

**GREEN, TECHNOLOGY &
COEXISTING TOGETHER**

PE GAS PIPE

KUPP GAS PIPE



KUPP gas pipes can be easily installed by welding, and their perfect joints allow no gas leakage. These pipes have been made from compound materials which render them physically and chemically superior.

These flexible pipes are easy to install and the joints do not collapse even in differential settlement. They do not corroded by seawater or wet lands, and do not get eroded from electricity.

Physical Characteristics

High Chemical Resistance

KUPP Pipe is inert to attack by strong acids, alkalis, salt solutions, and many other chemicals. It also doesn't corrode, degrade or support biological growth. These characteristics make it suitable to transport these chemicals or to be installed in an environment where these chemicals are present.

Long Life

KUPP Gas Pipe's service life for transporting gas at ambient temperature is estimated to conservatively be in excess of 50 years.

Light Weight/Flexibility

KUPP pipe is light in weight, which makes it easy to handle, assemble, and install. Its high flexibility eliminates the need for elbows at slight bends. Also its flexibility at a low temperature enables it easy to be installed in any applications.

Heat Fusion Welding

KUPP pipe adapts the heat fusion welding, a proven welding technique that provides a speedy and leak-free joint that is as strong or stronger than the pipe itself and will last the life of the pipe. And its flexibility for any shifting in the ground caused by swelling and shrinking soil or earthquakes will not damage the pipes or cause joints to leak.

Strength/Durability

KUPP Pipe is highly resilient, tough and durable with high tensile and high impact strength. Its Freeze resistance allows it to maintain flexibility and integrity to lower than -80. Its impact resistance, slow crack growth resistance and long service life prove it suitable for various tough applications.

Reliability

Whether for gas distribution, water distribution or sewers, KUPP Pipe is highly recognized thanks to its maximum reliability and years of efficient service life.

Easy Installation

KUPP Pipe is light in weight reducing transportation, handling, and installation costs. Its advantage is that lighter equipment, smaller crew, ordinary "bedding" requirements, standard valves and flanges are needed. These benefits result in a reduced number of fittings with no restrained joints as well as easy installation.

Low Maintenance / Cost effective

Once KUPP Piping System is properly selected, designed, and installed, it is virtually maintenance free. It will not rust, pit, scale, corrode, or promote build-up on the interior. Accordingly years of trouble-free can be expected, which will keep the maintenance and labor cost very low.

Typical Properties

Properties	Method	Units	Typical value
Density	ASTM D 1505	g/cm ³	0.939
Melt Index - 2.16 kg load	ASTM D 1238	g/10 min	0.2
- 5 kg load		g/10 min	1.0
Tensile Properties	ASTM D 638(V)		
- Tensile strength at yield(min)		kg/ ²	190
- Tensile strength at break(min)		kg/ ²	270
- Elongation at break(min)		%	500
Flexural modulus	ASTM D 790	kg/ ²	6900
Environmental Stress Crack Resistance	ASTM D 1693	hr	1000
Condition B, F50(min)			
Hardness(min)	ASTM D 2240	shore"D"	59
Impact strength(Izod,Method A,min)	ASTM D 256	kgcm/cm	30
Minimum Required Strength(MRS)	ISO/TR 9080	MPa	8.0
Brittleness temp.(max)	ASTM D 746	° c	-75
Vicat softening temp.	ASTM D 1525	° c	119
Oxidative Induction Time at 200	ISO/TR 10837	min	40
Thermal conductivity	ASTM D 177	Watt/m • ° c	0.4
Coef.of linear thermal expansion	ASTM D 696	1/° c	0.00019
Specification data			
- Material Classification	ASTM D 1248	-	II B 5 P24
- Cell Classification	ASTM D 3350	-	234333E(PE2406)

Note) All properties except MRS are typical values for compression moulded specimens;the properties of these materials in extruded pipe form, or as moulded fittings will vary slightly in each individual case owing to morphological differences arising from the different processing methods.



Pipe Dimensions



DN	Out Diameter (mm)	Tolerance	Min. Thickness (mm)	Max. Thickness (mm)	Remarks
32	32	+0.3	3.0	3.4	
40	40	+0.4	3.7	4.2	
50	50	+0.4	4.6	5.2	
63	63	+0.4	5.8	6.5	
75	75	+0.5	6.8	7.6	
90	90	+0.6	8.2	9.2	KS M 3514
110	110	+0.7	10.0	11.1	
125	125	+0.8	11.4	12.7	ISO 4437
160	160	+1.0	14.6	16.2	
180	180	+1.1	16.4	18.2	SDR11
200	200	+1.2	18.2	20.2	
225	225	+1.4	20.5	22.7	
250	250	+1.5	22.7	25.1	
280	280	+1.7	25.4	28.1	
315	315	+1.9	28.6	31.6	

FITTINGS for GAS PIPE

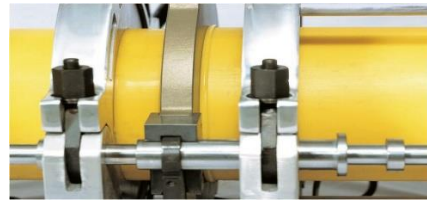
BUTT WELDING TYPE (75~315mm)



ELECTRO FUSION TYPE (32~75mm)



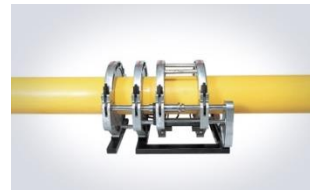
BUTT FUSION PROCESS



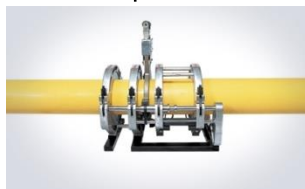
Preparation



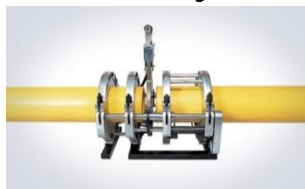
Trimming



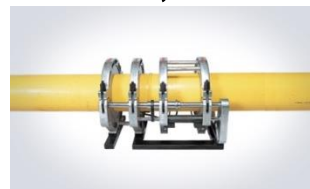
Bare eye test



Position Heater



Remove Heater



Completion

ELECTRONIC FUSION PROCESS



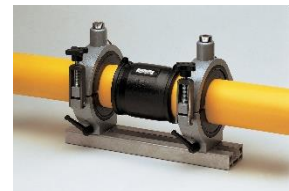
Trimming



Cleaning



Insert E/F socket



Alignment



Connecting cables



Completion



KUPP CO., LTD.

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