



PRODUCT CATALOGUE

# Best Quality For Fluid Flow System

*Tough times  
don't last,  
Tuff product do.*



**Tuff / PP-R Pipes**  
Fluid Flow System



## Introduction

**TUFF PP-R** brand is a product of Jabros industries Nigeria limited. Through the history of plumbing, we have been in existence for more than 50 years, providing services and delivering quality products in building construction. Jabros industries limited is registered in Nigeria co-operate Affairs commission since 1987 with RC No 93159. We have a vision to be the leading plumbing company in Africa by offering our customers products with superior quality and value. We have been researching a technology that defies the constant maintenance of plumbing work in building structure. We are happy to introduce **TUFF PP-R** brand. A brand that stands out to correct/withstand plumbing lapses through the durability of liquid conveyance material. **Tuff PP-R** is a product manufactured under stringent conditions to serve its function to you. Manufactured from polypropylene random copolymer (PP-R) for pressure system, produced at PN25 (Pressure Nominal), design with elegance, **Tuff PP-R** serves you beyond your intent.

**OUR PRODUCT  
MAKES PLUMBING  
UNCOMPLICATED**





Material: PP-R/Steel  
 Colour: Green  
 Specification: (mm)  
 20x1 /2/20x3 /4 /25x1/2/25x3 /4  
 32x1/2/32x3 /4 /32x1/40x1/2/40x3  
 4 /40x1/40x11/4 /50x1/2/50x3 /4  
 50x1/50x11/2/63x2

**MALE ELBOW**

Tuff male elbow connects with the female elbow to withstand the pressure of fluid at a 90 degree angle bend



Material: PP-R  
 Colour: Green  
 Specification: (mm)  
 20 /25 /32 /40 /50 /63

**UNION**

Tuff union fitting serves to connect two pipes and also gives opportunity for enhancement from that point. It serves to give way for adjusting or service by detachment



Material: PP-R  
 Colour: Green  
 Specification: (mm)  
 20 /25 /32 /40 /50 /63 /75 /90 /110

**BALL VALVE**

Ball valve is a quarter-turn that is opened and closed by pressure on a hollow perforated and pivoting ball to control flow through it. It opens when the balls hole is in line with the flow and closes when it is pivoted 90 degree by the valve handle.



Material: PP-R/Steel  
 Colour: Green  
 Specification: (mm)  
 20 /25 /32

**STOP VALVE**

Tuff PP-R stop valve close or open at will to stop flow of liquid in pipe. Gate valve are incapable of immediate redirection.



Material: PP-R  
 Colour: Green  
 Specification: (mm)  
 20 /25 /32 /40 /50 /63 /75 /90 /110

**TEE**

Tuff PP-R tee tend to connect a second way flow of liquid through a Tuff PP-R conveying pipe



Material: PP-R  
 Colour: Green  
 Specification: (mm)  
 20 /25 /32 /40 /50 /63 /75 /90 /110

**END CAP**

Tuff PP-R Ends cap fitting for closure at the end of a pipe



Material: PP-R  
 Colour: Green  
 Specification: (mm)  
 20/25/32/40/50/63/75/90/110

**ELBOW**

Tuff PP-R fitting intended to join a piece of pipe and another at 90° angle. Each end of the elbow could be hub to receive a straight pipe.



Material: PP-R / steel  
 Colour: Green  
 Specification: (mm)  
 Elbow: 20x1½/25x1½/25x2¼

**DOUBLE FEMALE ELBOW**

Special design to serve a faucet mixer. Serves to combine two 90° degree elbow at the same time.



**FUSION MACHINE**

Material: Metal  
 20-32/20-63

Tuff Fusion Machine is a heating mechanism for joining Tuff PP-R pipe & fitting to give a durable service. Works by melting of Tuff PP-R Product at designated temperature.



Material: PP-R / steel  
 Colour: Green  
 Specification: (mm)  
 25x20/32x20/32x25/40x20/40x32  
 50x20/50x32/50x40/63x20/63x25  
 63x32/63x40/63x50/75x20/75x25  
 75x32/75x40/75x50/75x63/90x20  
 90x25/90x32/90x40/90x50/90x63  
 90x75/110x20/110x25/110x32/110x40  
 110x50/110x63/110x75/110x90

**REDUCING TEE**

Tuff Reducing Tee fitting reduces the size of a one way flowing pipe



Material: PP-R  
 Colour: Green  
 Specification: (mm)  
 20/25/32/40/50/63/75/90/110

**PIPE CLAMP**

Tuff PP-R pipe clamp serves to hold the pipe at interval distance along a flat or high surface



Material: PP-R / steel  
 Colour: Green  
 Specification: (mm)  
 20/25/32/40/50/63/75/90/110

**GATE VALVE**

Tuff gate valve open by lifting up a barrier out of the path of the fluid. It require little space along the axis of the pipe and hardly restrict the flow of fluid when the gate is fully open

**PP-R PIPE**



Specification: (mm)

**PN 25**

Colour: Green

20x3.4\25x4.2\32x5.4\40x6.7\50x8.3\63x10.5\75x12.5\90x15.0\110x18.3

Tuff PP-R pipe is a conveying medium for fluid and it comes in different sizes depending on the load pressure of fluid



Tuff cross bar directs the flow of liquid conveying material (PPR Pipe) over another covering material (PPR Pipe) of same size.

**TUFF CROSS OVER-BAR :**



Tuff female socket serves to connect two pipes and withstand flow pressure / also serve as an outlet for faucet fittings.

**TUFF FEMALE SOCKET:**



Tuff PP-R plug serves with its thread to stop the flow of fluid through PPR pipes by screwing

**TUFF PP-R PLUG**

|| Plug size : 20/25/32 || Cross over bar size : 20/25/32||

|| Female socket size : 20\*1/2, 3/4\*1/2mf, 3/4mf, 1mf, 1/1/2mf, 1/1/4mf, 2mf.||



Material: PP-R  
 Colour: Green  
 Specification: (mm)  
 20 / 25 / 32 / 40 / 50 / 63 / 75 / 90 / 110

**SOCKET**

Tuff PP-R socket joins two pipes of the same diameter /size for continuous flow of conveying fluid



Material: PP-R  
 Colour: Green  
 Specification: (mm)  
 25x20 / 32x25 / 40x25 / 40x32 / 50x20  
 50x25 / 50x32 / 50x40 / 63x20 / 63x25  
 63x32 / 63x40 / 63x50 / 75x20 / 75x25  
 75x32 / 75x40 / 75x50 / 75x63 / 90x20  
 90x25 / 90x32 / 90x40 / 90x50 / 90x63  
 90x75 / 110x20 / 110x25 / 110x32 / 110x40  
 110x50 / 110x63 / 110x75 / 110x90

**REDUCING SOCKET**

This is joint piece that is used for Reducing / increasing PP-R pipe diameter. The joining is made by fusion welding.



Material: PP-R  
 Colour: Green  
 Specification: (mm)  
 25x20 / 32x20 / 32x25 / 40x20 / 4x25  
 40x32 / 50x20 / 50x25 / 50x32 / 50x40  
 63x20 / 63x25 / 63x32 / 63x40 / 63x50

**REDUCING ELBOW**

Reducing elbow serves to change the diameter size of conveying pipe at a 90 degree bend to effect increase / decrease in pressure of conveying liquid



Material: PP-R / Steel  
 Colour: Green  
 Specification: (mm)  
 20x1/2 / 20x3 / 4 / 25x1/2 / 25x3 / 4  
 25x1/32x1/2 / 32x3 / 4 / 32x1/40x1  
 2 / 40x3 / 4 / 40x1/40x11/4 / 50x1/2  
 50x3 / 4 / 50x1/50x1/2 / 63x2 / 75x2  
 2 / 90x3 / 110x4

**MALE SOCKET**

Tuff male threaded socket connects to a female threaded socket. Tuff male socket can connect a piece of pipe with a female threaded socket to withstand the pressure of fluid passing through the pipe



Material: PP-R / Steel  
 Colour: Green  
 Specification: (mm)  
 20x1/2 / 20x3 / 4 / 25x1/2 / 25x3 / 4  
 32x1/2 / 32x3 / 4 / 32x1/40x1/2 / 50x3  
 4 / 50x1/50x1-1/2 / 63x1/2 / 63x2 / 4  
 63x2

**FEMALE TEE**

Tuff female tee serves to connect two conveying pipes at the same time, reduce pressure by connecting a male socket (Adapter)



Material: PP-R / Steel  
 Colour: Green  
 Specification: (mm)  
 20x1/2 / 20x3 / 4x1/2 / 25x3 / 4 / 32x1  
 2 / 32x3 / 4 / 32x1/40x1/2 / 40x3 / 4  
 40x1/50x1/2 / 50x3 / 4 / 50x1/50x11  
 2 / 63x1/2 / 63x3 / 4 / 63x2

**FEMALE ELBOW**

Connects males thread at a 90 degree angle, Tuff female elbow is ideal for any where a reliable threaded connection is necessary to the fluid pressure

# ~~BAD~~ EFFECT OF GLUE MECHANISM on Liquid flow Material



In as much as trend and innovation increase in plumbing system to withstand pressure/temperature, elasticity, resistance and high flow over time, as much as glue mechanism product cannot do; **TUFF PP-R** (Fusion Mechanism) serves in your building structure to avoid agonizing look. To ensure the system useful life, raw materials are combined with antioxidant which extend the life span of the pipes over time when they are used to transport fluid at high temperature. The exclusive pipe manufacturing system by coextrusion, allows the rational use of additive, increasing its concentration in the interior white layer. At the same time, it is important to highlight that the fitting have the same concentration of additive as the pipe. As fitting are the most critical part of the system, fitting are produced at PN25, making the fitting the strongest part of the system. All metal are made of aluminum oxide, joined with polypropylene random copolymer (PP-R) confirming no direct contact with liquid to avoid any oxidation of metals

Forget about leakage, forget about dampness, product is durable and quality enough to guarantee lifetime service in your building structure. **TUFF PP-R** supplies wide range of fittings and pipes. They are thermoplastic resin produced through the polymerization of propylene with ethylene link introduced in the polymer chain. Presently **Tuff PP-R** pipes and fitting are most reliable in plumbing, hot and cold water supply plants, due to their chemical features and fusion welding, which ensure the plumbing system a perfect seal tight system

We are always in the fore front of technological investigation in thermoplastic products and we are committed to develop the industry. Through this, we obtain a firm recognition of our products in domestic and foreign market. Overall, the benefits of **Tuff PP-R** is that, installed correctly, it is impossible for it to leak.

# Installation



## Cutting Pipes To Proper Length

Cut pipes perpendicularly to its axis with a pipe cutter or a rotary pipe cutter



## Cleaning & Marking

Before fusion, clean up the end of the pipe and a fitting, mark the depth of the insertion of pipe into a fitting in accordance with the table



## Welding Of Elements

when the heating temperature has reached the required 260°C, push the filter and the end of the pipe on the welding ends by means of a sliding non-rotary motion to the depth previously marked and heat them according to the time specified in the table.



## Joining

Take a pipe and a fitting off the welding ends and join them by pushing without turning, up to the previously marked welding depth. During pushing determine the mutual position of a pipe and a fitting. Leave a joint still until it reaches the required stability.

# APPLICATION

- RESIDUAL COLD AND HOT WATER DISTRIBUTION SYSTEM FOR BUILDINGS, SCHOOLS, HOTELS, MALLS E.T.C
- UNDERGROUND HEATING SYSTEM
- CONVEYOR OF INDUSTRIAL WATER AND CHEMICAL MATERIALS
- SANITARY AND PURE WATER PIPELINES
- HOT WATER RECYCLING SYSTEM
- COMPRESSED AIR PIPELINE
- OTHER INDUSTRIAL AND AGRICULTURAL IRRIGATION PIPELINES



Potable water application



Chilled water technology



Chemical transport



Heating system construction



Agriculture



Rainwater application



Connection heating and cooling



Swimming-pool technology



District heating pipeline system



Lightweight



Flexible Pipe



Very Fast Installation



Money Saver



Cannot Rust



Impact Resistant



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