

SECTION 02 BLACK & GALVANIZED NIPPLES

This section lists out our extensive offering for steel nipples and pipe. Each section conveniently lays out the different offerings of each type of nipple in black, galvanized, wholesale and retail.

For Steel Pipe, Pre-Cut Pipe, Extra-Heavy Nipples, Seamless Nipples, please visit our wholesale literature page at our website: www.bkproducts.com

Black & Galv. Nipples0018

- Schedule 40
- Schedule 80
- Schedule 80 Seamless
- Schedule 160 Seamless

Nipple Assortments031

- Series 6700

Schedule 40 Precut Pipe033



SCHED. 40 NIPPLES | BLACK & GALVANIZED



3/4in Diameter Schedule 40 Nipples MIP x MIP

BULK PART NUMBER

| Length | Black | Galvanized | Inner | MC |
|---------|---------|------------|-------|-----|
| Close | 584-001 | 564-001 | 25 | 100 |
| 1-1/2in | 584-015 | 564-015 | 25 | 100 |
| 2in | 584-020 | 564-020 | 25 | - |
| 2-1/2in | 584-025 | 564-025 | 25 | - |
| 3in | 584-030 | 564-030 | 25 | - |
| 3-1/2in | 584-035 | 564-035 | 25 | - |
| 4in | 584-040 | 564-040 | 25 | - |
| 4-1/2in | 584-045 | 564-045 | 25 | - |
| 5in | 584-050 | 564-050 | 25 | - |
| 5-1/2in | 584-055 | 564-055 | 25 | - |
| 6in | 584-060 | 564-060 | 25 | - |
| 7in | 584-070 | 564-070 | 25 | - |
| 8in | 584-080 | 564-080 | 25 | - |
| 9in | 584-090 | 564-090 | 25 | - |
| 10in | 584-100 | 564-100 | 25 | - |
| 11in | 584-110 | 564-110 | 25 | - |
| 12in | 584-120 | 564-120 | 25 | - |

BARCODED PART NUMBER

| Length | Black | Galvanized | Inner | MC |
|---------|-----------|------------|-------|-----|
| Close | 584-001HC | 564-001HC | 25 | 400 |
| 1-1/2in | 584-015HC | 564-015HC | 25 | 400 |
| 2in | 584-020HC | 564-020HC | 25 | 300 |
| 2-1/2in | 584-025HC | 564-025HC | 25 | 300 |
| 3in | 584-030HC | 564-030HC | 25 | 200 |
| 3-1/2in | 584-035HC | 564-035HC | 25 | 200 |
| 4in | 584-040HC | 564-040HC | 25 | 200 |
| 4-1/2in | 584-045HC | 564-045HC | 25 | 100 |
| 5in | 584-050HC | 564-050HC | 25 | 100 |
| 5-1/2in | 584-055HC | 564-055HC | 25 | 100 |
| 6in | 584-060HC | 564-060HC | 25 | 100 |
| 7in | 584-070HC | 564-070HC | 25 | 50 |
| 8in | 584-080HC | 564-080HC | 25 | 50 |
| 9in | 584-090HC | 564-090HC | 25 | 50 |
| 10in | 584-100HC | 564-100HC | 25 | 50 |
| 11in | 584-110HC | 564-110HC | 25 | 50 |
| 12in | 584-120HC | 564-120HC | 25 | 50 |

1in Diameter Schedule 40 Nipples MIP x MIP

BULK PART NUMBER

| Length | Black | Galvanized | Inner | MC |
|---------|---------|------------|-------|----|
| Close | 585-001 | 565-001 | 25 | - |
| 2in | 585-020 | 565-020 | 25 | - |
| 2-1/2in | 585-025 | 565-025 | 25 | - |
| 3in | 585-030 | 565-030 | 25 | - |
| 3-1/2in | 585-035 | 565-035 | 25 | - |
| 4in | 585-040 | 565-040 | 25 | - |
| 4-1/2in | 585-045 | 565-045 | 25 | - |
| 5in | 585-050 | 565-050 | 25 | - |
| 5-1/2in | 585-055 | 565-055 | 25 | - |
| 6in | 585-060 | 565-060 | 25 | - |
| 7in | 585-070 | 565-070 | 25 | - |
| 8in | 585-080 | 565-080 | 25 | - |
| 9in | 585-090 | 565-090 | 25 | - |
| 10in | 585-100 | 565-100 | 25 | - |
| 11in | 585-110 | 565-110 | 25 | - |
| 12in | 585-120 | 565-120 | 25 | - |

BARCODED PART NUMBER

| Length | Black | Galvanized | Inner | MC |
|---------|-----------|------------|-------|-----|
| Close | 585-001HC | 565-001HC | 10 | 160 |
| 2in | 585-020HC | 565-020HC | 10 | 160 |
| 2-1/2in | 585-025HC | 565-025HC | 10 | 160 |
| 3in | 585-030HC | 565-030HC | 10 | 160 |
| 3-1/2in | 585-035HC | 565-035HC | 10 | 160 |
| 4in | 585-040HC | 565-040HC | 10 | 120 |
| 4-1/2in | 585-045HC | 565-045HC | 10 | 120 |
| 5in | 585-050HC | 565-050HC | 10 | 80 |
| 5-1/2in | 585-055HC | 565-055HC | 10 | 80 |
| 6in | 585-060HC | 565-060HC | 10 | 80 |
| 7in | 585-070HC | 565-070HC | 10 | 40 |
| 8in | 585-080HC | 565-080HC | 10 | 40 |
| 9in | 585-090HC | 565-090HC | 10 | 40 |
| 10in | 585-100HC | 565-100HC | 10 | 40 |
| 11in | 585-110HC | 565-110HC | 10 | 40 |
| 12in | 585-120HC | 565-120HC | 10 | 40 |



FINISHES

Black, Galvanized and Their Designed Applications

Our fittings, nipples and pipes are offered in three finishes: Black, Galvanized and Red Brass. Each finish offers unique application advantages over each other making them ideal for particular projects.

BLACK FINISH

Accessories with black finish are generally used for lubricant oil, grease, LP gas, natural gas, gases (nitrogen, oxygen, etc.), steam and diesel. This finish is best suited for normal use where an inner rustproof protection is not required.

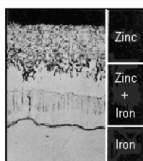
GALVANIZED FINISH

Our Galvanized Finish offering is used for hot and cold water systems, refrigeration, sprinklers, compressed air, gasoline, diesel, alcohol, and some other applications where conducted fluid needs inner rustproof protection.

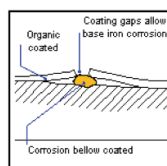
These fittings are manufactured by hot-dip galvanizing according to ASTM A-153. There are several ways to protect iron against rust, but none better than our hot-dip galvanizing process. Hot-dip galvanizing is one of the most efficient, practical and economical ways to protect iron and steel as zinc resists very well environment, air, and water corrosion for long lasting protection.

Galvanizing protects from corrosion the following ways:

- 1) It offers a long lasting isolating coverage made of metallic zinc and zinc alloy expertly applied to our iron.
- 2) Since zinc is bonded to iron as part of the iron-zinc combination, the protection works at a molecular level throughout the union. This serves as both a mechanical and corrosion protector.

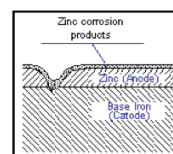


Zinc resists the environment's corrosive actions. Opposite to this, most of the organic coatings (paintings) are environmentally unstable and need to be renewed frequently. When a little failure occurs, corrosion starts and it begins to become larger under the protective coating.



Cathodic iron protection, provided by the metallic zinc coating, is factually based on corrosion being an electro-chemical process.

As zinc is a highly active electrochemical element, it tends to absorb oxygen before iron does it. Furthermore, this condition



creates additional protection against zinc hydroxide. This cathodic protection prevents corrosion to exposed parts, due to any discontinuity or mechanical damage on the coating.

NIPPLE PRODUCTS

We manufacture threaded and flat end nipples with galvanized and black finishes alongside aluminum and brass options. Processed diameters range from 1/8-in to 6-in and lengths from close thread to 12-in for nipples with pipe lengths from 10 ft to 21-ft.

WELDED STEEL NIPPLE PRODUCTS

Offering includes:

- Schedule 40 Nipple, Black and Galvanized
- Schedule 80 Nipple, Black and Galvanized
- Galvanized Conduit Nipple (UL listed)

Normal applications for threaded product lines are steam, gas, water and compressed air. Schedule should be selected based on the conduction lines required pressure. Our galvanized conduit is best with metallic pipes used for installation of wires and cables.

Our welded steel nipples are manufactured to ASTM A733 and ASME B1.20.1 specifications. UL6 specification applies for galvanized conduit nipples.

SEAMLESS STEEL NIPPLE PRODUCTS

This nipple offering is manufactured with seamless steel pipe that complies with ASTM A106, Grade B standard.

- Schedule 40 Nipple, Black and Electro-galvanized (includes yellow-zinc finish)
- Schedule 80 Nipple, Black and Electro-galvanized (includes yellow-zinc finish)
- Schedule 160 Nipple, Black and Electro-galvanized (includes yellow-zinc finish)

These seamless nipples are ideal for high temperature service applications. Schedule should be selected based on the conduction lines required pressure.

Our seamless steel nipples are manufactured according to ASTM A733 and ASME B1.20.1 standards.

BRASS NIPPLES

Southland brass nipples are manufactured with ASTM B43 compliant brass tube.

Brass nipple applications include plumbing, heater lines, boilers and related purposes.

These are manufactured according to ASTM B687 and ASME B1.20.1 standards.



NIPPLE SPECIFICATIONS

Material, Mechanical & Chemical Properties

Southland nipples are manufactured to the exacting technical specs noted below. All nipple products undergo rigorous testing to help ensure guaranteed quality throughout all product groups.

MATERIAL SPECIFICATIONS

Our line of steel nipples and ready cut pipe is manufactured according to the strictest worldwide specifications. For this reason its response to corrosion, temperature and working pressures will be excellent, promoting long lasting and reliable fluid conduction systems.

MECHANICALS PROPERTIES

Welded steel pipe nipples and ready-cut pipe, schedule 40 & 80, ERW type (Electric Resistance Welded), Grade A are manufactured to the ASTM A-53 standard.

Seamless steel pipe nipples and ready-cut pipe, schedule 40, 80, 160 & XXS, Grade B are manufactured to the ASTM A-106 standard.

| | GRADE A | GRADE B |
|------------------------|-------------------------------------|-------------------------------------|
| Tensile strength | 48,000 psi | 60,000 psi |
| Yield strength | 30,000 psi | 35,000 psi |
| Elongation in 2 inches | $E = 625000 \cdot A^{0.2}$ U*0.9 | $E = 625000 \cdot A^{0.2}$ U*0.9 |

CHEMICAL PROPERTIES

Chemical composition (%) – maximum values

| | CARBON | COOPER A | NICKEL A | CHROME A | MOLYBDENUM A | VANADIUM A | MANGANESE | PHOSPHORUS | SULFUR |
|---------------|--------|----------|----------|----------|--------------|------------|------------|------------|--------|
| Grade A: A53 | 0.25% | 0.4% | 0.4% | 0.4% | 0.15% | 0.08% | 0.95% | 0.05% | 0.045% |
| Grade B: A106 | 0.30% | 0.4% | 0.4% | 0.4% | 0.15% | 0.08% | 0.29-1.06% | 0.035% | 0.035% |

A – The combination of these 5 elements should not exceed 1.00%



PRESSURES

Maximum allowable working pressure - Grade A welded carbon steel pipe threaded nipples.

| Size | Depth Thread | OD | Wall Thickness | Schedule | -20°-100°F (PSI) | 200°F (PSI) | 300°F (PSI) | 400°F (PSI) | 500°F (PSI) | 600°F (PSI) | 650°F (PSI) |
|----------|--------------|-------|----------------|----------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 1/8-in | 0.027 | 0.405 | 0.068 | 40 | 2948 | 2948 | 2948 | 2948 | 2948 | 2782 | 2702 |
| | 0.027 | 0.405 | 0.095 | 80 | 5222 | 5222 | 5222 | 5222 | 5222 | 4857 | 4756 |
| 1/4-in | 0.046 | 0.540 | 0.088 | 40 | 2229 | 2229 | 2229 | 2229 | 2229 | 2084 | 2038 |
| | 0.046 | 0.540 | 0.119 | 80 | 4085 | 4085 | 4085 | 4085 | 4085 | 3823 | 3729 |
| 3/8-in | 0.046 | 0.675 | 0.091 | 40 | 1897 | 1897 | 1897 | 1897 | 1897 | 1777 | 1739 |
| | 0.046 | 0.675 | 0.126 | 80 | 3547 | 3547 | 3547 | 3547 | 3547 | 3281 | 3229 |
| 1/2-in | 0.054 | 0.840 | 0.109 | 40 | 1879 | 1879 | 1879 | 1879 | 1879 | 1747 | 1715 |
| | 0.054 | 0.840 | 0.147 | 80 | 3301 | 3301 | 3301 | 3301 | 3301 | 3067 | 3006 |
| 3/4-in | 0.054 | 1.050 | 0.113 | 40 | 1601 | 1601 | 1601 | 1601 | 1601 | 1493 | 1454 |
| | 0.054 | 1.050 | 0.154 | 80 | 2795 | 2795 | 2795 | 2795 | 2795 | 2605 | 2555 |
| 1-in | 0.066 | 1.315 | 0.133 | 40 | 1438 | 1438 | 1438 | 1438 | 1438 | 1335 | 1315 |
| | 0.066 | 1.315 | 0.179 | 80 | 2505 | 2505 | 2505 | 2505 | 2505 | 2320 | 2281 |
| 1-1/4-in | 0.066 | 1.660 | 0.140 | 40 | 1254 | 1254 | 1254 | 1254 | 1254 | 1169 | 1145 |
| | 0.066 | 1.660 | 0.191 | 80 | 2172 | 2172 | 2172 | 2172 | 2172 | 2021 | 1980 |
| 1-1/2-in | 0.066 | 1.900 | 0.145 | 40 | 1162 | 1162 | 1162 | 1162 | 1162 | 1086 | 1064 |
| | 0.066 | 1.900 | 0.200 | 80 | 2028 | 2028 | 2028 | 2028 | 2028 | 1883 | 1846 |
| 2-in | 0.066 | 2.375 | 0.154 | 40 | 1034 | 1034 | 1034 | 1034 | 1034 | 964 | 940 |
| | 0.066 | 2.375 | 0.218 | 80 | 1834 | 1834 | 1834 | 1834 | 1834 | 1699 | 1660 |
| 2-1/2-in | 0.096 | 2.875 | 0.203 | 40 | 1037 | 1037 | 1037 | 1037 | 1037 | 964 | 945 |
| | 0.096 | 2.875 | 0.276 | 80 | 1785 | 1785 | 1785 | 1785 | 1785 | 1657 | 1621 |
| 3-in | 0.096 | 3.500 | 0.216 | 40 | 953 | 953 | 953 | 953 | 953 | 886 | 866 |
| | 0.096 | 3.500 | 0.300 | 80 | 1657 | 1657 | 1657 | 1657 | 1657 | 1537 | 1507 |
| 4-in | 0.096 | 4.500 | 0.237 | 40 | 872 | 872 | 872 | 872 | 872 | 809 | 792 |
| | 0.096 | 4.500 | 0.337 | 80 | 1518 | 1518 | 1518 | 1518 | 1518 | 1408 | 1379 |
| 6-in | 0.096 | 6.625 | 0.280 | 40 | 771 | 771 | 771 | 771 | 771 | 713 | 700 |
| | 0.096 | 6.625 | 0.432 | 80 | 1434 | 1434 | 1434 | 1434 | 1434 | 1328 | 1301 |



THREADS

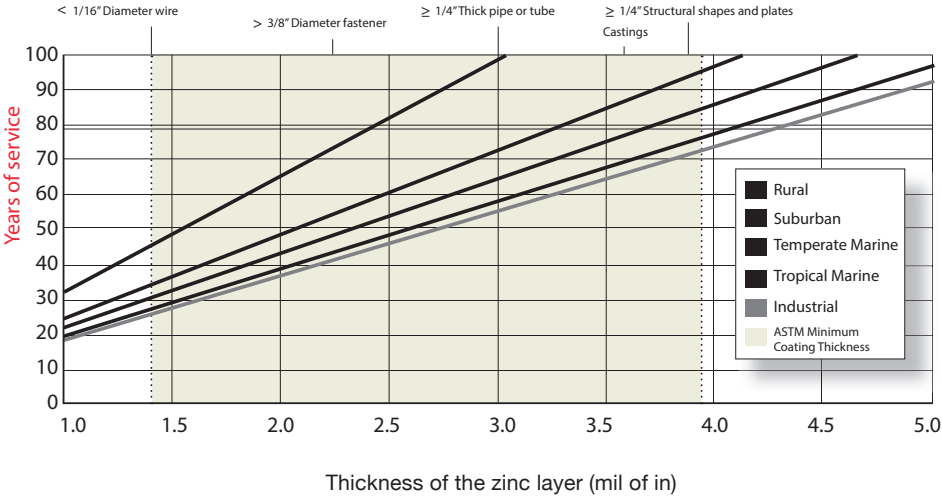
Our products comply with ASME B1.20.1 standard.

| NOMINAL PIPE SIZE | OUTSIDE DIAMETER | THREADS PER INCH | PITCH OF THREAD | HANDTIGHT ENGAGEMENT | | EFFECTIVE THREAD | | OVERALL THREAD LENGTH | |
|----------------------|---------------------|---------------------|--------------------|-------------------------|---------|---------------------|---------|-----------------------------|---------|
| | | | | LENGTH | | LENGTH | | | |
| | | | | INCH | THREADS | INCH | THREADS | INCH | THREADS |
| 1/8-in | 0.4050 | 27 | 0.03704 | 0.1615 | 4.36 | 0.2639 | 7.12 | 0.3924 | 10.59 |
| 1/4-in | 0.5400 | 18 | 0.05556 | 0.2278 | 4.10 | 0.4018 | 7.23 | 0.5946 | 10.70 |
| 3/8-in | 0.6750 | 18 | 0.05556 | 0.2400 | 4.32 | 0.4078 | 7.34 | 0.6006 | 10.81 |
| 1/2-in | 0.8400 | 14 | 0.07143 | 0.3200 | 4.48 | 0.5337 | 7.47 | 0.7815 | 10.94 |
| 3/4-in | 1.0500 | 14 | 0.07143 | 0.3390 | 4.75 | 0.5457 | 7.64 | 0.7935 | 11.11 |
| 1-in | 1.3150 | 12 | 0.08696 | 0.4000 | 4.60 | 0.6828 | 7.85 | 0.9845 | 11.32 |
| 1-1/4-in | 1.6600 | 12 | 0.08696 | 0.4200 | 4.83 | 0.7068 | 8.13 | 1.0085 | 11.60 |
| 1-1/2-in | 1.9000 | 12 | 0.08696 | 0.4200 | 4.83 | 0.7235 | 8.32 | 1.0252 | 11.79 |
| 2-in | 2.3750 | 12 | 0.08696 | 0.4360 | 5.01 | 0.7565 | 8.70 | 1.0582 | 12.17 |
| 2-1/2-in | 2.8750 | 8 | 0.12500 | 0.6820 | 5.46 | 1.1375 | 9.10 | 1.5712 | 12.57 |
| 3-in | 3.5000 | 8 | 0.12500 | 0.7660 | 6.13 | 1.2000 | 9.60 | 1.6337 | 13.07 |
| 4-in | 4.5000 | 8 | 0.12500 | 0.8440 | 6.75 | 1.3000 | 10.40 | 1.7337 | 13.87 |
| 6-in | 6.6250 | 8 | 0.12500 | 0.9580 | 7.66 | 1.5125 | 12.10 | 1.9462 | 15.57 |



TABLE

Showing the Lifetime of Hot Dip Galvanized Products



RURAL:
This is the less aggressive environment since the presence of sulfurs and emissions are very low.

SUBURBAN:
These environments are less corrosive than industrial areas and, in general terms, are found in residential zones, peripheral communities, urban areas and cities without heavy industry.

TEMPERATE MARINE:
These areas are close to the sea coast with temperate weather making them less corrosive than industrial areas.

TROPICAL MARINE:
These are hot weather areas considered as a less corrosive environment as they are typically located farther from industrial zones.

INDUSTRIAL:
Most cities and urban areas fall into this aggressive environment category as they contain sulfurs and phosphates.