Which Pipe is Safe for You – PPR or CPVC?

There are many different types of pipes and fittings available on the market, from HDPE pipes to PVC pipes and conduit pipes. When choosing between PPR (Polypropylene Random Copolymer) and Chlorinated Polyvinyl Chloride (CPVC pipes), both materials have their specific advantages, depending on the intended use. Let's look at both:

1. PPR (Polypropylene Random Copolymer) Pipes:

· Safety & Health: PPR pipes are non-toxic, and they do not leach harmful chemicals into water, making them safe for potable (drinking) water systems.

· Temperature Resistance: PPR pipes can withstand high temperatures, making them ideal for hot and cold-water supply.

· Durability: PPR is highly resistant to corrosion and scaling, which helps in maintaining water quality over long periods.

· Longevity: PPR pipes have a long service life (50+ years) due to their resistance to wear and tear from both high temperatures and pressures.

· Installation: The installation requires heat fusion, which ensures leak-proof joints but requires specialised tools.

2. CPVC (Chlorinated Polyvinyl Chloride) Pipes:

· Safety & Health: CPVC pipes are also approved for potable water use. However, concerns have been raised about certain additives in CPVC that could leach into water under extreme conditions. That said, CPVC is widely used and considered safe when following manufacturer guidelines.
· Temperature Resistance: CPVC can handle higher temperatures than regular PVC, but its upper limit is slightly lower than PPR's. It is suitable for both hot and cold-water systems.
· Durability: CPVC is resistant to corrosion, scaling, and chlorine, making it suitable for both residential and industrial water supply systems.
· Longevity: CPVC pipes have a service life of around 40–50 years if properly installed and maintained.
· Installation: CPVC is easy to install using solvent cement, making it a convenient choice for many applications.

Which is Safer?

PPR is often considered safer for potable water due to its high chemical resistance and non-toxic properties.

CPVC is also safe for drinking water but may have minor concerns related to the leaching of additives in certain conditions.

Conclusion:

PPR pipes are generally preferred for drinking water systems because they are highly durable, chemically inert, and free from harmful leaching risks. CPVC is also a good option, but PPR tends to have an edge in terms of long-term safety and temperature resistance.