

## EN FM & UL

	OD (mm)	OD (inch)	Wall Thickness (mm)	Wall Thickness (inch)	FM
Easy Flow Light Wall	33,7	1"	2,00	0,079	✓
	33,7	1"	2,60	0,102	✓
	42,4	1 1/4"	2,00	0,079	✓
	42,4	1 1/4"	2,30	0,091	✓
	42,4	1 1/4"	2,60	0,102	✓
	48,3	1 1/2"	2,00	0,079	✓
	48,3	1 1/2"	2,60	0,102	✓
	60,3	2"	2,00	0,079	✓
	60,3	2"	2,90	0,114	✓
	76,1	2 1/2"	2,18	0,086	✓
	76,1	2 1/2"	2,90	0,114	✓
	88,9	3"	2,36	0,093	✓
	88,9	3"	3,20	0,126	✓
	114,3	4"	2,60	0,102	✓
114,3	4"	3,60	0,142	✓	
139,7	5"	3,40	0,134	✓	

	OD (mm)	OD (inch)	Wall Thickness (mm)	Wall Thickness (inch)	FM	UL
EN 10255 Medium	21,3	1/2"	2,6	0,102		
	26,9	3/4"	2,6	0,102		
	33,7	1"	3,2	0,126	✓	
	42,4	1 1/4"	3,2	0,126	✓	✓
	48,3	1 1/2"	3,2	0,126	✓	✓
	60,3	2"	3,6	0,142	✓	✓
	76,1	2 1/2"	3,6	0,142	✓	✓
	88,9	3"	4	0,157	✓	✓
	114,3	4"	4,5	0,177	✓	✓
	139,7	5"	5	0,197	✓	✓
165,1	6"	5	0,197	✓	✓	

	OD (mm)	OD (inch)	Wall Thickness (mm)	Wall Thickness (inch)	FM
EN 10255 Heavy	21,3	1/2"	3,2	0,126	✓
	26,9	3/4"	3,2	0,126	✓
	33,7	1"	4	0,157	✓
	42,4	1 1/4"	4	0,157	✓
	48,3	1 1/2"	4	0,157	✓
	60,3	2"	4,5	0,177	✓
	76,1	2 1/2"	4,5	0,177	✓
	88,9	3"	5	0,197	✓
	114,3	4"	5,4	0,213	✓
	139,7	5"	5,4	0,213	✓
165,1	6"	5,4	0,213	✓	

## Technical Specifications

- ✦ Roll Grooved
- ✦ FM Approved
- ✦ UL/C-UL Listed
- ✦ NFS Certified
- ✦ Custom Length Availability
- ✦ ASTM A53 / A795 and EN production standards
- ✦ Tight tolerances
- ✦ Consistent roundness
- ✦ Consistent wall thickness
- ✦ Consistent straightness
- ✦ Weldable
- ✦ Pressure Tested
- ✦ Reliable high steel quality
- ✦ Galvanised or sandblasted and varnish coated black, red (RAL 3000, RAL 3002 and Ral 3009) or grey (RAL 7012)
- ✦ CE, PED Certified

# EASY FLOW FIRE SPRINKLER PIPES



A leading European producer of steel pipes, Borusan Mannesmann is the choice of customers across Europe, the US and Canada for industrial and residential fire protection sprinkler system pipes.

Factory Mutual approved, Underwriters Laboratories & Canadian UL listed, ASTM A53 / A795 and EN production standard Borusan Mannesmann sprinkler pipes... To enhance the safety of your projects with the professional service and high quality assurance of Borusan Mannesmann, known all over the world.

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E-mail: [export@borusan.com](mailto:export@borusan.com)  
[www.borusanmannesmann.com](http://www.borusanmannesmann.com)

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# EASY FLOW FIRE SPRINKLER PIPES

Borusan Mannesmann is the first manufacturer in Europe and Turkey who has been UL listed and FM approved according to EN standards since 2015 and UL listed and FM approved according to ASTM standards since 2007.

In recent years, the importance of fire protection systems has increased significantly due to regulations and legislations in Occupational Health and Safety area. Fire protection systems have been disseminating in houses, shopping malls, airports and industrial facilities. In Europe over 4.000 and in the U.S over 3.500 lives are lost annually as a result of fire injuries. Consequently, fire protection measures have become an increasingly vital matter.

Borusan Mannesmann, a solution partner of its customers in the areas of black, galvanized and grooved pipes, is proud to be the avant-garde of fire protection pipes.

Easy Flow fire sprinkler pipes can be used in wet extinguishing systems including fire cabinet, hydrant and sprinkler systems. Alternatively, BM pipes have applications in sparkling, gas and dry chemical extinguishing systems for fire protection purposes.

Underwriters Laboratories (UL); is an international independent engineering and security company that tests the compliance of fire-safety systems with fire safety standards for the building elements of the system. UL is headquartered in the USA and serves in 6 continents; it operates in five main strategic areas including product safety, environment, health, university and verification services. Thousands of types of products, materials, and systems are scientifically assessed, tested, and approved by UL in compliance with the risks of electricity, fire, and injury. On the other hand, FM (Factory Mutual); is an independent technical unit of the FMI Company that insures great risks such as fire, natural disasters and it certifies the performance of the materials and systems. FM performs risk and insurance calculations through engineering analysis, which is different from the analysis prepared by insurance statisticians for many years.

Fire protection systems designed by using UL and FM approved system elements (pipe, valve, pump, sprinkler, etc.) avoids, life and property losses and provide economic advantages in insuring buildings against fire.

Borusan Mannesmann is the first steel pipe manufacturer which have UL and FM certificates according to EN standards in Europe.



## Why EASY FLOW fire sprinkler pipes?

Easy Flow fire sprinkler pipes are UL and FM certified according to EN and ASTM standards. Due to having high product quality and accredited by international institutions, the use of Easy Flow fire sprinkler pipes provides economic advantages in terms of insuring the buildings against fire.

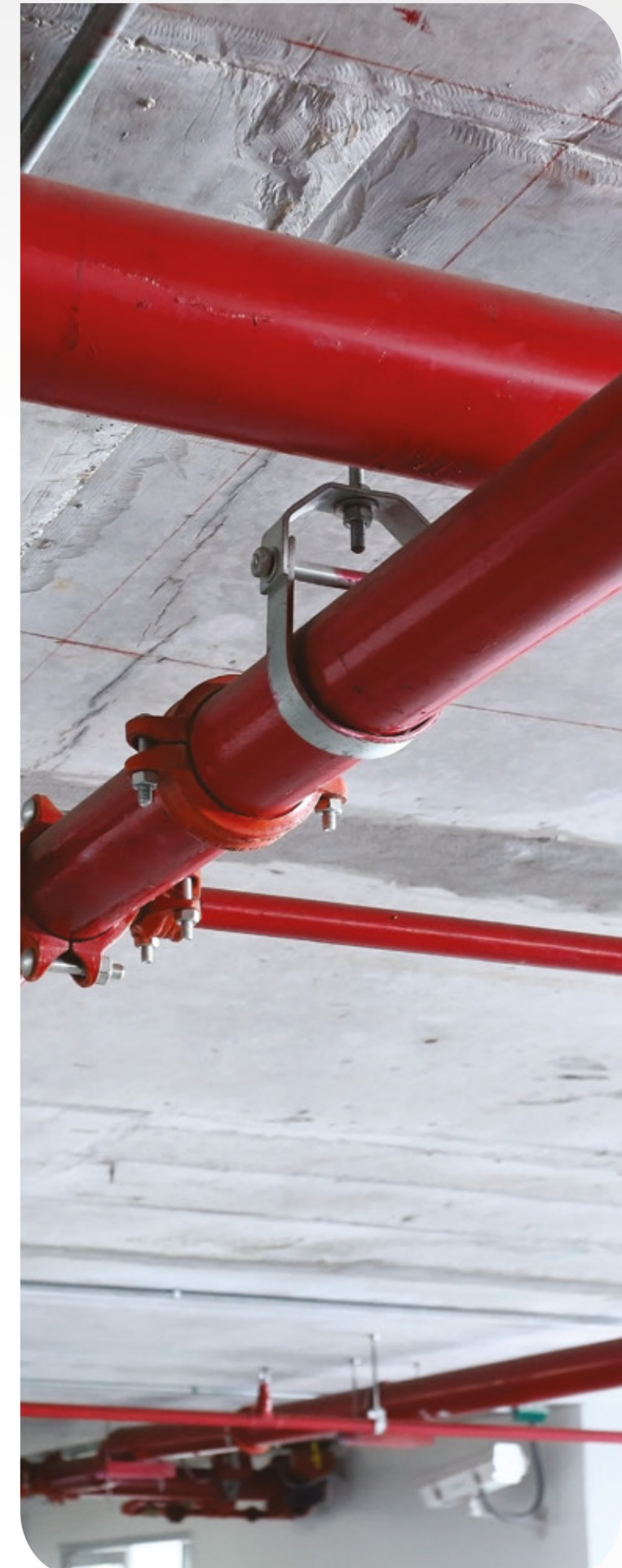
## Easy Flow fire sprinkler pipes have up to 30 micron of sand blasted varnish coating.

1- In order to reuse the corroded pipe, sandblasting and painting processes are necessary. In some cases, pipes may not be used where atmospheric rust has progressed and deep corrosion has occurred. Easy Flow provides long lasting fire protection system, provides low overhead costs and saves time, labor and scrap.

2- The painting process applied to Easy Flow products is done immediately after the production of pipes. The paint is applied to the adherence surface without contamination of foreign matter such as dirt, dust, etc. before the atmospheric rust is formed. Therefore, Easy Flow fire sprinkler pipes are better quality and long lasting and provide savings from costs of maintenance/repair.

## Inside weld bead is removed for grooved Easy Flow fire sprinkler pipes.

During grooving process, the weld bead causes measurement deviations and errors in grooved area. Such deflections may cause the seal not to be fully seated, the clamps not being fully tightened, or even leakages. Easy Flow grooved fire sprinkler pipes provide perfect connection and combination during assembly and also fully compatible with Victaulic and Atusa standards.



## Easy Flow fire sprinkler pipes have perfect roundness.

When all pipes are connected to each other, perfect alignment occurs and there is no weld gap to be filled. Fast, comfortable and secure pre-weld preparation is done. It is easy to make butt-welding and it saves labor, time and cost.



### Special Procedures Applied On Request

- ▣ Customized pipe length
- ▣ Production of special steel grades/qualities
- ▣ Inner / Outer Epoxy Coating
- ▣ Sandblasted and Varnish Coated
- ▣ Outer PE (polyethylene) Coating
- ▣ Galvanization
- ▣ Grooving

### Advantages Of Easy Flow Fire Sprinkler Pipes

- ▣ UL and FM approved in EN standards
- ▣ UL and FM approved in ASTM A53 and A795 standards.
- ▣ It can be produced as black bare, sandblasted and varnish coated (black, gray and red colors) and galvanized.
- ▣ The red paint has high adhesion and it is resistant to corrosion, water and oil.
- ▣ With options of Plain End, Threaded & Coupled or Grooved.
- ▣ Weld bead can be removed upon request. CE certified.

### About Borusan Mannesmann

- ▣ 6 World-Class Plants in Turkey, US and Italy
- ▣ Perfect Product Quality with Lean 6 Sigma Production Technique
- ▣ Wide Product Range with High Quality
- ▣ Exceeding Limits with Continuous R&D
- ▣ Excellent Service with Voice Of Customer Process
- ▣ Well established sales organization
- ▣ Export to more than 35 countries
- ▣ UL and C-UL listed, FM approved, NSF and DVGW certified
- ▣ Integrated Delivery Services



## ASTM FM & UL

	OD (mm)	OD (inch)	Wall Thickness (mm)	Wall Thickness (inch)	Weight (kg/m)	Weight (lb/ft)	UL	FM
Easy Flow Light Wall	33,4	1"	2,60	0.102	1,99	1,34		✓
	42,2	1 1/4"	2,30	0.091	2,27	1,53		✓
	42,2	1 1/4"	2,60	0.102	2,55	1,71		✓
	48,3	1 1/2"	2,60	0.102	2,93	1,97		✓
	60,3	2"	2,90	0.114	4,1	2,76		✓
	73	2 1/2"	2,90	0.114	5,23	3,52		✓
	88,9	3"	3,20	0.126	6,76	4,54		✓
	114,3	4"	3,60	0.142	9,83	6,60		✓
141,3	5"	3,40	0.134	11,43	7,68		✓	
SCH 7	33,4	1"	2,00	0.079	1,55	1,04	✓	✓
	42,2	1 1/4"	2,00	0.079	1,98	1,33	✓	✓
	48,3	1 1/2"	2,13	0.084	2,42	1,62	✓	✓
	60,3	2"	2,13	0.084	3,05	2,05	✓	✓
	73	2 1/2"	2,18	0.086	3,80	2,55	✓	✓
	88,9	3"	2,36	0.093	5,04	3,38	✓	✓
	114,3	4"	2,60	0.108	7,16	4,81	✓	✓
	141,3	5"	3,40	0.134	11,56	7,76	✓	✓
SCH 10	26,7	3/4"	2,11	0.083	1,28	0,86	✓	✓
	33,4	1"	2,77	0.109	2,09	1,41	✓	✓
	42,2	1 1/4"	2,77	0.109	2,69	1,81	✓	✓
	48,3	1 1/2"	2,77	0.109	3,11	2,09	✓	✓
	60,3	2"	2,77	0.109	3,93	2,64	✓	✓
	73	2 1/2"	3,05	0.120	5,26	3,53	✓	✓
	88,9	3"	3,05	0.120	6,46	4,34	✓	✓
	101,6	3 1/2"	3,05	0.120	7,41	4,98	✓	✓
	114,3	4"	3,05	0.120	8,37	5,62	✓	✓
	141,3	5"	3,4	0.134	11,58	7,78	✓	✓
	168,3	6"	3,4	0.134	13,85	9,30	✓	✓
	219,1	8"	4,78	0.188	25,26	16,96	✓	✓
273,1	10"	4,78	0.188	31,62	21,23	✓	✓	
SCH 30	323,8	12"	4,78	0.188	37,61	25,28		✓
	33,4	1"	2,90	0.114	2,18	1,46		✓
	42,2	1 1/4"	2,97	0.117	2,87	1,93		✓
	48,3	1 1/2"	3,18	0.125	3,53	2,37		✓
	60,3	2"	3,18	0.125	4,48	3,00		✓
	73	2 1/2"	4,78	0.188	8,04	5,40		✓
	88,9	3"	4,78	0.188	9,92	6,65		✓
	101,6	3 1/2"	4,78	0.188	11,41	7,65		✓
	114,3	4"	4,78	0.188	12,91	8,66		✓
	219,1	8"	7,04	0.277	36,82	24,72		✓
	273,1	10"	7,8	0.307	51,05	34,27		✓
	SCH 40	21,3	1/2"	2,77	0.109	1,27	0,85	✓
26,7		3/4"	2,87	0.113	1,69	1,13	✓	✓
33,4		1"	3,38	0.133	2,50	1,68	✓	✓
42,2		1 1/4"	3,56	0.140	3,39	2,27	✓	✓
48,3		1 1/2"	3,68	0.145	4,05	2,72	✓	✓
60,3		2"	3,91	0.154	5,45	3,66	✓	✓
73		2 1/2"	5,16	0.203	8,64	5,80	✓	✓
88,9		3"	5,49	0.216	11,29	7,58	✓	✓
101,6		3 1/2"	5,74	0.226	13,58	9,12	✓	✓
114,3		4"	6,02	0.237	16,09	10,80	✓	✓
141,3		5"	6,55	0.258	21,79	14,63	✓	✓
168,3		6"	7,11	0.280	28,29	18,99	✓	✓
219,1	8"	8,18	0.322	45,34	30,45	✓	✓	
273,1	10"	9,27	0.365	60,29	40,52	✓	✓	
SCH 80	21,3	1/2"	3,73	0.147	1,62	1,09		✓
	26,7	3/4"	3,91	0.154	2,20	1,48		✓
	33,4	1"	4,55	0.179	3,25	2,19		✓
	42,2	1 1/4"	4,85	0.191	4,49	3,03		✓
	48,3	1 1/2"	5,08	0.200	5,39	3,65		✓
	60,3	2"	5,54	0.218	7,55	5,08		✓
	73	2 1/2"	7,01	0.276	11,52	7,75		✓
	88,9	3"	7,62	0.300	15,39	10,35		✓
	101,6	3 1/2"	8,08	0.318	18,82	12,67		✓
	114,3	4"	8,56	0.337	22,60	15,20		✓
	141,3	5"	9,52	0.375	31,42	21,04		✓
	168,3	6"	10,97	0.432	43,05	28,88		✓
219,1	8"	12,70	0.500	65,41	44,00		✓	