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Southern Pipe



# SOUTHERN PIPE

Pre-painted  
Fire Sprinkler Pipe



*Reliability & Quality*

# At the forefront of the Steel Industry



Head Office (Butterworth Plant)

A member of the Southern Steel Group of companies, a leading steel mill in the region. SOUTHERN PIPE INDUSTRY (M) SDN BHD was established in 1967 as a joint-venture between Malaysia and Japan. Southern Steel Pipe Sdn Bhd was formed as a 100% owned subsidiary to cater to the export market.

The pipe group consists of two steel pipe factories in Malaysia with a combine annual sales revenues of over USD 100 million and an annual capacity that exceeds 200,000 MT.

The many certificates garnered through the years are testament to the companies steadfast commitment in providing only the best products and services. Among others, it has the distinction of being the first steel mill in the country to be awarded the ISO 9001:2000 certification. The group's product lines were being exported to countries all over the world.

## QUALITY

Full and consistently high quality alkyd base painting in factory operated in line automated painting line.

## RELIABLE

The only brand that performs 100% leak tightness test on top of the normal eddy current test.

## CONVENIENT

Ready for installation and worry no more about time consuming and tedious painting work.

Firex is manufactured and tested to comply with the requirements of the following specifications.

- AS 1074
- ASTM A 53
- BS 1387: 1985
- JIS G 3452: 1988

We also welcome inquiries concerning additional sizes special orders to meet your product needs. Please contact us (phone: 604-331 7393/331 7741 or fax: 604-331 0942) for further information.



# Specially Design for Fire Protection Industry

100% leak tightness tested/Water Pressure tested

## The Fire Protection Pipe

Firex is a pre-painted fire sprinkler pipe. It is specifically design and develop with the fire protection professionals for the fire protection professionals.

## USER'S BENEFITS



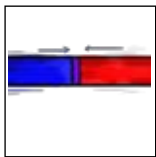
### LEAK PROOF

Firex is 100% leak tightness tested on top of normal eddy current test, provide you with double assurance on leak proof and no more worry with Firex.



### QUALITY FINISHING

Full and consistently high quality alkyd base painting in factory operated in line automatic painting line.



### EASIER/QUICKER INSTALLATION

Firex is ready for immediate use and installation. With a fully prepared surface, it looks good in any application. No more worries about time consuming and tedious painting work.



### HIGH QUALITY PAINT

Firex can be further coated with finishing coat.



### EASY TO USE

Firex is easy to work with - you can thread, cut, bend or weld Firex by using all the normal mild steel techniques.



### NO MORE RUSTY

Firex pre-painted finishing is free from rust and oil. No more clearing the oil and rust before painting and installation.



### TIME & COST SAVING

Ready use pipe eliminate the time consuming for cleaning. Save your precious time on low value added painting job and get more free time and spend more time wisely.



### SAFE TO USE

Firex clean pre-painted finishing and ask no more for greasy pipe that could be dangerous while handling.





# FIREX Sizes & Standards

## Fire Protection Pipes



### JIS G 3452: 1988

NOMINAL SIZE		OUTSIDE DIAMETER				WALL THICKNESS		WEIGHT			BUNDLING
		maximum		minimum							
inch	mm	inch	mm	inch	mm	inch	mm	kg/m	kg/ft	lb/ft	pieces
7	175	7.571	192.30	7.445	189.10	0.209	5.30	24.2	7.38	16.27	7
8	200	8.584	218.03	8.448	214.57	0.228	5.80	30.1	9.17	20.20	5

### SUPPLY CONDITIONS

Letter Symbol of Grade  
: SGP

Length  
: Standard Length is 6 meter  
: Cut-to-length is available upon request

End Finish  
: Plain End

### TECHNICAL SPECIFICATIONS

Tolerances

PERMISSIBLE VARIATION	
Wall Thickness	: -12.5%, +not specified

Mechanical Properties

TENSILE STRENGTH	ELONGATION%	
	No.11 and No.12 test pieces	No.5 test piece
N/mm <sup>2</sup>	Longitudinal	Transverse
290 (min)	30 (min)	25 (min)

Chemical Composition:

P Max (%)	S Max (%)
0.040	0.040



CLASS	NOMINAL SIZE		OUTSIDE DIAMETER				WALL THICKNESS		WEIGHT			BUNDLING
			maximum		minimum				plain ends			
	inch	mm	inch	mm	inch	mm	inch	mm	kg/m	kg/ft	lb/ft	pieces
MEDIUM	½	15	0.854	21.7	0.831	21.1	0.102	2.6	1.21	0.369	0.813	91
	¾	20	1.071	27.2	1.047	26.6	0.102	2.6	1.56	0.475	1.048	91
	1	25	1.346	34.2	1.315	33.4	0.126	3.2	2.41	0.735	1.620	91
	1¼	32	1.689	42.9	1.657	42.1	0.126	3.2	3.10	0.945	2.083	44
	1½	40	1.921	48.8	1.890	48.0	0.126	3.2	3.57	1.088	2.399	44
	2	50	2.394	60.8	2.354	59.8	0.142	3.6	5.03	1.533	3.380	44
	2½	65	3.016	76.6	2.969	75.4	0.142	3.6	6.43	1.963	4.328	19
	3	80	3.524	89.5	3.469	88.1	0.157	4.0	8.37	2.551	5.625	19
	4	100	4.524	114.9	4.461	113.3	0.177	4.5	12.2	3.718	8.199	10
	5	125	5.535	140.6	5.461	138.7	0.197	5.0	16.6	5.095	11.156	10
6	150	6.359	166.1	6.461	164.1	0.197	5.0	19.7	6.004	13.239	10	
HEAVY	½	15	0.854	21.7	0.831	21.1	0.126	3.2	1.44	0.439	0.968	91
	¾	20	1.071	27.2	1.047	26.6	0.126	3.2	1.87	0.570	1.257	91
	1	25	1.346	34.2	1.315	33.4	0.157	4.0	2.94	0.896	1.976	91
	1¼	32	1.689	42.9	1.657	42.1	0.157	4.0	3.80	1.158	2.554	44
	1½	40	1.921	48.8	1.890	48.0	0.157	4.0	4.38	1.335	2.944	44
	2	50	2.394	60.8	2.354	59.8	0.177	4.5	6.19	1.887	4.160	44
	2½	65	3.016	76.6	2.969	75.4	0.177	4.5	7.93	2.417	5.329	19
	3	80	3.524	89.5	3.469	88.1	0.197	5.0	10.3	3.139	6.922	19
	4	100	4.524	114.9	4.461	113.3	0.213	5.4	14.5	4.419	9.745	10
	5	125	5.535	140.6	5.461	138.7	0.213	5.4	17.9	5.456	12.030	10
6	150	6.539	166.1	6.461	164.1	0.213	5.4	21.3	6.492	14.315	10	

**SUPPLY CONDITIONS**

Identification marking

- : Medium tubes are marked by blue colour band
- : Heavy tubes are marked by red colour band

Length

- : Standard Length is 6 meter
- : Cut-to-length is available upon request

End Finish

- : Plain End

**TECHNICAL SPECIFICATIONS**

Tolerances

PERMISSIBLE VARIATION	
Wall Thickness	: - 10% , + not specified (Medium & Heavy Tubes)
Weight	: The mean consignment weight for quantities of 150m (500ft) and over of one size : ± 4% of the standard weight. The mean consignment weight for any single tube: +10%, -8% of the standard weight.
Length	: - 0mm, + 30mm

Mechanical Properties

TENSILE STRENGTH R <sub>m</sub>	YIELD STRENGTH R <sub>e</sub>	ELONGATION ON GAUGE LENGTH L <sub>0</sub> = 5.65√S <sub>0</sub> A
N/mm <sup>2</sup>	N/mm <sup>2</sup>	%
320 to 460	195 (min)	20 (min)

Chemical Composition:

C Max (%)	Mn Max (%)	P Max (%)	S Max (%)
0.20	1.20	0.045	0.045



# ASTM A53 Grade A-Sch 40

NOMINAL SIZE	OUTSIDE DIAMETER				WALL THICKNESS		WEIGHT			BUNDLING
	maximum		minimum		inch	mm	kg/m	kg/ft	lb/ft	pieces
inch	inch	mm	inch	mm						
1	1.331	33.7	1.299	33.1	0.133	3.38	2.50	0.76	1.68	91
1 ¼	1.676	42.5	1.644	41.9	0.140	3.56	3.39	1.03	2.28	44
1 ½	1.916	48.7	1.884	47.9	0.145	3.68	4.05	1.23	2.72	44
2	2.399	60.8	2.351	59.8	0.154	3.91	5.44	1.66	3.66	44
2 ½	2.904	73.6	2.846	72.4	0.203	5.16	8.63	2.63	5.80	19
3	3.535	89.6	3.465	88.2	0.216	5.49	11.29	3.44	7.59	19
3 ½	4.040	102.4	3.960	100.8	0.226	5.74	13.57	4.14	9.12	19
4	4.545	115.1	4.455	113.5	0.237	6.02	16.07	4.90	10.80	10
5	5.619	142.3	5.507	140.3	0.258	6.55	21.77	6.64	14.63	10
6	6.691	169.9	6.559	166.6	0.280	7.11	28.26	8.61	18.99	10
8	8.711	220.9	8.539	217.3	0.322	8.18	42.55	12.97	28.59	5

## SUPPLY CONDITIONS

### Length

- : Standard Length is 6 meter
- : Cut-to-length is available upon request

### End Finish

- : Plain End

## TECHNICAL SPECIFICATIONS

### Tolerances

PERMISSIBLE VARIATION	
Wall Thickness	: - 12.5%, + not specified
Weight	: ± 10%
Outside Diameter	: ± ¼ inch, <NPS2 or ± 0.40mm, <NPS 2 : ± 1%, >NPS 2
Length	: - 0mm, + 30mm

### Mechanical Properties

TENSILE STRENGTH	YIELD STRENGTH
N/mm <sup>2</sup>	N/mm <sup>2</sup>
330 (min)	205 (min)

### Chemical Composition

C	Mn	P	S	Cu	Ni	Cr	Mo	V
Max (%)	Max (%)	Max (%)	Max (%)	Max (%)	Max (%)	Max (%)	Max (%)	Max (%)
0.25	0.95	0.05	0.045	0.40	0.40	0.40	0.15	0.08



# Outstanding in Quality and Performance



As technological development sweeps rapidly the industries we service, it is critical that our steel products meet the highest demands of quality and performance. Southern Pipe employs advanced technology for manufacturing of quality pipes, all of which conform to stringent quality assurance standards. Our efforts in this direction were recognized in early 1982 when we earned the Certificate of Excellence by SIRIM.



In 1993, Southern Pipe emerged as the first Malaysia steel pipe mill to meet the international requirements in quality management systems from the Bureau Veritas Quality International. In 1994, we again achieved the MS ISO 9002 Quality System Registration Certificate by SIRIM.



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**Southern Pipe**

Head Office & Factory

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Manufacturer

**SOUTHERN PIPE INDUSTRY (M) SDN BHD**

