

# FIRESIST® FIRE SPRINKLER PIPES



Borusan Pipe is a leading steel pipe manufacturer with over 65 years of industry expertise, producing more than 4,000 products across 10 state-of-the-art facilities in Türkiye, Italy, Romania, and the USA.

As a trusted provider of fire protection solutions, we offer the widest range of UL Listed & FM Approved fire protection pipes. Our product portfolio includes bare, galvanized, primer-varnished, and epoxy-coated options, along with various end configurations such as roll-grooved, threaded & coupled, or beveled pipe ends.

With an extensive sales network spanning over 35 countries, Borusan Pipe is committed to being your preferred partner in fire protection projects. Through customer-focused R&D, long-term collaboration, consistent product quality, and seamless communication, we ensure the highest standards of reliability and performance.

For more information, contact us at [export@borusan.com](mailto:export@borusan.com).



## OVERVIEW

|                  | C4-M<br>Corrosivity Category | Regrooveable | Color                                                                | Eliminating<br>Field Painting |
|------------------|------------------------------|--------------|----------------------------------------------------------------------|-------------------------------|
| FIRESIST PLUS    | ✓                            | ✓            | RAL 7012<br>RAL 3000                                                 | ✓                             |
| FIRESIST EPOXY   |                              |              | RAL 7012<br>RAL 3000<br>RAL 3009<br>RAL 9016<br>RAL 1018             | ✓                             |
| FIRESIST VARNISH |                              |              | RAL 9005<br>RAL 7012<br>RAL 3000<br>RAL 3009<br>RAL 5017<br>RAL 5005 |                               |
| GALVANIZED       | ✓                            | ✓            | Galvanized                                                           | ✓                             |

# FIRE SIST PLUS EPOXY COATED SPRINKLER PIPES

Premium epoxy-coated Firesist plus pipes are certified as corrosivity category C4-M and proven to exhibit outstanding mechanical performance by European independent third-party testing laboratories. They are suitable for difficult environmental conditions and ideal for continuous operation up to 98 °C. Firesist plus pipes are specially developed with ease of on-site use in mind. They allow regrooving with no flaking or peeling on pipe ends. The coating color and texture are not visually affected by heat during cutting and drilling.

## Firesist Plus Product Specifications

- Superior epoxy coating up to 250 microns
- C4-M certified for corrosivity category
- Available in Gray (RAL 7012) and Red (RAL 3000)
- Roll-grooved threaded & coupled or beveled pipe ends
- Eliminates field painting
- Widest range of UL and FM approvals CE certified, UKCA certified for EN 10217-1/2
- Produced according to ASTM, EN, AS 1074, and AS/NZS 1163 standards
- Pressure ratings up to 300 psi
- Size range: 1/2" – 12"
- Reliable in all sizes
- Inner weld seam removal and custom length upon request
- Tight tolerances, consistent roundness, and straightness
- Regroovable



## Technical Data Sheet

### CORROSION RESISTANCE

|                            |                                                                                         |                  |
|----------------------------|-----------------------------------------------------------------------------------------|------------------|
| Corrosivity Category       | C4-M (urban, industrial, coastal, seashore)                                             | ISO 12944-6:2018 |
| Water Condensation (240 h) | No visual change<br>(incl. blistering, rusting, cracking, flaking)<br>21,4 MPa adhesion | ISO 6270-1       |
| Neutral Salt Spray (480 h) | No visual change<br>0,0 mm corrosion from scribe<br>21,9 MPa adhesion                   | ISO 9227         |

### MECHANICAL PERFORMANCE

|                                 |                                |                      |
|---------------------------------|--------------------------------|----------------------|
| Cathodic Disbondment            | R < 4 mm (168 hours, 24 °C)    | ASTM G8-96           |
| Cross-cut                       | Gt 0                           | ISO 2409:2007        |
| Adhesion                        | 22,9 MPa                       | ISO 4624-B           |
| Impact Resistance               | ≥ 2,0 N.m                      | ASTM D2794           |
| Mandrel Bend Test               | ≥ 2 mm                         | ISO 1519:2011        |
| Cupping Test (Erichsen Drawing) | ≥ 11 mm                        | ISO 1520:2006        |
| Buchholz Hardness               | > 250 (0,0 mm)                 | ISO 2815:2003        |
| Gloss                           | 90 – 94 (60°)<br>40 – 48 (20°) | DIN EN ISO 2813:2014 |

### CHEMICAL RESISTANCE

|                                                                                                                                                                                             |                                                                                    |           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------|
| Immersion (45 days at 24°C) <ul style="list-style-type: none"><li>Distilled water</li><li>3 molar calcium chloride</li><li>3 molar sodium chloride</li><li>Sat. calcium hydroxide</li></ul> | No holidays<br>No undercutting<br>No blistering<br>No loss of bond<br>No softening | ASTM A775 |
| Chloride Permeability                                                                                                                                                                       | 1.4 x 10 <sup>-5</sup> M (45 days at 24°C)                                         | ASTM A775 |

(\*): DEKRA approval is available upon request.

\*\*\*Given technical properties are for RAL 7012, RAL 3000 properties are available upon request.

## FIRESIST EPOXY COATED SPRINKLER PIPES

- ❑ Powder epoxy coating up to 100 microns
- ❑ Available in Red (RAL 3000), Red Brown (RAL 3009), Grey (RAL 7012), White (RAL 9016) and Yellow (RAL 1018)
- ❑ Roll-grooved threaded & coupled or beveled pipe ends
- ❑ Eliminates field painting
- ❑ Widest range of UL and FM approval, CE certified, UKCA certified for EN 10217-1/2
- ❑ Produced according to ASTM, EN, AS 1074, and AS/NZS 1163 standards
- ❑ Pressure ratings up to 300 psi
- ❑ Size range Size range: 1/2" – 12"
- ❑ Reliable in all sizes
- ❑ Inner weld seam removal and custom length upon request
- ❑ Tight tolerances, consistent roundness and straightness



## FIRESIST PRIMER VARNISHED SPRINKLER PIPES

Primer varnished sprinkler pipes provide protection against corrosion with low overhead cost.

- ❑ Varnishing coating between 20 – 25 microns
- ❑ Protects against atmospheric rust
- ❑ Available in Black (RAL 9005), Gray (RAL 7012), Red (RAL 3000), Red-Brown (RAL 3009), and Blue (RAL 5017, RAL 5005)
- ❑ Roll-grooved threaded & coupled or beveled pipe end
- ❑ Saves time, labor, cost, scrap
- ❑ Inner weld seam removal and custom length upon request
- ❑ Widest range of UL and FM approvals CE certified, UKCA certified for EN 10217-1/2
- ❑ Produced according to ASTM, EN, AS 1074, and AS/NZS 1163 standards
- ❑ Pressure ratings up to 300 psi
- ❑ Size range: 1/2" – 12"
- ❑ Reliable in all sizes
- ❑ Tight tolerances, consistent roundness, and straightness



Primer varnished sprinkler pipes provide protection against corrosion for up to 60 days under appropriate shipping and storage conditions.

# GALVANIZED SPRINKLER PIPES

Zinc coated sprinkler pipes provide long lasting protection against corrosion. They are compatible for use in wet, dry, pre-action and deluge sprinkler systems.

- Superior zinc coating between 50 – 55 microns
- Maintains corrosion resistance
- Roll-grooved threaded & coupled or beveled pipe ends
- Easy to weld and install
- Compliant with European project requirements
- Inner weld seam removal and custom length upon request
- Widest range of UL and FM approvals CE and DVGW certified
- Produced according to ASTM and EN standards
- Pressure ratings up to 300 psi
- Size range: 1/2" – 12"
- Reliable in all sizes
- Tight tolerances, consistent roundness and straightness



## Technical Data Sheet

### CORROSION RESISTANCE

|                            |                                                                                         |                  |
|----------------------------|-----------------------------------------------------------------------------------------|------------------|
| Corrosivity Category       | C4-M (industrial and potable water)                                                     | ISO 12944-6:2018 |
| Water Condensation (240 h) | No visual change<br>(incl. blistering, rusting, cracking, flaking)<br>13,1 MPa adhesion | ISO 6270-1       |
| Neutral Salt Spray (480 h) | No visual change<br>0,0 mm corrosion from scribe<br>3,8 MPa adhesion                    | ISO 9227         |



# ASTM A53 – ASTM A795 – EN 10217-1

|                           | OD<br>(mm) | OD<br>(inch) | Wall<br>Thickness<br>(mm) | Wall<br>Thickness<br>(inch) | Weight<br>(kg/m) | Weight<br>(lb/ft) | UL | FM |
|---------------------------|------------|--------------|---------------------------|-----------------------------|------------------|-------------------|----|----|
| EASY<br>FLOW<br>LIGHTWALL | 33,7       | 1"           | 2                         | 0,079                       | 1,56             | 1,05              |    | ✓  |
|                           | 33,7       | 1"           | 2,60                      | 0,102                       | 1,99             | 1,34              |    | ✓  |
|                           | 42,4       | 1 1/4"       | 2,00                      | 0,079                       | 1,99             | 1,34              |    | ✓  |
|                           | 42,4       | 1 1/4"       | 2,30                      | 0,091                       | 2,27             | 1,53              |    | ✓  |
|                           | 42,4       | 1 1/4"       | 2,60                      | 0,102                       | 2,55             | 1,71              |    | ✓  |
|                           | 48,3       | 1 1/2"       | 2,00                      | 0,079                       | 2,28             | 1,53              |    | ✓  |
|                           | 48,3       | 1 1/2"       | 2,30                      | 0,091                       | 2,61             | 1,75              |    | ✓  |
|                           | 48,3       | 1 1/2"       | 2,60                      | 0,102                       | 2,93             | 1,97              |    | ✓  |
|                           | 60,3       | 1 1/2"       | 2,00                      | 0,079                       | 2,88             | 1,93              |    | ✓  |
|                           | 60,3       | 2"           | 2,60                      | 0,102                       | 3,70             | 2,49              |    | ✓  |
|                           | 60,3       | 2"           | 2,90                      | 0,114                       | 4,10             | 2,76              |    | ✓  |
|                           | 76,1       | 2 1/2"       | 2,18                      | 0,086                       | 3,97             | 2,67              |    | ✓  |
|                           | 76,1       | 2 1/2"       | 2,60                      | 0,102                       | 4,71             | 3,17              |    | ✓  |
|                           | 76,1       | 2 1/2"       | 2,90                      | 0,114                       | 5,23             | 3,52              |    | ✓  |
|                           | 88,9       | 3"           | 2,36                      | 0,093                       | 5,04             | 3,38              |    | ✓  |
|                           | 88,9       | 3"           | 2,90                      | 0,114                       | 6,15             | 4,13              |    | ✓  |
|                           | 88,9       | 3"           | 3,20                      | 0,126                       | 6,76             | 4,54              |    | ✓  |
|                           | 114,3      | 4"           | 2,60                      | 0,102                       | 7,16             | 4,81              |    | ✓  |
|                           | 114,3      | 4"           | 3,60                      | 0,142                       | 9,83             | 6,60              |    | ✓  |
|                           | 139,7      | 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                      | 0,102                       | 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              | ✓  | ✓  |
|                           | 139,7      | 5 1/2"       | 3,6                       | 0,142                       | 12,08            | 8,12              | ✓  | ✓  |
|                           | 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"           | 3,76                      | 0,148                       | 19,97            | 13,4              | ✓  | ✓  |
|                           | 219,1      | 8"           | 4,78                      | 0,188                       | 25,26            | 16,96             | ✓  | ✓  |
|                           | 273,1      | 10"          | 4,19                      | 0,165                       | 27,79            | 18,67             | ✓  | ✓  |
|                           | 273,1      | 10"          | 4,78                      | 0,188                       | 31,62            | 21,23             | ✓  | ✓  |
|                           | 323,8      | 12"          | 4,78                      | 0,188                       | 37,61            | 25,28             | ✓  | ✓  |
| SCH 30                    | 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              |    | ✓  |
|                           | 141,3      | 5"           | 5,56                      | 0,219                       | 18,61            | 12,51             |    | ✓  |
|                           | 168,3      | 6"           | 5,56                      | 0,219                       | 22,31            | 15,00             |    | ✓  |
|                           | 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             |    | ✓  |

|                          | OD<br>(mm) | OD<br>(inch) | Wall<br>Thickness<br>(mm) | Wall<br>Thickness<br>(inch) | Weight<br>(kg/m) | Weight<br>(lb/ft) | UL | FM |
|--------------------------|------------|--------------|---------------------------|-----------------------------|------------------|-------------------|----|----|
| Certification<br>Process | 114,3      | 4"           | 3,20                      | 0,126                       | 8,77             | 5,89              |    |    |
|                          | 168,3      | 6"           | 4,00                      | 0,157                       | 16,21            | 10,89             |    |    |
|                          | 273,0      | 10"          | 5,00                      | 0,197                       | 33,05            | 22,21             |    |    |
|                          | 323,9      | 10"          | 5,60                      | 0,220                       | 43,96            | 29,54             |    |    |

## EN 10255 UL & FM

|                       | OD<br>(mm) | OD<br>(inch) | Wall Thickness<br>(mm) | Wall Thickness<br>(inch) | UL | FM |
|-----------------------|------------|--------------|------------------------|--------------------------|----|----|
| EN<br>10255<br>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<br>(mm) | OD<br>(inch) | Wall Thickness<br>(mm) | Wall Thickness<br>(inch) | FM |
|----------------------|------------|--------------|------------------------|--------------------------|----|
| EN<br>10255<br>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                    | ✓  |



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