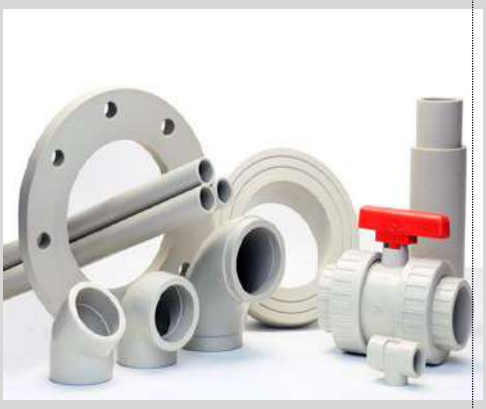
PP/ PPH TECHNICAL DATA SHEET

Polypropylene (PP) is a thermoplastic from the polyolefin group. It is a semi-rigid, translucent polymer with good toughness and weather resistance properties, low water absorption and is easily moulded to desired shapes. PP is a largely non-polar, partially crystalline thermoplastic with a crystallinity of 60 to 70% and a density of 0.90 to 0.91 g/cm which is amongst the lowest for all plastics.

PP-Copolymer (PP-C) is produced by adding 4-15% ethylene to the polypropylene which gives much improved impact strength and considerably lowers the brittle point to below normal service temperatures i.e. -15°C to -20°C.

PP-Homopolymer (PP-H) is produced by a continous chain of polypropylene units which results in a high stiffness material. Advanced homopolymer types like beta nucleated PP, are used to make piping systems and sheets.



Key Features:-

- Excellent Chemical Resistance: Increases reliability and scope of use
- High Thermal Resistance: Less vulnerable to weathering
- High Stress Crack Resistance: Prevents inching growth of cracks
- Excellent Fusion Capabilities: Ease of installation
- Low density, Low weight: Ease of transportation
- Homogenous structure: Aesthetically superior.
- Very good fatigue resistance
- Good elasticity: Easy installation
- Non Toxic, Food Grade
- High Impact Strength: Better durability
- Smooth Inner surface: Low frictional loss
- Good Thermal insulation
- Excellent dielectric properties

Standards:

DIN 8077-78 / Liner Pipes / ASTM Sch 40/80

Custom Sizing / Ventilation Ducts /

DIN 16962 / DIN 2501 / ANSI 16.5

Applications:-

- Acid Fillings Stations
- Laboratories
- Desalination Plants
- Pickling Lines
- Electroplating Plants
- Thermal Baths
- Galvanizing Plants
- Water Purification Plants
- Industrial washing /bleaching lines
- Packaging of Electrical Components
- Suction & exhaust pipelines
- Lined Pipings (Mild Steel+PP), (FRP +PP)
- Food & Beverage
- Laboratories
- Textile Industry
- Refineries
- Water, effluent transport
- Hoods, Fume Ducts
- Automotive Industry
- Nuclear Research Centres
- Chemical Industry
- Paper & Pulp Mills
- Construction (Plumbing)
- Pharmaceutical Industry
- Effluent Treatment / Disposal Plants

Technical Details:

Pipe - Grades	Range (in mm Ø)
PP-H Pipes and Liner Pipes	16 - 630 upto SDR 11
PP- CO / RC	16 - 630 upto SDR 9
Other	Fire Retardant (V0, V1, V2) Conductive, Anti Static, Multi layered Ventilation Ducts, Dual Containment

Range (in mm Ø)

Fittings Grade	Moulded	Fabricated	Electrofusion
Elbows, Bends	20-225	160-630	20-90
Tees	20-180	200-630	20-90
Cross/ Wyes/ Branch		20-315	
Stub Flanges,	20-630		20-110
End Cap	20-630		
Conc/ Ecc Reducers	20-630		20-90
Backing Flanges, Flanges w/Steel core	20-630	20-630	20-225
Couplers	20-630		20-315
Compression Fittings	20-90		

Typical Properties

Properties	Test Method	Unit	Value	
			PP-C	PP-H
Specific gravity (ρ)	ISO 1183	g/cm³	0.90	0.91
Max. permissible service temperature	Average	°C	80	95
Lower permissible service temperature		°C	5	5
Tensile strength at yield	ISO 527	Mpa	>22	>28
Tensile strength at break	ISO 527	Mpa	≥26	>31
Elongation at yield	ISO 527	%	≥8	≥8
Elongation at break	ISO 527	%	≥100	≥80
Notch impact strength	ISO 179	KJ/m2	12	9
Impact strength	ISO 179	KJ/m2	No Break	No Break
Modulus of elasticity	ISO 527	Mpa	1300	1700
Shore hardness	ISO 868	Shore -D	70	71
Vicat Softening Temperature	ISO 306	°C	50-90	105
Heat deflection temperature	ISO 306	°C	85	90

N.B.: Technical data refers to average values. The information provided above is based on the values measured in our laboratory as well as independent laboratories. The quoted values are based on specific resin properties and are subject to change without prior notice.

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