

# Sourcing Hardware

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## **BATHROOM FITTINGS**

Bath Tubs & Bath Accessories

## **BUILDERS HARDWARE**

Hand Tools  
Pipes & Fittings  
Roller Blinds

## **DOOR/WINDOW FITTINGS**

Hinges  
Automatic Door Operators  
Furniture & Door Hardware

## **FLOOR & WALL COVERINGS**

Concrete Pavers & Tiles  
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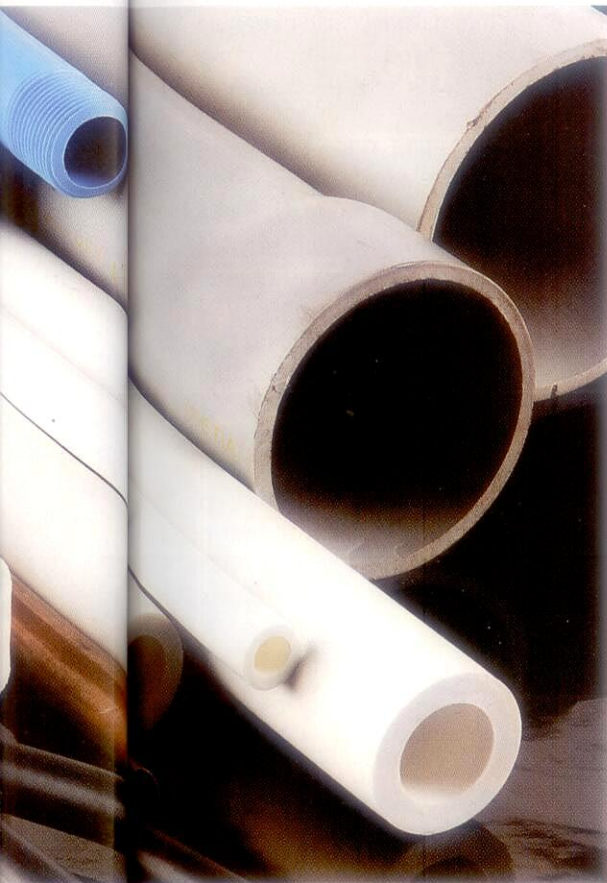
## **KITCHEN PRODUCTS**

Kitchen Sinks  
Kitchen Accessories

## **WOOD PRODUCTS**

Doors & Door Skins

## PLUMBING PIPES



Plastics (PB and PPR), copper and composites offer solutions for many of these problems, even though metals other than iron, and plastics, have their own strengths when it comes to dealing with pressure, temperature variations and water quality. World over, the shift to plastic has been definite, while some countries including China have gone beyond to adopt stainless steel in their piping systems. In India, the message from makers of new-material pipes is that discerning customers should match the application with properties of the pipe.

Even with such a niche approach, it is estimated that the Indian market for 50mm pipes in non-conventional materials, just for handling potable, and hot and cold water, is around 300 million meters. On a larger canvass, the size of the GI plumbing pipe market (Rs 4,000 crore) is itself a major opportunity for alternate materials.

However, many factors are hindering growth of companies that offer pipes in alternate materials. Gurmit Singh of Rajco, a company that specialises in

copper piping, says he has spent Rs 10 crore in a decade trying to promote copper pipes. He believes that returns have been less than satisfactory for the amount of time he has invested in selling his pipes. George Fischer, the maker of PB pipes, has seen its turnover stagnate for the last four years. The main challenge that these companies face is concept selling. Besides, the unorganised market, untrained installers and price considerations have together prevented users from adopting their superior technologies and materials. The way ahead for suppliers then is to identify their own specific niches so that they do not overstretch resources. ■

### The war against GI is in the open

- Damage due to leaky joints leads to average repair costs of Rs 300 per sft, every 30 years
- Main resistance to alternative materials is from plumbers
- Theft of metal fittings is a major deterrent
- The retail has to be updated on technicals of new plumbing materials

attacks that buildings and equipment are subjected to, but will also enable truly skilled plumbers to take responsibility for their installations.

### EXPERT OPINION

- The aggressive environment, elevated temperatures and hot dry climate are definitely a danger to plastic. PP, PB and PE plastic pipes suffer degradation upon exposure to UV light. They should be lagged, or protected by a UV absorbent water based paint coating. uPVC pipes have carbon black, which protects the plastic from UV light and heat fatigue. PVDF pipes are UV resistant but UV radiation may penetrate the pipe's walls, and may react with the chemical being handled by the piping.
- The storage matrix in respect of spacing, height of storage and the shade from direct sunlight etc are certain basic issues that need to be considered in order to get a long life out of the plumbing system.
- uPVC, cPVC and PVDF have limiting oxygen index (LOI) values greater than 21, and will support combustion but will not burn on indirect contact with a flame. Toxic and corrosive by-products are produced on burning whereas polyolefines (PE, PP, PB) will burn at room temperature, but the relative toxicity of their combustion is lower than of natural materials such as wood, wool or cotton. Even they don't pose the same dangers as PVC and PVDF because their molecular structure contains no halogens like chlorine etc.
- The excessive pressure due to water hammer must be considered in addition to the hydrostatic load while selecting the pipe material and this total pressure must be sustainable by the piping system. In the case of oscillating surge pressures, extreme caution is needed as surging at the harmonic frequency of the system could lead to damage.
- Copper pipes can be considered as inexpensive when one takes into account their characteristics such as corrosion resistance, durability, freedom from leaks, low maintenance, hygiene, and environment friendliness.

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