PERFORMANCE

When correctly installed Mission Rubber's range of couplings, bushes and ancillary products will withstand the following water pressures:-

STANDARD COUPLINGS AND BUSHES

Up to 620mm diameter	2.5 bar	Plumbing Couplings	0.6 bar
635mm to 995mm diameter	1.0 bar	Plumbing Fittings	0.6 bar
Over 995mm diameter	0.6 bar	End Caps	0.5 bar
Extra Wide Couplings	0.6 bar	Flexible Saddles	0.5 bar
Drain Couplings	0.6 bar	Wall Seals	0.5 bar
Adaptor Couplings	0.6 bar		

SITE TESTING

Mission Rubber Couplings and Bushes will withstand the air and water tests specified in BS EN 1610 "Construction and testing of Drains and Sewers" These tests are part of the requirements of the Civil Engineering Specification for the Water Industry, Sewers for Adoption, Sewers for Scotland and Approved Document H of the Building Regulations.

LONG TERM PERFORMANCE

There are two aspects which affect the long term performance of a coupling. These are the durability of the materials and the maintenance of an adequate sealing pressure between the coupling and the pipe.

In terms of durability, research and experience has shown that synthetic elastomers such as EPDM and SBR have excellent durability on sewerage, drainage and plumbing systems operating at normal temperatures (below 80 Deg C continuous) and which do not contain harmful industrial effluents. Furthermore austenitic stainless steel, either 1.4301 or 1.4401 depending upon ground conditions has also been shown to have excellent durability according to BS EN 10086.

Long term sealing performance is a function not only of the characteristics of the elastomer but also of the ability of the end clamps to convert tightening torque into clamping force. The choice of synthetic elastomers conforming to EN 681-1 together with clamping bands manufactured to Mission's own specification means that when clamps are tightened to the recommended torque then after 50 years plus the sealing pressure will still be more than sufficient to maintain a leak tight seal.

Overall, Mission is confident that when their products are correctly specified and installed they will have a design life of 100 years.

CLAMPING SYSTEMS

To resist hydrostatic pressure, both internal and external, as well as root penetration it is necessary to provide a minimum contact pressure between the coupling and the pipe. For a satisfactory design life this contact pressure needs to be the 50 year figure, not the as-installed figure. To ensure that this 50 year figure is attained when a coupling is correctly installed (see page 17) we recommend tightening torques for the end clamps, which are dependent upon the size of the coupling.

Three types of end clamp are used, depending upon the coupling size. Two are worm drive clamps with perforated bands, which are self cleaning should the band become coated in mud or sand. The third is a unique design of bolted clamp specially designed for large diameter couplings.

RECOMMENDED TIGHTENING TORQUES

PRODUCT	CLAMP TYPE	RECOMMENDED TORQUE (Nm)
Standard/Extra Wide Coupling	Hi-Torque	
Up to 300mm diameter (MSC290)		10
300 to 620mm diameter (MSC620)		13
Large Standard/Extra Wide Cplg	Bolted	
Up to 1200 diameter		20
Over 1200 diameter		25
Drain Couplings	Medium Duty	6
Adaptor Couplings	Medium Duty	6
Plumbing Couplings	Medium Duty	6
Plumbing Fittings	Medium Duty	6
Flexible Saddles	Medium Duty	6
Lateral Connectors	Medium Duty	6