.783	1.364	2.641		
0.082	0.043	0.099	0.198	0.393	0.793	1.382	2.677		
0.084	0.043	0.100	0.200	0.398	0.804	1.401	2.713		
0.086	0.044	0.102	0.203	0.403	0.815	1.419	2.749		
0.088	0.044	0.103	0.206	0.408	0.825	1.438			
0.090	0.045	0.104	0.208	0.414	0.836	1.456			
0.092	0.046	0.106	0.211	0.419	0.846	1.474			
0.094	0.046	0.107	0.214	0.424	0.856	1.491			
0.096	0.047	0.108	0.216	0.429	0.866	1.509			
0.098	0.047	0.110	0.219	0.434	0.876	1.526			
0.100	0.048	0.111	0.221	0.439	0.886	1.544			
0.102	0.048	0.112	0.224	0.444	0.896	1.561			
0.104	0.049	0.113	0.226	0.449	0.906	1.578			
0.106	0.049	0.115	0.229	0.453	0.916				
0.108	0.050	0.116	0.231	0.458	0.925				
0.110	0.051	0.117	0.233	0.463	0.935				
0.112	0.051	0.118	0.236	0.468	0.944				
0.114	0.052	0.119	0.238	0.472	0.953				
0.116	0.052	0.121	0.240	0.477	0.963				
0.118	0.053	0.122	0.243	0.481	0.972				
0.120	0.053	0.123	0.245	0.486	0.981				
0.130	0.056	0.129	0.256	0.508	1.026				
0.140	0.058	0.134	0.267	0.530					
0.150	0.060	0.139	0.278	0.551					
0.160	0.063	0.145	0.288	0.571					
0.170	0.065	0.150	0.298	0.590					
0.180	0.067	0.155	0.308	0.610					
0.190	0.069	0.159	0.317	0.628					
0.200	0.071	0.164	0.326	0.646					

Source: CIBSE Domestic Heating Design Guide

MULTI-LAYER COMPOSITE PIPE

Classification of Operating Conditions

In accordance with ISO 10508 / EN ISO 21003. The applicable classes are shown in the table below:

Application Class	TD		Tmax		Tmal		Typical area of application
	°C	Time Years	°C	Time Years	°C	Time Hours	
1	60	49	80	1	95	100	Hot water supply (60°C)
2	70	49	80	1	95	100	Hot water supply (70°C)
4	20	2.5	70	2.5	100	100	Underfloor heating and low temperature radiator connections
	40	20					
	60	25					
5	20	14	90	1	100	100	High temperature radiator connection
	60	25					
	80	10					

T = Temperature, TD = Design temperature, Tmax = Maximum design temperature, Tmal = Fault temperature

All specified typical fields of application are recommendations and for guidance only.

Pipe performance requirements are specified for different application classes. Each application class relates to a typical area of application and takes into account a service life of 50 years.

All Maincor pipes are designed for a lifetime of 50 years.

Test Method

Obviously it is not possible to test products for 50 years, therefore testing methods exist that are able to predict the expected lifetime, by taking into account the properties of polymers and statistical methods. The polymers have a relationship between time and temperature in regard of macro-molecular processes, meaning that the same macro-molecular processes happen faster at higher temperatures than at lower temperatures. Therefore testing is performed at higher temperatures to predict the behaviour at lower temperatures over a longer period of time.

A long-term hydrostatic stress curve is derived from a statistical method described in ISO 9088 as SEM (Standard Extrapolation Method). To apply this SEM, the testing of pipe samples is carried out for a maximum of 1.5 years at 4 temperatures (20, 60, 95 and 110°C).

A variety of chosen pressures (loads) applied to the samples. Related to the different temperatures and loads, the samples will fail after different time periods have elapsed. From these failure points a mathematical correlation is derived that extrapolates a 70°C curve for 50 years. This curve defines a minimum load that the pipe is able to withstand in relation to the exposure time.

Each application class has a corresponding permissible operating pressure of 4, 6, 8 or 10 bar, depending on the particular application.

In real life, the temperatures are not constant, but will vary according to outside temperatures, the season etc. To consider these influences, application classes have been defined to describe time/temperature collectives for 50 years.

If we consider Application Class 2 for example: in 50 years the pipe is exposed to 70°C for 49 years, 80°C for 1 year and to 95°C for 100 hours. Together with pressure levels 4,6,8 and 10 bars, a 'virtual degradation' is calculated for every time-temperature pair. The sum of these degradations leads to a virtual lifetime prediction and this prediction has to be above 50 years. ISO 21003 describes this procedure in detail.

Use of Application Classes

Application classes provide designers and installers with a basis for the selection of suitable pipes for specific uses.

Maincor MLCP is suitable for all ISO 10508 application conditions (1, 2, 4 and 5) at 10 bar pressure condition, making the pipe extremely versatile.

Application Class 2 is the arguably the most onerous application condition and some plastic pipes in common use are unable to meet the requirements for this, limiting their use in applications like pump secondary returns or dead legs.

Because of statistical limitations, it is only valid to state that the pipe has a service life for 50 years under consideration of the application class and the pressure level. Lifetime predictions for longer time periods, other temperatures, other pressure levels or a permanent maximum temperature are not possible.

MULTI-LAYER COMPOSITE PIPE

MLCP Installation Principles

When installing Multi-Layer Composite Pipe ensure that all relevant health and safety legislation and local site regulations are fully adhered to at all times.

Site Storage

MLCP and ancillary products should be protected from mechanical damage/impairment and that caused by weather conditions and should be stored out of direct sunlight. For reasons of hygiene, surfaces in contact with water must be covered with end caps.

It is recommended that all MLCP system components are kept in their original packing until they are ready to be used, to protect them from damage.

Boxes of pipe coils should not be stacked above 2m and straight lengths of pipe should not be stored in a way that causes them to bend out of shape.

Fittings must not be thrown or handled roughly. Fittings with damaged 'O'-rings must not be used.

Cutting MLCP

Use a set of Maincor Cutters to enable a straight and accurate 90° cut on the pipe.

A range of cutter types are available to suit the pipe diameter.

Use a set of Maincor disc type cutters for pipes larger than 32mm.

Bevelling the Pipe

Prior to fitting connectors, the pipe is to be bevelled by inserting the bevelling tool and rotating the tool three full turns. This will put a 45° chamfer on the pipe and the pipe will be ready to take the fitting.

Bevelled pipe, check to ensure there are no burrs.

MULTI-LAYER COMPOSITE PIPE

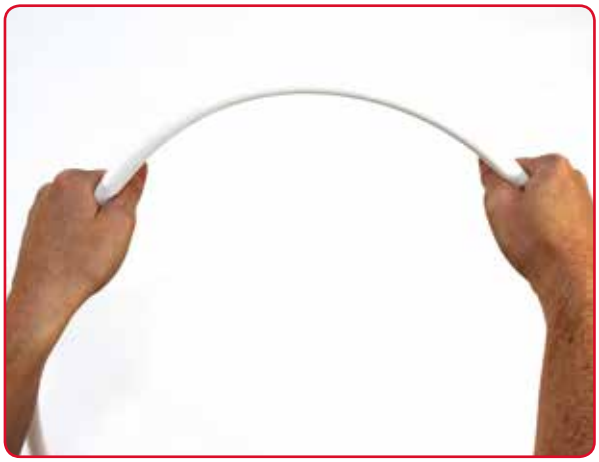
MLCP Installation Principles

Bending the Pipe

The product is extremely flexible like plastic pipes, allowing it to be easily bent by hand, combined with formstability allows it to stay in place when bent without springing back.

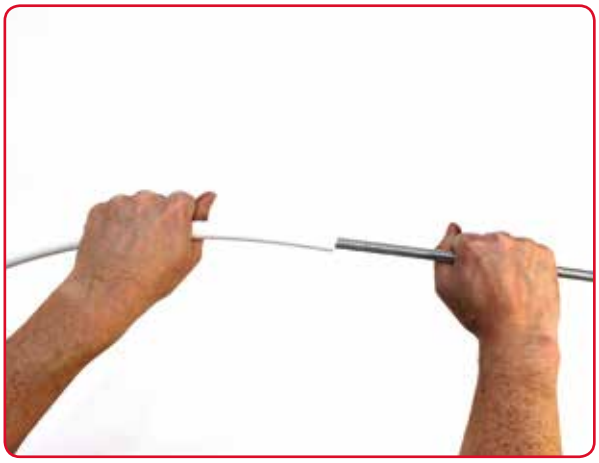
See the table below for minimum possible bending radius. Maincor Bending Springs can be used to form an accurately curved bend for any parts of the installation which may be visible.

MLCP must not be bent by means of an open flame or other heat source. The pipe also should not be repeatedly bent at the same point. If the minimum bending radius cannot be met, a corresponding fitting such as an elbow should be used.



Bending the pipe by hand.

If the pipes are bent by hand, both hands should be used in order to prevent buckling of the pipe bend. The pipes may not be bent directly at any connections to avoid putting stress on the joints.



Bending the pipe using an Internal Bending Spring.

When bending with the inner flexible spring, the pipe end must firstly be de-burred (see Bevelling the Pipe). During the bending procedure, the ribs of the flexible spring must not be visible on the outer coating.

Bending the pipe using an External Bending Spring.

Size	Bending radius by hand (5 x d)	Bending radius using flexible springs (4 x d)	Bending radius using machine (4 x d)
16 x 2.0mm	80mm	64mm	64mm
20 x 2.25mm	100mm	80mm	80mm
25 x 2.5mm	125mm	100mm	100mm
32 x 3.0mm	-	-	128mm

⚠ ***The specified minimum bending radii must not be exceeded.***

MULTI-LAYER COMPOSITE PIPE

MLCP Installation Principles

Laying the Pipe

Pipelines in the floor structure must be planned in such a way that they do not to cross. The pipelines should be made as straight as possible, in parallel to the walls and the axis. As a rule, pipeline crossings lead to larger construction heights. This can be avoided by careful planning. Pipe clips and fastening materials for the Multi-Layer Composite Pipe system may only be used if these are suitable for the pipe material and the pipe diameter. Requirements regarding clip protection and length expansion must be considered.

Notching Joists

- **Notching solid joists** - Holes should be drilled or notched in accordance with BS6700, BS5449 and NHBC regulations.
- **Engineered 'I' joists** - Maincor MLC pipe is ideal for 'cabling through' the pre-fabricated knockouts in TJI joists or fed through metal web joists. MLCP is formstable and strong enough to span between joists without sagging down (ordinary plastic pipes have a tendency to sag down when hot water is running through them).

Design Considerations:

- When fastening, the entire weight of the system during operation must be considered.
- Wall and ceiling openings must be executed such that the building regulations in the areas of fire protection (Approved Document B) and sound insulation (Approved Document E) are adhered to.

  See page 22 for more details.
- Direct contact with walls and concrete surfaces should be avoided.
- MLCP and fittings must be protected from external influences such as aggressive media and materials, UV radiation and saline air.

MULTI-LAYER COMPOSITE PIPE

MLCP Installation Principles

Clipping Distances

The following table represents the maximum spacings between clips for different pipe diameters:

Maincor pipe clips with self closing clamps can be used for fast and easy installation.

Pipe Dimensions OD x Wall Thickness (mm)	Maximum mounting distance between pipe clips			Pipe weight with 10°C water filling / without insulation	
	Horizontal		Vertical (m)	Coil (kg/m)	Straight Length (kg/m)
	Coil (m)	Straight Length (m)			
12 x 1.6	1.20	-	1.70	0.128	-
16 x 2.0	1.20	1.60	1.70	0.217	0.217
20 x 2.25	1.30	1.60	1.70	0.337	0.337
25 x 2.5	1.50	1.80	2.00	0.539	0.539
32 x 3.0	1.60	1.80	2.10	0.861	0.861
40 x 4.0	1.70	2.00	2.20	-	1.312
50 x 4.5	2.00	2.00	2.60	-	2.065
63 x 6.0	2.20	2.20	2.85	-	3.267

Pipe Damage and Repair

Damage to MLCP

If a pipe is buckled or damaged in any way, it must be replaced or a corresponding fitting must be used.

Damaged pipe sections can be repaired using Maincor press couplers or compression fittings. Further information can be found in the Branch Plumbing section.

Damage From Vermin

It is not unheard of for rodents to gnaw plastic pipes and PVC cables. MLCP and fittings do not attract vermin and damage is highly unlikely in service. Although Maincor have not experienced reports of vermin attacking MLCP and fittings, it's recommended that they are protected from vermin as we can't guarantee that they won't be damaged.

Using Freezing Kits to Repair Pipe

Freezing Kits are sometimes used to temporarily freeze a short section of pipe to enable a repair without draining the water out of the system.

There are many different types of kits available on the market which are typically designed for use with copper or steel pipes. Depending on the type of kit, they typically operate at -30, -70 or -120°C.

The type of pipe used will influence the amount of time taken to create an ice plug. If, when using freezing kits, the ice plugs are positioned too close, there is a danger that there is no room for expansion which will cause the pipe to burst. This is due to the frozen water expanding by around 9%, although this may vary depending on the type and concentration of any inhibitor or anti-freeze in the system.

⚠ ***Maincor have not tested or approved any freezing kits for use with MLCP and therefore can't warrant the suitability of freezing kits with Maincor pipe.***

MULTI-LAYER COMPOSITE PIPE

Building Regulations and Associated Documents

When designing and installing Multi-Layer Composite Pipe systems, ensure that Building Regulations and relevant guidance documents are adhered to. For example:

Fire Safety (Approved Document B)

Building Regulations Approved Document B provides practical guidance on meeting the fire safety requirements of the Building Regulations 2000 for England and Wales. The equivalent document for Scotland is the Technical Handbook (Fire - section 2).

Approved Document B is split into 2 volumes:

- Volume 1 covers 'dwelling houses'
- Volume 2 covers buildings other than 'dwelling houses'

These documents classify the use of a building into groups (e.g. schools, hospitals, flats, etc) and specify minimum periods of fire resistance to be achieved by the building elements. The periods of fire resistance needed will vary according to the use and the size of building (e.g. 30, 60, 90 and 120 minutes are common). The greater the fire hazard a building presents, then the greater the period of fire resistance required to protect the elements within the building. The materials used to form the internal surfaces of the building are also controlled to reduce the risk of fire growth and internal fire spread.

Maincor MLCP is a class B2 building material in accordance with DIN 4102.

Hospitals and Schools also have additional specific guidance around fire safety, the relevant documents are Health Technical Memorandum (HTM) 05 and Building Bulletin (BB) 100 respectively. Equivalent versions of these are also available for Scotland.

Maintaining Compartmentation

The spread of fire within a building can be restricted by sub-dividing it into 'compartments' separated from one another by fire resisting walls and/or floors (e.g. rated at 30, 60, 90 or 120 minutes etc).

The two key objectives are:

- **To prevent rapid fire spread, which could trap occupants within the building.**
- **To reduce the chance of fires becoming large presenting a danger to occupants, the fire service or adjacent buildings.**

In most cases, building elements such as walls and floors are imperforate when tested for fire resistance. However, in practice, service routings and penetrations need to be accommodated. Approved Document B provides extensive guidance on how to fire stop pipes and other service penetrations.

Note that it is likely that a specialist contractor will be appointed for the fire sealing activities on the project. It is important that the various contractors involved in the junction detailing (e.g. M&E Contractor, Drylining Contractor and Fire Protection Specialist) work together with the developer to maintain the compartmentation of the walls / floors.

Acoustics (Approved Document E)

Building acoustics covers the minimisation of noise transmission from one space to another and the control of noise levels within a space. The best defence against unwanted noise is to ensure that proper precautions are taken at the design stage and during construction of the building. Small openings such as gaps and holes made for service penetrations will conduct noise and can reduce the sound insulation of a construction. For optimum sound insulation a wall / ceiling junction must be made airtight using sealants etc.

Building Regulations Approved Document E provides practical guidance on meeting the acoustics requirements of the Building Regulations. The equivalent document for Scotland is the Technical Handbook section 5.

Hospitals and Schools also have additional specific guidance around building acoustics, the relevant documents are Health Technical Memorandum (HTM) 08-01 and Building Bulletin (BB) 93 respectively.

Electrical Requirements

The installation of electrical services must always be carried out strictly in accordance with BS 7671 'Requirements for Electrical Installations'. IET Wiring Regulations.

⚠ ***Maincor MLCP is a non-conductive pipe it cannot be used for equipotential bonding and should not be grounded.***

NHBC Traceability requirements

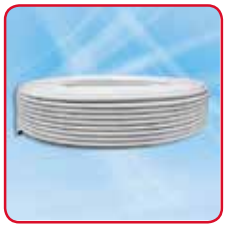
NHBC Standards Chapter 8.1 'Internal Services' states that concealed pipework installed just behind a wall surface must be detectable, to enable the pipe to be easily located in the event of damage causing water leakage (e.g. for when the occupier wants to drill into the wall etc).

Usually plastic pipes will need to be wrapped in metal tape (or have the tape located behind the pipe) to aid detection with an electronic pipe / metal detector. Due to the aluminium layer within the MLCP construction, Maincor pipes are easily detected and therefore additional metal tape is unnecessary.

MULTI-LAYER COMPOSITE PIPE

Key Components

Maincor MLCP, PE-RT/AL/PE-RT Coils



Maincor MLCP, PE-RT/AL/PE-RT, overlap welded aluminium Multi-Layer 100% barrier Composite Pipe, supplied in coils.

Available in 12, 16, 20, 25 and 32mm.

Maincor MLCP, PE-RT/AL/PE-RT Straight Lengths

Maincor MLCP, PE-RT/AL/PE-RT, overlap welded aluminium Multi-Layer 100% barrier Composite Pipe, supplied in 5m straight lengths.

Available in 16, 20, 25, 32, 40, 50 and 63mm.

Maincor Pipe in Conduit Coils

Maincor 16 and 20mm MLCP supplied in red or blue conduit.

Maincor Pre-Insulated Pipe Coils

Maincor pre-insulated MLCP supplied in 9mm or 13mm insulation.

Available in 16, 20 and 25mm.

Maincor Conduit

Maincor pipe conduit for 12, 16, 20, 25 and 32mm pipe.
NB. In addition, Maincor makes a wide range of conduits in sizes from 8mm up to 200mm, in any colour, catering for special resistances to temperature, oils and chemicals. Details available on request.

Bevelling Tool

A range of tools for bevelling Maincor MLCP prior to inserting fittings.

Pipe Cutting Tools

Cutting Tool for use with Maincor MLCP, with a range of cutters up to 63mm.

Internal Bending Spring

Maincor Internal Bending Springs can be used to form an accurately curved bend for the parts of the installation that are visible.

External Bending Spring

Maincor External Bending Springs can be used to form an accurately curved bend for the parts of the installation which will be visible.

Pipe De-Coiler

Maincor Pipe De-Coilers are for use with Maincor MLCP coils. They can be used with pipe of up to 25mm diameter and a maximum coil length of 500m.