



ANTI BACTERIAL PIPE

ANTI-BACTERIAL PIPE SYSTEM MARKETING CONDITION

1. The high Temperature pressure strength has remained unchanged for more than 20 years.
2. Products tend to be common and face high competition.
3. New Capabilities are needed to differentiate from normal PPR.
4. End users want product value for money.

1N1, SARS, hand, foot and mouth disease, bird flu, **COVID-19** with the occurrence of various epidemic events in recent years, people's living environment is under unprecedented threat from germs, and antibacterial products on the market are gradually favored by consumers. From white electricity, water appliances to sanitary ware, kitchen ware to paint tile, floor, consumers increasingly favor healthy and safe anti- bacterial products.



非典病毒



禽流感病毒



流感病毒

With the improvement of living standards, people pay more and more attention to health problems, but with the deterioration of the environment, the incidence of various diseases is getting higher and higher, people are exposed to a variety of bacteria every day, which is the most direct contact with human is water, the content of bacteria in the water determines the quality of water quality. Using the antibacterial

properties of plastic pipes to improve water quality is an effective way, that is, using antibacterial plastics to make pipes, so that the pipeline system has antibacterial properties, so as to achieve the purpose of improving water quality.

不是水脏了，而是管脏了

家庭水管有多脏？多年不洗的水管比马桶要脏100倍！

- 1 青苔滋生
- 2 水管细菌
- 3 水管霉菌
- 4 管道锈迹
- 5 管道水垢

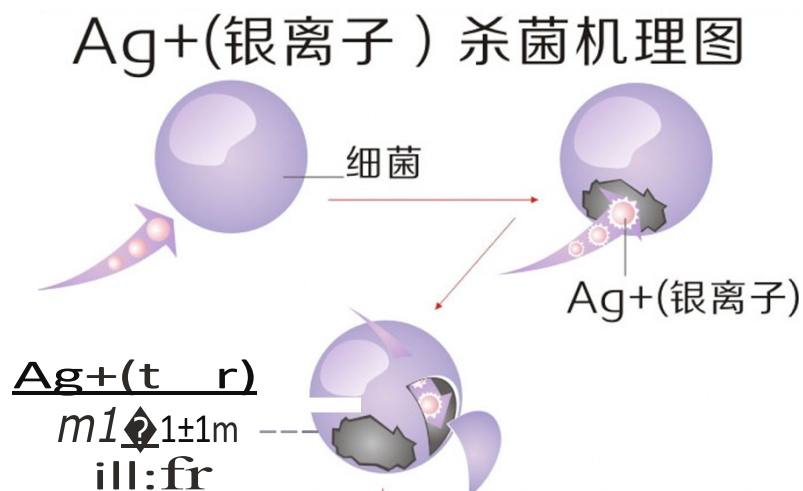
Definition: Antibacterial pipe product refers to a new type of healthy pipe product which can kill and inhibit bacterial regeneration by adding antibacterial masterbatch or antibacterial agent to the raw material of pipe product. The anti-bacterial pipe has function of self-cleaning.

Antibacterial self-cleaning function:

Refers to the strong penetration of bacteria, fungi, viruses in contact with the pipe products, the silver ion components in the product will take the initiative to attack, adsorbed on the cell membrane of bacteria, fungi, viruses, and hinder the absorption of these harmful microorganisms on amino acids and other essential nutrients for growth, thus inhibiting the growth of pathogenic bacteria, viruses.

Mechanism of bacteriostasis in antibacterial tube

Antibacterial mechanism: Many metal ions are bactericidal and mildew resistant. The bactericidal activity of metal ions decreases in the following order: $Ag > Hg > Cu > Cd > Cr > Ni > Pb > Co > Zn > Fe$. Due to the toxicity of Hg, Cd, Pb and Cr, the metals used as inorganic fungicides are mainly Ag, Cu and Zn, and the bactericidal capacity of Ag is stronger than that of Cu and Zn.



PPR Anti-bacterial Pipe

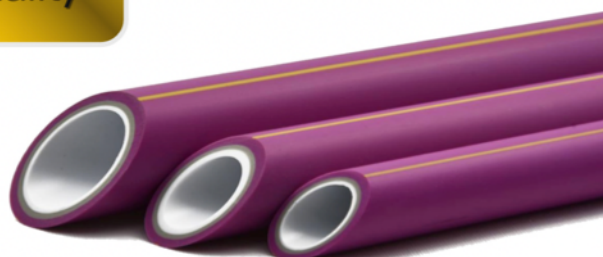
It is an upgrade of the PPR standard tube. However, different from the traditional concept of sterilization, which is to kill all microorganisms, while antibacterial only reduces the number of microorganisms and maintains it at a safe level for a long time. From the perspective of ecological balance, this is also in line with the principle of coexistence between people and microorganisms, which is beneficial to human health.

In the process of antibacterial pipe production, adding

antibacterial agents, the obtained pipe products not only have good antibacterial properties but also durability is better, and the life of the pipe facilities can be equivalent. Inorganic nanoscale metal is currently recognized as the safest antibacterial agent.



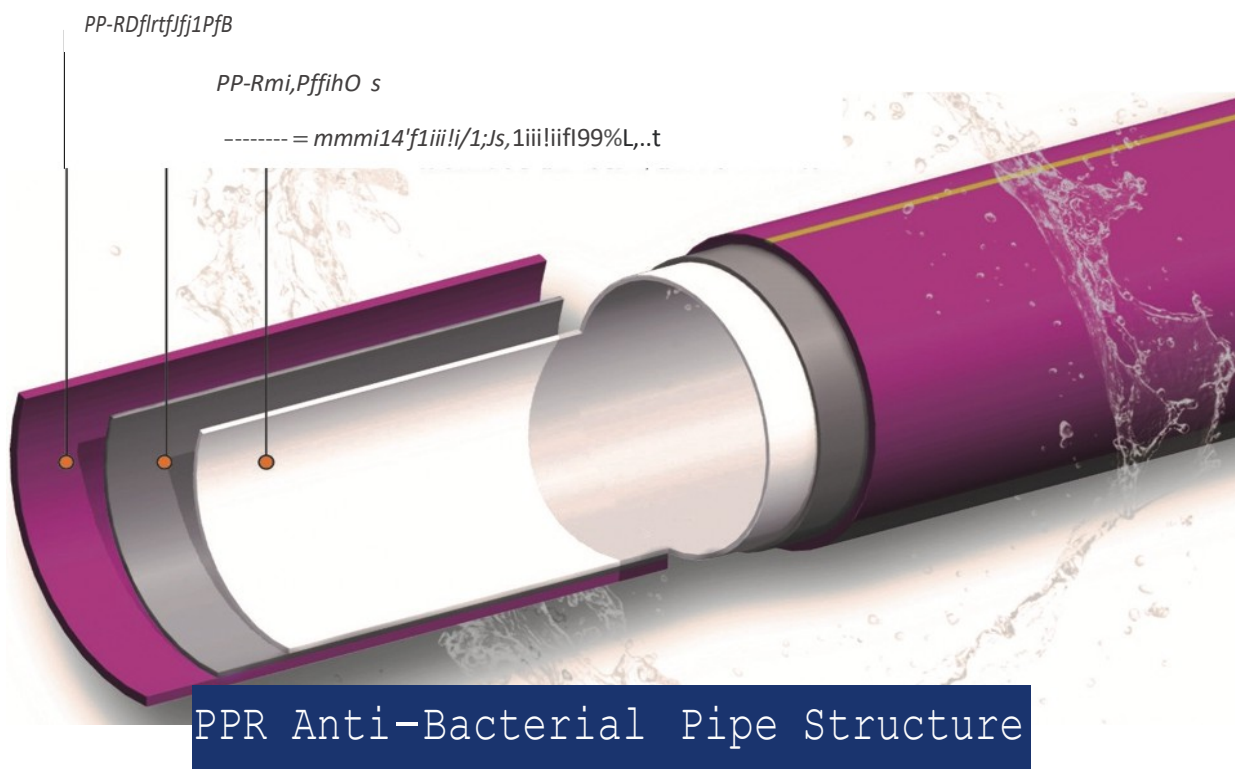
PRODUCT INTRODUCTION



Adopting a new generation of integrated molding process, integrating crystal control-technology and specific formula process, the three-layer structure function is improved, effectively blocking visible light, green environmental protection, water safety and rest assured.



PRODUCT INTRODUCTION



Out Layer

Barrier Layer With high refractive index and hiding power, it can effectively refract sunlight and reduce the reproduction of microorganisms in water.

Middle Layer

Enhancement layer High strength formula, material crystal control, further enhance the pipeline pressure and high temperature resistance.

Inner Layer

Anti-Bacterial Layer Nano antibacterial anti-scale technology, ceramic texture, more smooth and not easy to scale, reduce water flow resistance ensure water safe.

PRODUCT INTRODUCTION



The antibacterial pipe adopts imported PPR raw materials, green environmental protection, sanitary conditions meet food grade safety standards, and hot melt connection has no irritating odor to ensure the health of household water.



The Antibacterial pipe integrates energy saving, health, self-cleaning and all health indicators energy saving, health, self-cleaning and all health indicators meet international standards, and can be directly used in pure water transportation system. The thermal conductivity of the product is only 1/200 of the metal pipe, and the effect of hot water insulation is excellent.

PRODUCT INTRODUCTION



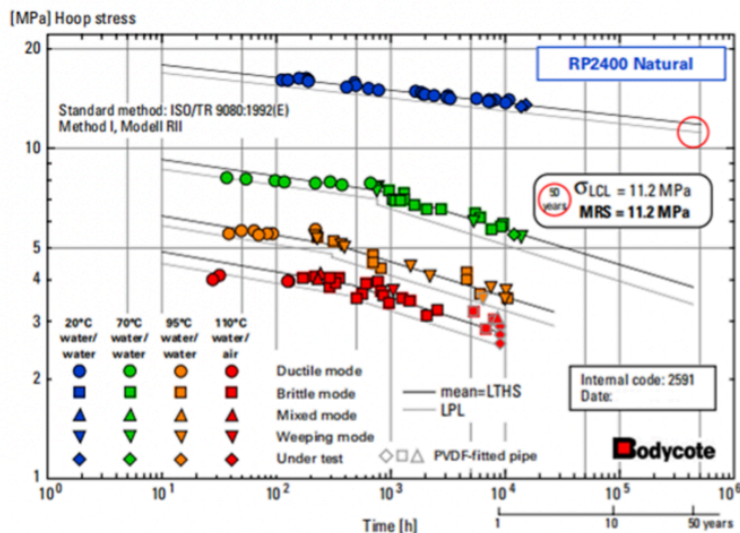
The antibacterial tube is resistant to high temperature, high pressure and corrosion, and has a life span of more than 50 years under normal conditions.

PRODUCT STRENGTH



The company adopts international advanced production equipment, full computer automatic control, greatly improve the performance of the pipeline through the three-layer structure of the composite, effectively solve the problem of pipeline deformation, light transmission, etc., meanwhile equipped with the German meter heavy machine to make the pipe in the production process of wall thickness uniform extrusion to improve the quality.

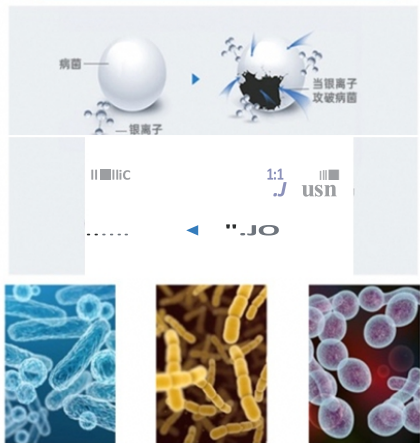
PRODUCT STRENGTH



100% imported PPR raw materials Under the long-term action of 20°C and 50 years of pressure, the minimum guaranteed value of the circumferential tensile strength of pipe line MRS=11.2 MPA.

Ag⁺有效杀灭多种有害菌群

对大肠杆菌、金黄色葡萄球菌等有杀菌作用



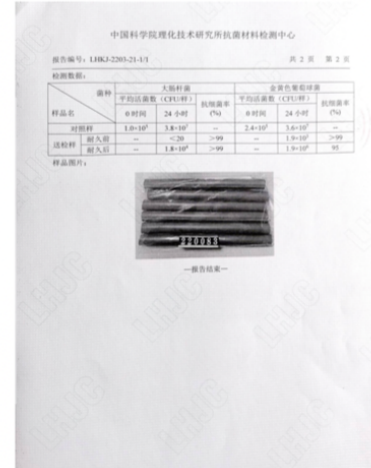
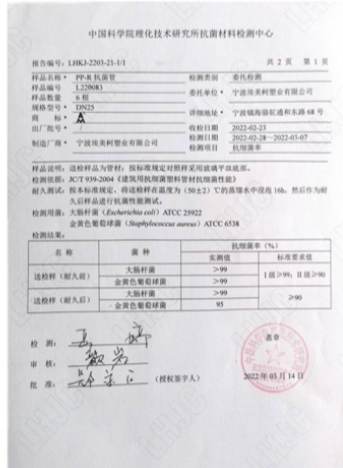
大肠杆菌 金黄色葡萄球菌 白色念珠菌

Antibacterial property It can inhibit bacteria, fungi, viruses and so on. The antibacterial rate of common pathogenic representative bacteria (Escherichia coli, Staphylococcus aureus) was above 95%.

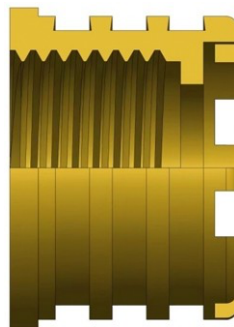
Security Using silver ion (inorganic antibacterial) antibacterial mechanism, inorganic antibacterial materials compared with organic antibacterial agents non-toxic side effects on the human body, is internationally recognized as the best safety of antibacterial agents.

Persistence Nano-scale powder materials are combined in PPR raw materials, and the binding degree of PPR is stronger than traditional materials, and the long-term antibacterial performance can be.

PRODUCT STRENGTH



tested by the antibacterial Materials Testing Center of Technical Institute of Physics and Chemistry, Chinese Academy of Sciences



The surface of all copper inserts is passivated to improve the corrosion resistance of copper and effectively maintain the brightness of copper. Improve product aesthetics. Copper insert unique three dovetail groove design, tighten PPR material, and three checkpoints to prevent leakage.

PRODUCT STRENGTH

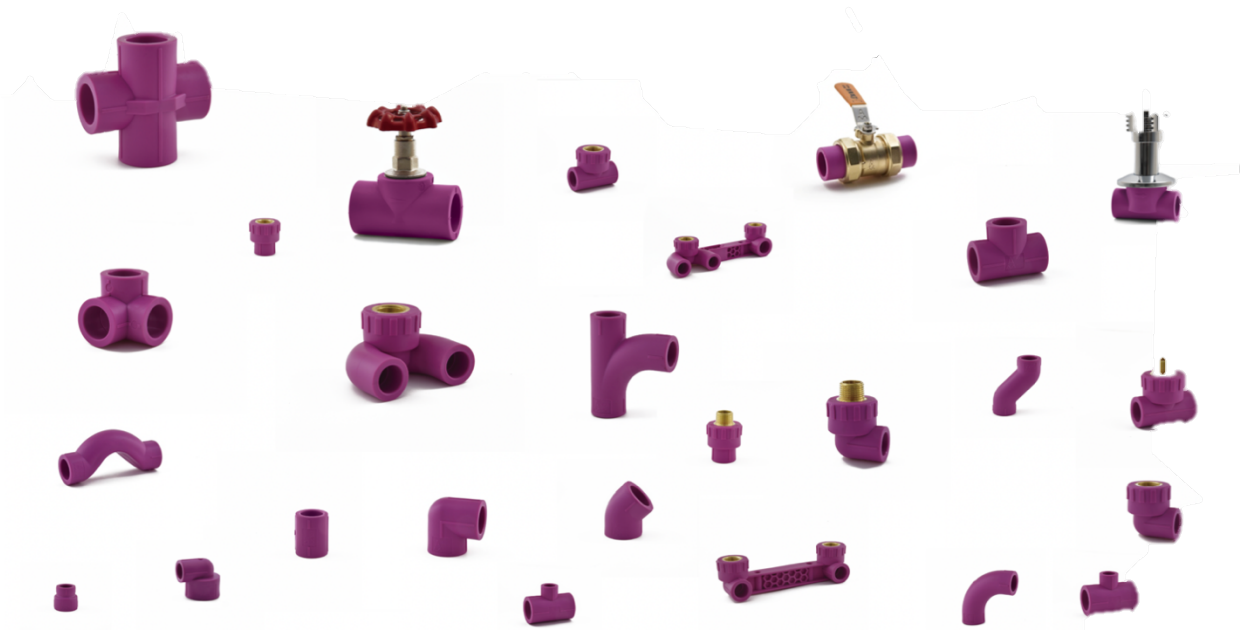


The company has developed a number of large flow PPR pipe fittings to create a large flow pipeline system.



Large flow pipe fittings replace the original installation method. The water resistance is smaller, the water flow is larger, so makes the use more comfortable. And the pipeline installation process is more convenient, reduce solder joints, reduce leakage hazards, reduce the risk of welding diameter reduction, greatly improve the construction efficiency, save trouble and effort.

VARIOUS FITTINGS



PRODUCT APPLICATION



- 1, High-grade residential direct drinking water system pipe network.
2. Beverage, pure water, mineral water Transportation.
3. Pipeline transportation system of hospitals, schools etc.
4. Villas, hotels, residential drinking water.
5. food, medicine, processing plant pipeline transportation.
6. High standard water quality pipeline transportation.