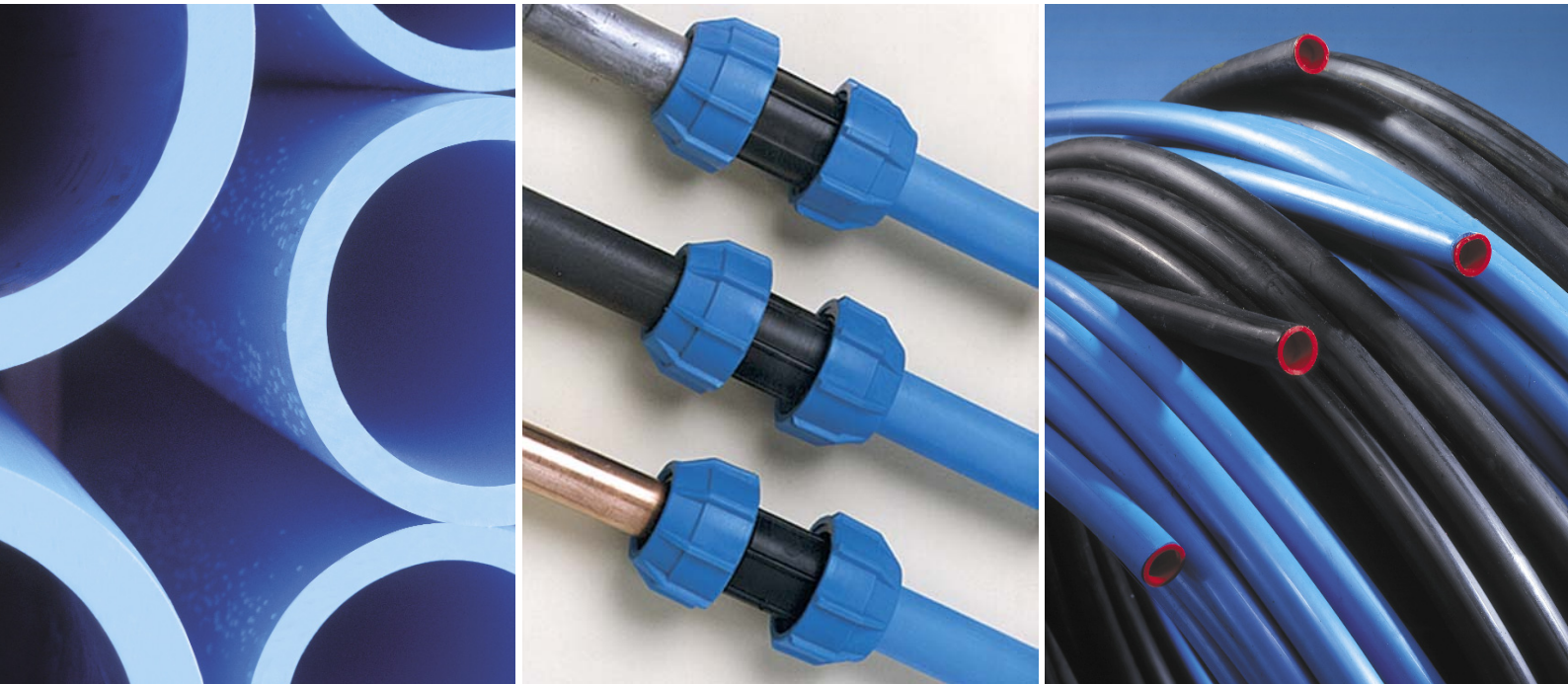


# Cold Water Supply Systems

PG3 NOVEMBER 2010

EFFECTIVE: 1ST NOVEMBER 2010

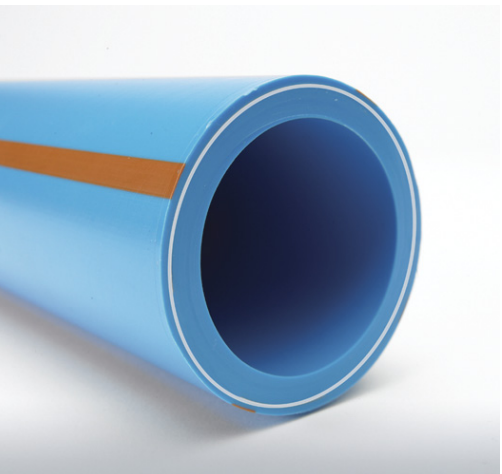


## Product Guide

November 2010



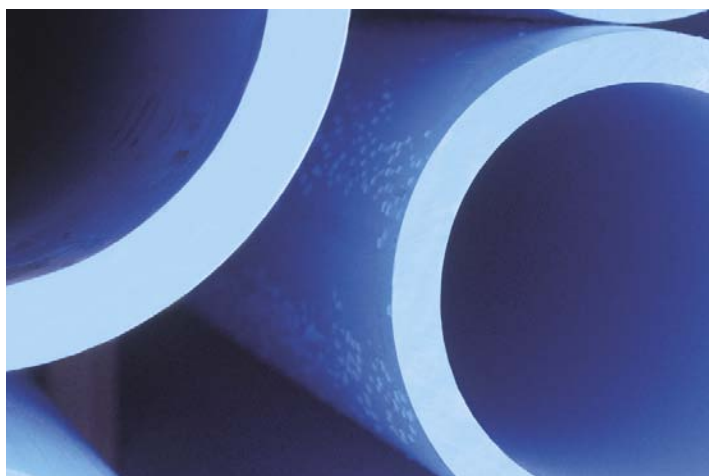
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# INTRODUCTION



Polypipe manufactures a comprehensive range of polyethylene pipes and fittings for use in potable and non-potable applications.

Polyethylene pipe systems offer many benefits to the water engineer, including

- Lower weight for easier handling and reduced health and safety risks
- Cost savings due to faster installation
- Long lengths for reduced jointing operations
- Greater flexibility, offering superior performance where ground movements occur
- Superior abrasion resistance
- Excellent resistance to corrosion and a wide range of chemicals
- Smooth internal bores for excellent flow rates

## APPLICATIONS

Polyethylene pipe systems are widely used for:

- Cold water distribution systems and waste water

They are not suitable for hot water applications, compressed air or chemical waste applications or fuel lines eg. petrol, diesel or gas pipework.

## QUALITY ASSURANCE

The company operates a comprehensive quality assurance system to BS EN ISO 9002 applicable to all manufactured products and which has been accepted by the British Standards Institution and has 13 BSI Kitemark Licences. The company is a BSI Registered Firm of Assessed capability for the manufacture of PE pressure pipes to WRC standards.

## INSTALLATION

Polypipe Polyethylene Pipe systems should be installed in accordance with the Water Industries Manual for PE pipe systems for Water Supply and the Codes of Practice for PE Pipework CP312 Parts 1 and 3.

The normal minimum depth of cover for service pipes is 750mm.

In uniform, soft soils free from sharp stones having a compaction fraction of less than 0.3, the pipes can be laid on the trimmed trench bottom and the as-dug soil can be used for side and backfill.

Thorough compaction by hand should be carried out until 250mm depth of cover is placed above the pipe following which machine compaction can be used. If the as-dug material is not suitable, then the trench should be excavated 100mm below the centre of the pipe and imported granular or similar bedding and fill in accordance with WIS 4.08.01 should be used. Polyethylene pipe systems are not suitable for use as an electrical earth

## POLYFAST COMPRESSION

An economical compression system for jointing MDPE, LDPE, HDPE, normal gauge and heavy gauge polyethylene, copper, lead, PVCu and galvanised steel.

## ELECTROFUSION

A simple to follow fusion system, requires Electro Fusion control box with 110v electricity supply.

## HANDLING AND STORAGE

Do not use metallic slings as these can cause cuts and gouges.

Ensure that pipes and fittings do not come into contact with oils/solvents or heat sources (polyethylene is flammable). Avoid contact with sharp objects and do not drag pipes across the ground.

For storage periods outdoors longer than 12 months blue products should be stored under cover. Particular care should be exercised when handling pipes/fittings in wet or frosty conditions as the pipes/fittings will be slippery and difficult to handle.

## TESTING

Pressure test to 1.5 times the actual working pressure for 1 hour maximum before connecting the installation to the mains supply. Any permissible fall off in pressure after isolating from the pressure source will be determined by the Site Engineer in accordance with the WRC Manual for PE Pipe Systems. Sanitisation of the pipework prior to connection to carry Potable Water should be in accordance with the recommended procedure of the responsible Water Authority.



# SERVICE PIPES & FITTINGS



## FEATURES:

- **Sound joint integrity** gives reliable trouble free service.
- **Simple and quick** to use for speedy installation.
- **PN12.5 Pressure Rating** gives increased safety factor.
- **Pipe and fittings** from one British manufacturer.
- **End load resistant** – pull out is prevented by grab ring/pipe stiffener/insert.
- **Robust** high impact resistance.
- **Tough** to withstand damage even at low temperatures.
- **Seals** are pre-lubricated.

## MATERIALS:

Polyfast compression fittings are manufactured with engineering plastic bodies and grab rings with EPDM Rubber seals kitemarked to BS EN681-1 and engineering plastic stiffeners and retaining nuts.



## SERVICE PIPES

Blue MDPE pipes in diameters from 20 to 63mm are designed for underground potable water services for the connection of individual properties to distribution mains and are kitemarked to BS EN 12201.

Black MDPE pipes in diameters from 20 to 63mm are used for potable water above ground and are also kitemarked to BS EN 12201. Black MDPE pipe can also be used for non potable water applications.

All service pipes are available in coil sizes of 25, 50, 100 and 150 metres.

## FITTINGS

MDPE Service pipes may be jointed using Polyfast or electrofusion fittings.

Black LDPE pipes are jointed using Polyfast compression fittings using the BS 1972 adaptors.

## POLYFAST FITTINGS

Polyfast fittings are economical compression fittings for jointing pipes manufactured to BS EN 12201. Polyfast fittings are manufactured in diameters from 20 to 63mm to the requirements of WIS 4.32.11 and hold WFBS Certificate No. 9503041.

Polyfast features include

- Sound joint integrity gives reliable trouble free service
- Simple and quick to use for rapid installation
- Manufacture with engineering plastic bodies and grab rings with EPDM rubber seals to BS EN 681-1 and engineering plastic stiffeners and retaining nuts.
- 12.5 bar pressure rating offers a high safety factor
- End load resistant design, with pull out prevented by the grab ring, pipe stiffener and insert
- Robust construction with high impact resistance
- Tough, even at low temperatures
- Pre-lubricated seals

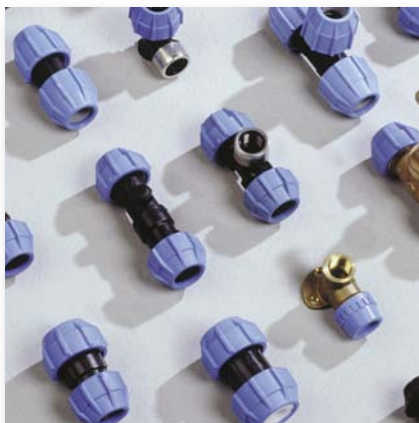
## ELECTROFUSION FITTINGS

Electrofusion fittings are a simple to use jointing system for connecting pipes to BS EN 12201. 12 bar rated socket fittings are used which consist of an injection moulded polyethylene body with an integral heating element and 2 terminals. Fittings are available in blue or black and are manufactured in accordance with WIS 4-32-08.

Fusion occurs when fittings are energised by means of a 39.5 Volt electrofusion control box connected to a suitable 110V supply with a minimum rating of 4 kVA. Each fitting is marked with the appropriate fusion and cooling time.

### **Compression Fittings in sizes 20mm to 63mm OD, to the requirements of WRC WIS 4.32.11 are Adaptable for Polyethylene, Lead, Copper and Galvanised Iron**

- 20mm to 63mm • MDPE to BS6572 and BS6730 • 3/8 inch to 2 inch LDPE to BS1972:1967 Class C and D • HDPE to BS3284:1967 Class C and D • LDPE to BS1972:1961 Normal and Heavy Gauge (IS134-1977) • Copper to BS2871 Table X and Y BS659, BS1386 • Lead to BS602/1085:1970 • PVC to BS3505:1986 • Galvanised Steel to BS1387:1985.



# MDPE SERVICE PIPE

## SERVICE PIPE MDPE BLUE PE80 12.5 BAR PRESSURE



Approved to BS EN12201

| Nom Size O.D. (mm) | 6m Straight Length | 25m Coil Product Code | 50m Coil Product Code | 100m Coil Product Code | 150m Coil Product Code | Approx kg/m | Min Wall Thickness mm |
|--------------------|--------------------|-----------------------|-----------------------|------------------------|------------------------|-------------|-----------------------|
| 20                 |                    | 2025BU                | 2050BU                | 20100BU                | 20150BU                | 0.13        | 2.3                   |
| 25                 |                    | 2525BU                | 2550BU                | 25100BU                | 25150BU                | 0.17        | 2.3                   |
| 32                 |                    | 3225BU                | 3250BU                | 32100BU                | 32150BU                | 0.28        | 3.0                   |
| 50                 | 5006BU             | 5025BU                | 5050BU                | 50100BU                | 50150BU                | 0.67        | 4.6                   |
| 63                 | 6306BU             | 6325BU                | 6350BU                | 63100BU                | 63150BU                | 1.05        | 5.8                   |

## SERVICE PIPE MDPE BLACK PE80 12.5 BAR PRESSURE



Approved to BS EN12201

| Nom Size O.D. (mm) | 6m Straight Length | 25m Coil Product Code | 50m Coil Product Code | 100m Coil Product Code | 150m Coil Product Code | Approx kg/m | Min Wall Thickness mm |
|--------------------|--------------------|-----------------------|-----------------------|------------------------|------------------------|-------------|-----------------------|
| 20                 |                    | 2025B                 | 2050B                 | 20100B                 | 20150B                 | 0.13        | 2.3                   |
| 25                 |                    | 2525B                 | 2550B                 | 25100B                 | 25150B                 | 0.17        | 2.3                   |
| 32                 |                    | 3225B                 | 3250B                 | 32100B                 | 32150B                 | 0.28        | 3.0                   |
| 40                 |                    | -                     | -                     | 40100B                 | -                      | 0.50        | 3.7                   |
| 50                 | 5006B              | 5025B                 | 5050B                 | 50100B                 | 50150B                 | 0.67        | 4.6                   |
| 63                 | 6306B              | 6325B                 | 6350B                 | 63100B                 | 63150B                 | 1.05        | 5.8                   |

## SERVICE PIPE MDPE BLACK PE80 8 BAR PRESSURE

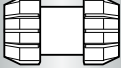





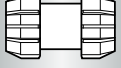
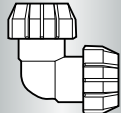
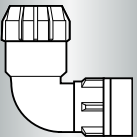




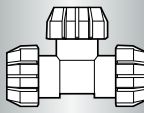
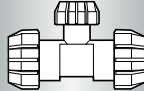
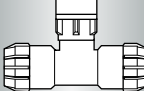
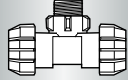
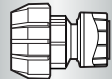



Approved to BS EN12201

| Nom Size O.D. (mm) | 25m Coil Product Code | 50m Coil Product Code | 100m Coil Product Code | 150m Coil Product Code | Approx kg/m | Min Wall Thickness mm |
|--------------------|-----------------------|-----------------------|------------------------|------------------------|-------------|-----------------------|
| 50                 | -                     | -                     | 5008100B               | -                      | 0.40        | 2.9                   |
| 63                 | -                     | -                     | 6308100B               | -                      | 0.64        | 3.6                   |


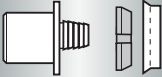
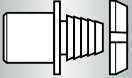


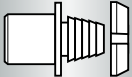
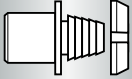


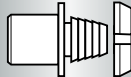
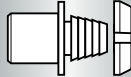
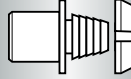
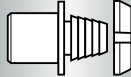


# POLYFAST COMPRESSION SERVICE FITTINGS

| COMPONENT   | PRODUCT DESCRIPTION  | CODE NUMBER   |
|---|--|---|
|    | <b>Straight Coupler</b><br>20mm<br>25mm<br>32mm<br>40mm<br>50mm<br>63mm  | 40020<br>40025<br>40032<br>40040<br>40050<br>40063            |
|    | <b>Slip/Repair Coupler</b><br>20mm<br>25mm<br>32mm<br>40mm<br>50mm<br>63mm   | 40020S<br>40025S<br>40032S<br>40040S<br>40050S<br>40063S      |
|    | <b>Reducing Coupler</b><br>25 x 20mm<br>32 x 20mm<br>32 x 25mm<br>40 x 32mm<br>50 x 32mm<br>50 x 40mm  | 40625<br>4063220<br>40632<br>40640<br>4065032<br>40650        |
| <br>Taper BSP thread to BS21-Use PTFE tape to seal the threads | <b>Imperial Mail Iron x PE Coupler</b><br>1/2"<br>3/4"<br>1"   | 49012<br>49034<br>4901  |
| <br>Complete with stainless steel reinforcing shroud         | <b>Female Adaptor</b><br>20mm x 1/2" BSP<br>25mm x 1/2" BSP<br>25mm x 3/4" BSP<br>32mm x 1" BSP<br>40mm x 1 1/4" BSP<br>50mm x 1 1/2" BSP<br>63mm x 2" BSP | 40320<br>4032512<br>40325<br>40332<br>40340<br>40350<br>40363 |
|    | <b>Male Adaptor</b><br>20mm x 1/2" BSP<br>25mm x 1/2" BSP<br>25mm x 3/4" BSP<br>32mm x 1" BSP<br>40mm x 1 1/4" BSP<br>50mm x 1 1/2" BSP<br>63mm x 2" BSP   | 40420<br>4042512<br>40425<br>40432<br>40440<br>40450<br>40463 |
|    | <b>Metric to Imperial Coupler</b><br>20mm x 1/2"<br>25mm x 1/2"<br>25mm x 3/4"   | 48120<br>4812512<br>48125                                     |
|    | <b>Elbow</b><br>20mm<br>25mm<br>32mm<br>40mm<br>50mm<br>63mm   | 40120<br>40125<br>40132<br>40140<br>40150<br>40163            |
| <br>Complete with stainless steel reinforcing shroud          | <b>Female Elbow</b><br>20mm x 1/2" BSP<br>25mm x 3/4" BSP<br>32mm x 1" BSP<br>40mm x 1 1/4" BSP<br>50mm x 1 1/2" BSP<br>63mm x 2" BSP                      | 42120<br>42125<br>42132<br>42140<br>42150<br>42163            |

| COMPONENT   | PRODUCT DESCRIPTION  | CODE NUMBER  |
|---|--|--|
|    | <b>Male Elbow</b><br>20mm x 1/2" BSP<br>25mm x 3/4" BSP<br>32mm x 1" BSP   | 42320<br>42325<br>42332                            |
|    | <b>Tank Connector</b><br>25mm x 3/4" BSP   | 42525  |
|   | <b>Equal Tee</b><br>20mm<br>25mm<br>32mm<br>40mm<br>50mm<br>63mm   | 40220<br>40225<br>40232<br>40240<br>40250<br>40263 |
|   | <b>Branch Reducing Tee</b><br>25 x 20mm<br>32 x 20mm<br>32 x 25mm  | 41125<br>4113220<br>41132                          |
| <br>Complete with stainless steel reinforcing shroud          | <b>Female Branch Tee</b><br>20mm x 1/2" BSP<br>25mm x 3/4" BSP<br>32mm x 1" BSP<br>40mm x 1 1/4" BSP<br>50mm x 1 1/2" BSP<br>63mm x 2" BSP | 42220<br>42225<br>42232<br>42240<br>42250<br>42263 |
|    | <b>Male Branch Tee</b><br>20mm x 1/2" BSP<br>25mm x 3/4" BSP   | 42420<br>42425                                     |
|    | <b>Copper Adaptor</b><br>20mm x 15mm (1/2")<br>25mm x 15mm (1/2")<br>25mm x 22mm (3/4")<br>32mm x 22mm (3/4")<br>32mm x 28mm (1")          | 47820<br>4782515<br>47825<br>4783222<br>47832      |
|    | <b>End Plug</b><br>20mm<br>25mm<br>32mm<br>40mm<br>50mm<br>63mm  | 40920<br>40925<br>40932<br>40940<br>40950<br>40963 |
| <br>Fits Polyfast sockets<br>Pipe stiffeners should be used. | <b>Stop End (Blue MDPE)</b><br>20mm<br>25mm<br>32mm<br>40mm<br>50mm<br>63mm  | 30920<br>30925<br>30932<br>30940<br>30950<br>30963 |
|    | <b>12.5 Bar Plastic Pipe Stiffener</b><br>20mm<br>25mm<br>32mm<br>40mm<br>50mm<br>63mm   | 46420<br>46425<br>46432<br>46440<br>46450<br>46463 |
|   | <b>8 Bar Plastic Pipe Stiffeners</b><br>50mm<br>63mm   | 47450<br>47463                                     |

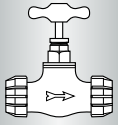
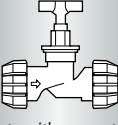
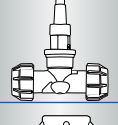
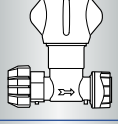
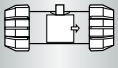
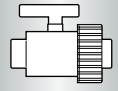
# POLYFAST COMPRESSION SERVICE FITTINGS



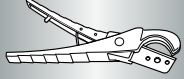
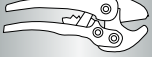
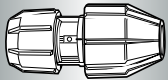
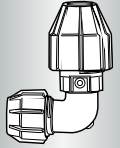
| COMPONENT  | PRODUCT DESCRIPTION  | CODE NUMBER              |
|--|--|--------------------------|
|  <p>*Only used with 25x20mm, 32x25mm and 63x50mm</p>   | <b>MDPE Hi-Flow Reducing Set</b>   |                          |
|  | 25mm x 20mm  | 4802520                  |
|  | 32mm x 20mm  | 4803220                  |
|  | 32mm x 25mm  | 4803225                  |
|  | 50mm x 20mm  | 4805020                  |
|  | 50mm x 25mm  | 4805025                  |
|  | 50mm x 32mm  | 4805032                  |
|  | 63mm x 20mm  | 4806320                  |
|  | 63mm x 25mm  | 4806325                  |
|  | 63mm x 32mm  | 4806332                  |
|  | 63mm x 50mm  | 4806350                  |
|  |  <p>For MDPE BS6572 and BS6730</p> | <b>MDPE Reducing Set</b> |
| 25 x 20mm  |  | 4712520                  |
| 32 x 20mm  |  | 4713220                  |
| 32 x 25mm  |  | 4713225                  |
| 50 x 20mm  |  | 4715020                  |
| 50 x 25mm  |  | 4715025                  |
| 50 x 32mm  |  | 4715032                  |
| 63 x 20mm  |  | 4716320                  |
| 63 x 25mm  |  | 4716325                  |
| 63 x 32mm  |  | 4716332                  |
| 63 x 50mm  | 4716350  |                          |
|  <p><b>Light Grey</b><br/>(BS602, 1085)</p>  | <b>Lead Adaptor Set</b>  |                          |
|  | 20mm x 3/8" 5lb  | 46920                    |
|  | 25mm x 1/2" 7lb  | 46925                    |
|  | 32mm x 3/4" 11lb   | 46932                    |
|  | 32mm x 3/4" 9lb  | 469329                   |
| 40mm x 1" 16lb   | 46940  |                          |
|   | <b>Wider Tolerance Lead Coupler</b>  |                          |
|  | 25mm x 3/8" 5lb Lead   | 479385                   |
|  | 25mm x 1/2" 7lb Lead   | 479127                   |
|  | 25mm x 1/2" 9lb Lead   | 479129                   |
|  | 25mm x 3/4" 9lb Lead   | 479349                   |
|  | 32mm x 3/4" 11lb Lead  | 4793411                  |
| 25mm x 1" 16lb Lead  | 479116   |                          |
|   | <b>Copper Adaptor Set</b>  |                          |
|  | 20 x 15mm Cu   | 46820                    |
|  | 25 x 15mm Cu   | 4682515                  |
|  | 25 x 22mm Cu   | 46825                    |
| 32 x 28mm Cu   | 46832  |                          |
|  <p><b>Mid Blue</b><br/>To connect 3/8" use 1/2" 467NG12 (red) with 20mm nut and body Low Density BS1972: 1967 Class C</p> | <b>Polyethylene Adaptor Set</b>  |                          |
|  | 20mm x 3/8"  | 467NG12(red)             |
|  | 20mm x 1/2"  | 465C12                   |
|  | 25mm x 3/4"  | 465C34                   |
|  | 32mm x 1"  | 465C1                    |
|  | 50mm x 1 1/4"  | 465C114                  |
|  | 50mm x 1 1/2"  | 465C112                  |
| 63mm x 2"  | 465C2  |                          |
|  <p><b>Light Green</b><br/>Low Density BS1972: 1967 Class D</p>  | <b>Polyethylene Adaptor Set</b>  |                          |
|  | 20mm x 1/2"  | 465D12                   |
|  | 25mm x 3/4"  | 465D34                   |
|  | 32mm x 1"  | 465D1                    |
|  | 50mm x 1 1/4"  | 465D114                  |
|  | 50mm x 1 1/2"  | 465D112                  |

| COMPONENT  | PRODUCT DESCRIPTION                   | CODE NUMBER |
|--|---------------------------------------|-------------|
|  <p><b>Dark Blue</b><br/>High Density<br/>BS3284: 1967 Class C</p>  | <b>Polyethylene Adaptor Set</b>       |             |
|  | 20mm x 1/2"                           | 466C12      |
|  | 25mm x 3/4"                           | 466C34      |
|  | 32mm x 1"                             | 466C1       |
|  | 50mm x 1 1/4"                         | 466C114     |
| 50mm x 1 1/2"  | 466C112                               |             |
| 63mm x 2"  | 466C2                                 |             |
|  <p><b>Dark Green</b><br/>High Density<br/>BS3284: 1967 Class D</p>   | <b>Polyethylene Adaptor Set</b>       |             |
|  | 20mm x 1/2"                           | 466D12      |
|  | 25mm x 3/4"                           | 466D34      |
|  | 32mm x 1"                             | 466D1       |
|  | 50mm x 1 1/4"                         | 466D114     |
|  | 50mm x 1 1/2"                         | 466D112     |
| 63mm x 2"  | 466D2                                 |             |
|  <p><b>Red</b><br/>Low Density BS1972: 1961<br/>Normal Gauge IS134: 1977</p>  | <b>Polyethylene Adaptor Set</b>       |             |
|  | 20mm x 1/2"                           | 467NG12     |
|  | 25mm x 3/4"                           | 467NG34     |
|  | 32mm x 1"                             | 467NG1      |
|  | 50mm x 1 1/4"                         | 467NG114    |
|  | 50mm x 1 1/2"                         | 467NG112    |
| 63mm x 2"  | 467NG2                                |             |
|  <p><b>Light Blue</b><br/>Low Density BS1972: 1961<br/>Heavy Gauge IS134: 1977</p>                                  | <b>Polyethylene Adaptor Set</b>       |             |
|  | 20mm x 1/2"                           | 467HG12     |
|  | 25mm x 3/4"                           | 467HG34     |
|  | 32mm x 1"                             | 467HG1      |
|  | 50mm x 1 1/4"                         | 467HG114    |
|  | 50mm x 1 1/2"                         | 467HG112    |
|  <p>NB: Not end load bearing. Must be anchored or clamped to prevent pullout. PVC BS3505/6, Galv. Steel BS1387)</p> | <b>PVC / Galvanised Steel Adaptor</b> |             |
|  | 20mm x 3/8"                           | 4722038     |
|  | 25mm x 1/2"                           | 4722512     |
|  | 32mm x 3/4"                           | 4723234     |
|  | 40mm x 1"                             | 472401      |
|   | <b>BSP Thread Reducing Bush</b>       |             |
|  | 3/4" x 1/2"                           | 4703412     |
|  | 1" x 1/2"                             | 470112      |
|  | 1" x 3/4"                             | 470134      |
|  | 1 1/4" x 1"                           | 4701141     |
|  | 1 1/2" x 1/2"                         | 47011212    |
|  | 1 1/2" x 3/4"                         | 47011234    |
|  | 1 1/2" x 1"                           | 4701121     |
|  | 1 1/2" x 1 1/4"                       | 470112114   |
|  | 2" x 1/2"                             | 470212      |
|  | 2" x 3/4"                             | 470234      |
|  | 2" x 1"                               | 47021       |
|  | 2" x 1 1/2"                           | 4702112     |
| 3" x 2"  | 47032                                 |             |
| 4" x 3"  | 47043                                 |             |


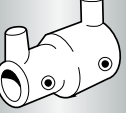

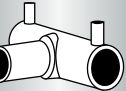


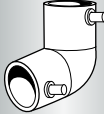
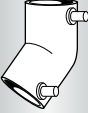
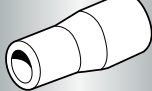

# POLYFAST COMPRESSION SERVICE FITTINGS

| COMPONENT   | PRODUCT DESCRIPTION   | CODE NUMBER                               |
|---|---|---|
|    | <b>Gunmetal Stop Cock</b><br>20mm<br>25mm<br>32mm<br>1 1/2" F.I.<br>2" F.I.                 | 41020<br>41025<br>41032<br>31050<br>31063 |
| <br>Complete with excess torque override feature | <b>Engineering Plastic Stop Cock</b><br>20mm<br>25mm<br>32mm                                | 42620<br>42625<br>42632                   |
|    | <b>Square Drive Stop Cock (Engineering Plastic)</b><br>20mm<br>25mm                         | 41920<br>41925                            |
|    | <b>Stop Cock (Copper)</b><br>20mm x 15mm (1/2")<br>25mm x 15mm (1/2")<br>25mm x 22mm (3/4") | 47720<br>4772515<br>47725                 |
|    | <b>Double Check Valve</b><br>20mm<br>25mm<br>32mm   | 47620<br>47625<br>47632                   |
|    | <b>Single Union Ball Valve</b><br>1/2" F.I.<br>3/4" F.I.<br>1" F.I.                         | 47312<br>47334<br>4731                    |

| COMPONENT  | PRODUCT DESCRIPTION  | CODE NUMBER                              |
|--|--|--|
|   | <b>Bibtap Wall Flange (DZR Brass)</b><br>20mm x 1/2" BSP<br>25mm x 1/2" BSP<br>25mm x 3/4" BSP   | 41320<br>41325<br>4132534                |
|   | <b>Bibtap Wall Flange (Plastic)</b><br>20mm x 1/2" BSP<br>25mm x 1/2" BSP<br>25mm x 3/4" BSP   | 48320<br>4832512<br>483525               |
|  | <b>Pipe Shears</b><br>20mm to 32mm   | PB781                                    |
|  | <b>Pipe Cutter</b><br>20mm to 32mm   | PB778                                    |
|  | <b>Pipe Cutter Spare Blades</b><br>20mm to 32mm  | PB779                                    |
|  | <b>Polylink Straight Universal Transition Coupler (c/w Pipe Stiffener)</b><br>25mm x 15/22mm<br>25mm x 21/27mm<br>25mm x 27/35mm<br>32mm x 27/35mm | 4841522<br>4842127<br>4842735<br>4882735 |
|  | <b>Polylink 90° Bent Universal Transition Coupler (c/w Pipe Stiffener)</b><br>25mm x 15/22mm<br>25mm x 21/27mm<br>25mm x 27/35mm<br>32mm x 27/35mm | 4841522<br>4842127<br>4842735<br>4882735 |

# ELECTROFUSION FITTINGS

| COMPONENT   | PRODUCT DESCRIPTION  | CODE NUMBER                               |
|---|--|---|
|  | <b>Electrofusion Coupler</b><br>20<br>25<br>32<br>50<br>63               | EF20C<br>EF25C<br>EF32C<br>EF50C<br>EF63C |
|  | <b>Electrofusion Reducer</b><br>25 x 20<br>32 x 20<br>32 x 25<br>63 x 50 | EF25R<br>EF3220R<br>EF32R<br>EF63R        |
|  | <b>Electrofusion Tapping Tee</b><br>25<br>32<br>50<br>63                 | EF25T<br>EF32T<br>EF50T<br>EF63T          |
|  | <b>Electrofusion Tee</b><br>50 x 32<br>63 x 32                           | EF5032S<br>EF6332S                        |

| COMPONENT  | PRODUCT DESCRIPTION   | CODE NUMBER   |
|--|---|---|
|   | <b>90° Electrofusion Elbow</b><br>20<br>25<br>32<br>50<br>63  | EF2090<br>EF2590<br>EF3290<br>EF5090<br>EF6390                            |
|   | <b>45° Electrofusion Elbow</b><br>25<br>32<br>50<br>63  | EF2545<br>EF3245<br>EF5045<br>EF6345                                      |
|  | <b>Spigot Reducer (Blue)</b><br>50 x 20<br>50 x 25<br>50 x 32<br>63 x 20<br>63 x 25<br>63 x 32<br>63 x 50 | 3085020<br>3085025<br>3085032<br>3086320<br>3086325<br>3086332<br>3086350 |
|   | <b>Spigot Stop End (Blue)</b><br>20<br>25<br>32<br>50<br>63   | 30920<br>30925<br>30932<br>30950<br>30963                                 |

# JOINTING INSTRUCTIONS

## Polyethylene Pipe Jointing Instructions

**Note:** Always check that the factory applied silicone lubricant grease is present on the rubber seal.

There are 5 Vital stages to successfully join Polyfast Compression fittings to blue (BS6572) and black (BS6730) MDPE pipe.

1. Always use one of the approved pipe cutters (Code 781 or 778). A slight rotation of the pipe when cutting will help make the operation easier. **Never use a hacksaw.** Cut pipe end square and remove any burrs or sharp edges.
2. Insert pipe stiffener in pipe up to the stop.
3. Loosen nut on Polyfast fittings.
4. Insert clean pipe to full socket depth and re-hand tighten the polyfast nut to secure, plus 1/8 of a turn using a strap wrench (Code: 780) **Do not over tighten.** Polyethylene pipe cannot be used as an electrical earth.

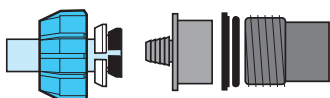


Hand tighten plus 1/8 turn using a strap wrench



## MDPE Reducing Set

- (a) Remove nut from fitting and place over pipe end.
- (b) Discard black/grey metric grab ring.
- (c) Place nut reducer and new black grab ring over pipe end (thickest section towards fitting body) Ensure the grab ring is positioned at the end of the pipe.
- (d) Insert barbed end of adaptor into pipe and tap in with wooden mallet up to flange.
- (e) Push black grab ring up to flange, if necessary.
- (f) Push spigot end of adaptor into body of fitting to full socket depth. Engage nut onto fitting.
- (g) Hand tighten plus 1/8 turn using strap wrench.

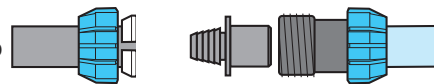


## LDPE and HDPE Black

**BS1972: 1967 C&D BS3284 C&D**

**BS1972: 1961 (IS134 NG & HG)**

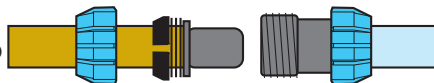
- (a) Remove nut from fitting and place over pipe end.
- (b) Discard black/grey metric grab ring.
- (c) Place white imperial grab ring over pipe (thickest section towards fitting body). Ensure the grab ring is positioned at the end of the pipe.
- (d) Insert barbed end of adaptor into pipe and tap in with wooden mallet up to flange.
- (e) Push spigot end of adaptor into body of fitting to full socket depth. Engage nut onto fitting.
- (f) Hand tighten plus 1/8 turn using strap wrench.



## Copper

**BS2871 Table X & Y (EN1057)**

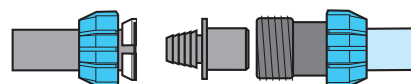
- (a) Remove nut from fitting and place over pipe end.
- (b) Place black or grey metric grab ring over pipe (thickest section towards fitting body).
- (c) Place over pipe stainless steel washer, stainless steel grab ring (taper towards pipe end) and then other stainless steel washer maximum 15mm from end.
- (d) Push rubber bush, flange first onto pipe, maintaining close contact with other components up to stop of rubber bush.
- (e) Push spigot end of rubber bush into body of fitting to full socket depth. Engage nut on fitting.
- (f) Hand tighten plus 1/2 turn using strap wrench.



## Lead

**BS602, 1085/1970 NB Use 3/8" in 20mm body, 1/2" in 25mm body, 3/4" in 32mm body, and 1" in 40mm body.**

- (a) Remove nut from fitting and place over pipe end.
- (b) Discard black/grey metric grab ring.
- (c) Place white grab ring over pipe (thickest section towards fitting body). Ensure the grab ring is positioned at the end of the pipe.
- (d) Insert barbed end of adaptor into pipe and tap in with wooden mallet up to flange.
- (e) Push white grab ring up to flange, if necessary.
- (f) Push spigot end of adaptor into body of fitting to full socket depth. Engage nut on fitting.
- (g) Hand tighten plus 1/2 turn using strap wrench.







## PVCu BS3505/6 1968 Galvanised Steel BS1387

- Remove nut from fitting and place over pipe end
- Discard black metric split grab ring
- Push rubber bush onto end of pipe
- Push spigot end of rubber bush into body of fitting to full socket depth. Engage nut onto fitting
- Hand tighten plus 1/2 turn using strap wrench.**

NB: Not end load bearing. Must be anchored to prevent pullout.

## Imperial Adaptor Couplers for LDPE/HDPDE Pipes

BS 1972: 1967/BS 3284: 1967

- Note that the imperial end of the fitting has a Black nut.  
Cut the pipe end square with the axis and file a chamfer onto the pipe end.
- Insert the pipe end through the black nut, grab-ring and the rubber seal to full socket depth.
- Hand tighten plus 1/8 turn using strap wrench.**  
**(Note: Do not over tighten).**

## Wide Tolerance Adaptor Couplers for Lead Pipes

BS 602, 1085: 1970

- Check condition of pipe surface and cut back pipe square to remove any surface grooves or damage using pipe cutters or saw, deburr and chamfer end of pipe to facilitate assembly.
- Remove the nut from the fitting and replace the nut over the pipe end.
- Mark the socket depth on the pipe and push the grab-ring up to the mark (thickest section toward fitting body).
- Push the seal onto the pipe and up to the grab-ring (tapered face towards fitting).
- Position the lead pipe, seal and grab-ring into the fitting body, engage the thread.
- Hand tighten plus 1/4 turn using strap wrench.**  
**(Note: Do not over tighten)**

## High Flow Reducing Set For MDPE Pipes

Plastic reducing bushes: 63 x 20mm (Code: 4806320) 63 x 25mm (Code: 4806325) 63mm x 32mm (Code: 4806332) 50 x 20mm (Code: 4805020) 50 x 25mm (Code: 4805025) 32 x 20mm (Code: 4803220)

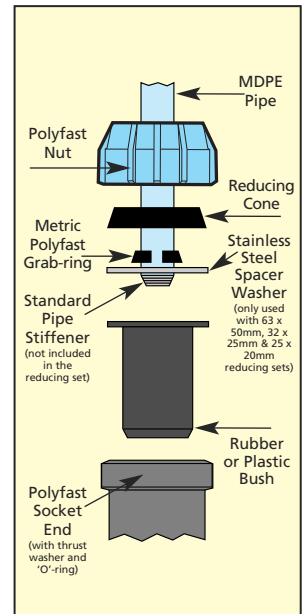
- Cut pipe square and fit standard Polyfast pipe stiffener.
- Select the appropriate reducing set for the size of polyfast fitting and the smaller pipe to be fitted (eg. 63mm x 20mm reducing set, Code: 4806320).
- Remove the nut from the Polyfast fitting and discard the standard metric grab-ring. Ensure that the seal and thrust washer remain in position in the socket.
- Push the plastic reducing bush into the socket of the polyfast socket until the end of the bush is flush with the end of the socket.

- Place the smaller grab-ring onto the reducing bush (thicker end in contact with the bush) and the reducing cone over the grab-ring and re-fit the Polyfast nut onto the end of the body.
- Push the pipe through the nut into the socket of the reducing bush to contact the register at the bottom of the socket.
- Hand tighten plus 1/8 turn using strap wrench.**  
**(Note: Do not over tighten).**

## High Flow Reducing Set For MDPE Pipes

Rubber bushes 63 x 50mm (Code: 4806350) 32 x 25mm (Code: 4803225) 25mm x 20mm (Code: 4802520)

- Cut pipe square and fit standard Polyfast pipe stiffener.
- Select the appropriate reducing set for the size of polyfast fitting and the smaller pipe to be fitted (eg. 63mm x 20mm reducing set, Code: 4806320).
- Remove the nut from the Polyfast fitting and discard the standard metric grab-ring. Ensure that the seal and thrust washer remain in the position in the socket and check that the factory applied silicone lubricant grease is present on the rubber seal.
- Place the nut on the pipe end followed by the reducing cone, grab-ring (thickest section towards the pipe end) and stainless steel support washer.
- Fit the rubber bush over the pipe end and push the stainless steel washer/grab-ring and reducing cone back down the pipe until the pipe is fully inserted into the rubber bush with a stainless steel spacer washer and grab-ring in contact with the flanged end of the rubber bush.
- Push the plain spigot of the rubber reducing bush into the socket of the fitting through the thrust washer and 'O'-ring and engage the nut onto the threads on the body of the fitting.
- Hand tighten plus 1/8 turn using strap wrench.**  
**(Note: Do not over tighten).**



# JOINTING INSTRUCTIONS

## High Flow Reducing Set For MDPE Pipes

Rubber bushes 63 x 50mm (Code: 4806350) 32 x 25mm (Code: 4803225) 25mm x 20mm (Code: 4802520)

- (a) Cut pipe square and fit standard Polyfast pipe stiffener.
- (b) Select the appropriate reducing set for the size of polyfast fitting and the smaller pipe to be fitted (eg. 63mm x 20mm reducing set, Code: 4806320).
- (c) Remove the nut from the Polyfast fitting and discard the standard metric grab-ring. Ensure that the seal and thrust washer remain in the position in the socket and check that the factory applied silicone lubricant grease is present on the rubber seal.
- (d) Place the nut on the pipe end followed by the reducing cone, grab-ring (thickest section towards the pipe end) and stainless steel support washer.
- (e) Fit the rubber bush over the pipe end and push the stainless steel washer/grab-ring and reducing cone back down the pipe until the pipe is fully inserted into the rubber bush with a stainless steel spacer washer and grab-ring in contact with the flanged end of the rubber bush.
- (f) Push the plain spigot of the rubber reducing bush into the socket of the fitting through the thrust washer and 'O'-ring and engage the nut onto the threads on the body of the fitting.
- (g) **Hand tighten plus 1/8 turn using strap wrench.**  
(Note: Do not over tighten).

## Copper/Polybutylene Sockets

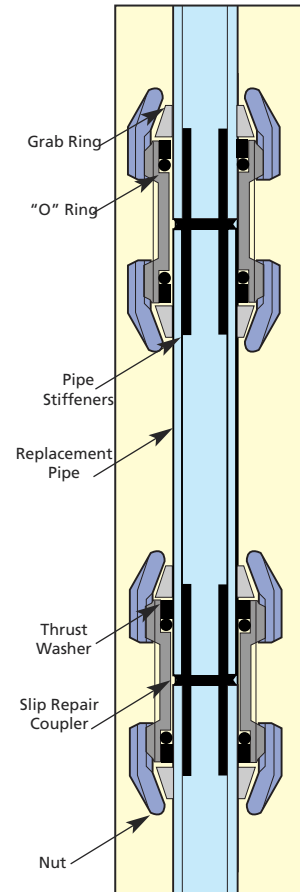
Polyfast MDPE x Copper/polybutylene adaptors (Code: 478) and Push-fit MDPE x Copper/polybutylene adaptors (Code: 378)

Please refer to the jointing and dismantling instruction section of the Polyplumb Hot and Cold Water Plumbing and Heating Guide earlier in this manual (pages 8, 9 and 10).

## Slip Repair Couplers

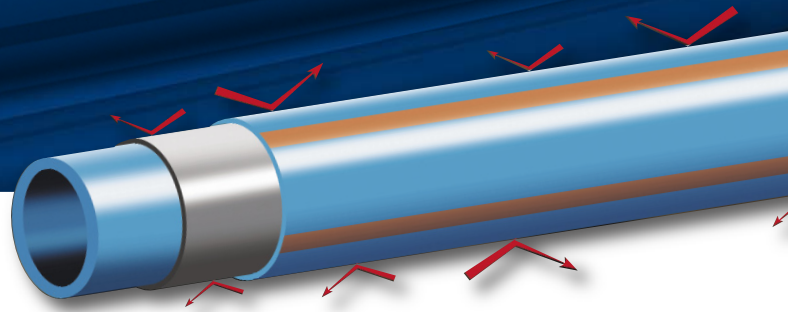
To replace damaged pipe on straight runs

- (a) Cut out the damaged pipe for a distance of at least the length of 2 slip couplers. Cut a replacement length of pipe, and deburr/chamfer pipe ends.
- (b) Fit pipe stiffeners to pipe ends and mark half the length of the slip couplers from each pipe end with a felt-tipped pen. Remove nuts and grab rings from the 2 slip couplers and place first one nut and one grab ring on the existing pipe ends with the tapers as shown.
- (c) Check that the 'O'-ring seals are lubricated and slide one slip coupler onto each pipe end, holding the thrust washer and 'O'-ring in place until the couplers are fully onto the pipe ends.
- (d) Place the second nut and grab-ring of each slip coupler onto the replacement length of pipe as shown, insert the replacement length of pipe inbetween the 2 existing pipe ends.
- (e) Slide the 2 slip couplers onto the replacement pipe so that they are half on the existing pipe and half on the replacement pipe using the previously marked lines for guidance.  
If necessary, ensure that the seals and thrust washers are pushed back into position in each socket.
- (f) Slide the grab-rings back to contact the end of each socket. (It may be necessary to insert the end of a screwdriver or a piece of wood in the grab-ring slot to open the grab-ring out slightly to enable it to be moved backwards).
- (g) **Screw the nuts onto each socket end.**  
**Hand tighten plus 1/8 of a turn with a strap-wrench.**





# POLYGUARD



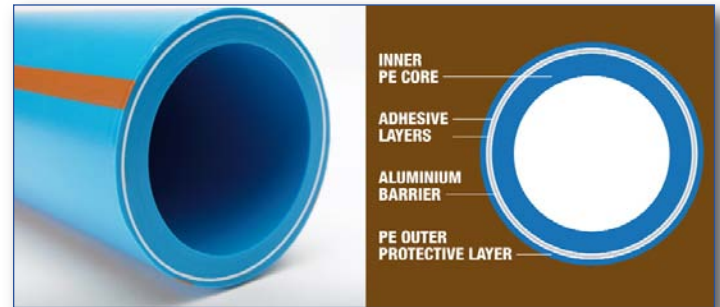
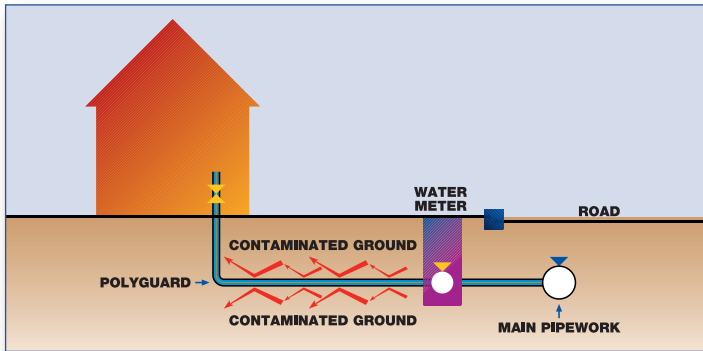
**Polyguard is a new barrier pipe solution designed to ensure the safe delivery of drinking water through redeveloped sites that may have been contaminated by previous industrial use. As its name suggests, Polyguard guard's essential drinking water against a wide range of potential contaminants, including organic, inorganic, corrosive and toxic elements.**

Manufactured by Polypipe – the UK market leader for above and below ground drainage, plumbing and water management systems – the Polyguard system offers a comprehensive range of both pipe and brassware fittings providing a complete potable water supply solution.

Polyguard pipe is constructed from 2 layers of Polypipe's proven flexible polyethylene adhered to a layer of aluminium, providing an impermeable barrier to the ingress of contaminants. The inner layer of polyethylene carries the water and the outer layer provides protection for the aluminium layer from damage. Brown stripes on the outer layer ensure installed pipework is easily identified.

The Polyguard range is completed by an extensive selection of specialist fittings, each incorporating a special insert designed to ensure a perfect seal. Tees, elbows, and both standard and transition couplings are available for use with each of the three Polyguard pipe sizes: 25, 32 and 63mm.

25 & 32mm pipe is available in 50m coils whilst 63mm is available in 25m, 50m coils & 6m straight lengths.

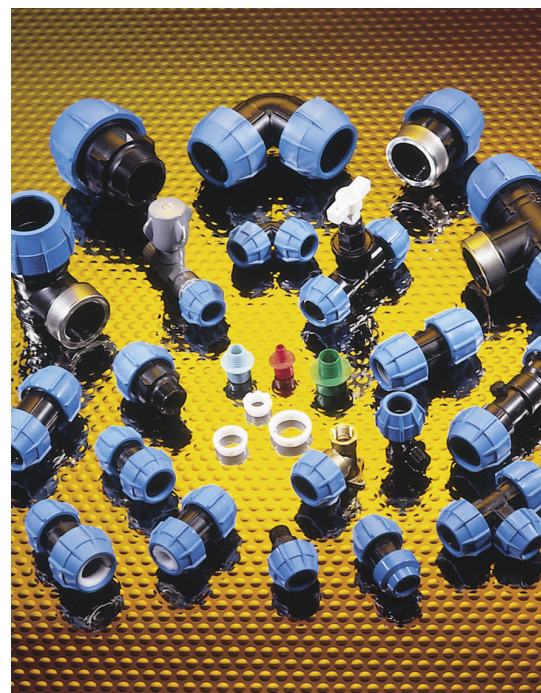


## POLYGUARD RANGE

| COMPONENT | PRODUCT DESCRIPTION  | CODE NUMBER  |
|-----------|--|--|
|           | <b>Polyguard Pipe</b><br>25mm x 50 metre coil<br>32mm x 50 metre coil<br>63mm x 6 metre length<br>63mm x 25mm coil<br>63mm x 50 metre coil | PGP2550<br>PGP3250<br>PGP636<br>PGP6325<br>PGP6350 |
|           | <b>Polyguard Straight Coupling</b><br>25mm<br>32mm<br>63mm   | PGF25SC<br>PGF32SC<br>PGF63SC                      |
|           | <b>Polyguard MBSP Coupling</b><br>25mm x 3/4"<br>32mm x 1"<br>63mm x 2"  | PGF25MTC<br>PGF32MTC<br>PGF63MTC                   |
|           | <b>Polyguard FBSP Coupling</b><br>25mm x 3/4"<br>32mm x 1"<br>63mm x 2"  | PGF25FTC<br>PGF32FTC<br>PGF63FTC                   |

| COMPONENT | PRODUCT DESCRIPTION   | CODE NUMBER                         |
|-----------|---|-------------------------------------|
|           | <b>Polyguard 90° Elbow</b><br>25mm<br>32mm<br>63mm                                      | PGF2590E<br>PGF3290E<br>PGF6390E    |
|           | <b>Polyguard Equal Tee</b><br>25mm<br>32mm<br>63mm                                      | PGF25T<br>PGF32T<br>PGF63T          |
|           | <b>Polyguard Copper Transition Coupling</b><br>25mm x 15mm<br>25mm x 22mm               | PGF2515TC<br>PGF2522TC              |
|           | <b>Polyguard to PE Transition Coupling</b><br>25mm x 25mm<br>32mm x 32mm<br>63mm x 63mm | PGF2525TC<br>PGF3232TC<br>PGF6363TC |

# Product Guide Polyethylene Range



## Polypipe Building Products

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Edlington  
Doncaster DN12 1ES  
Tel: 01709 770 000  
Fax: 01709 770 001

2410 London Road  
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