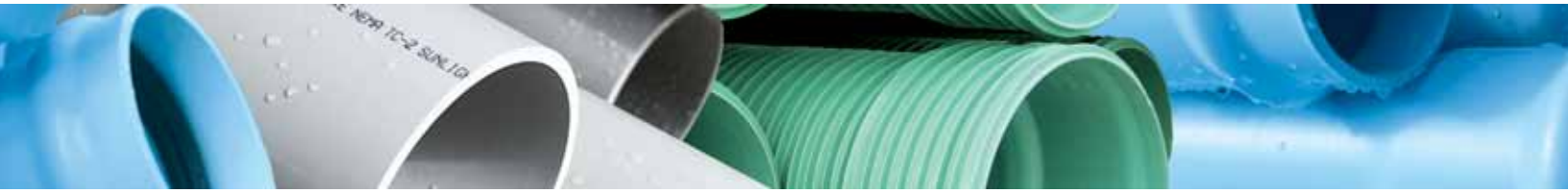


GRAVITY SEWER

CONTENTS

01

PRODUCT DESCRIPTION

GRAVITY SEWER PIPE AND FITTINGS

DESCRIPTION

JM Eagle™ realizes the growing demand for an effective all-out attack on water pollution, highlighting the need for improved sanitary sewage collection systems. A modern system needs pipe with improved design for reserve strength and stiffness to increase load-bearing capacity—all within the framework of maximizing sewer system capacity at a reasonable cost. JM Eagle's Ring-Tite™ PVC sewer pipe is designed to meet this need.

LONG LAYING LENGTHS

The standard laying lengths of Ring-Tite™ PVC Sewer Pipe are 14 and/or 20 feet. This means that more ground can be covered during installation while eliminating the cost of unnecessary joints.

APPLICATIONS

JM Eagle's Ring-Tite™ PVC sewer pipe is suitable for conveying domestic sanitary sewage as well as certain industrial wastes. For further information regarding the suitability of PVC for conveying various chemicals, call our Pro-duct Assurance Department at (800) 621-4404.

QUALITY CONTROL

This pipe is tested in accordance with the provisions of ASTM D3034 and ASTM F679 and subject to inspection by our quality control inspectors throughout every step of the manufacturing process.

JM Eagle's Quality Management System is ISO 9001: 2000 registered.* Copies of the registration certificates are available on our website at *http://www.jmeagle.com.*

* JM Eagle™ is in the process of obtaining the ISO 9001-2000 registration of Quality Management System for all locations.

CORROSION RESISTANCE

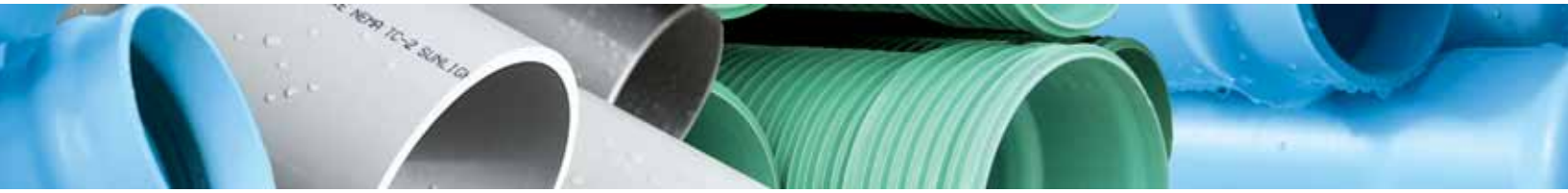
JM Eagle's Ring-Tite™ PVC sewer pipe is unaffected by the fluids found in ordinary domestic sewage. It is immune to sewer gases and the sulfuric acid generated by the completion of the hydrogen sulfide cycle. It is also immune to corrosive soils—both alkaline or acidic.

ABRASION RESISTANCE

JM Eagle's Ring-Tite™ PVC sewer pipe has excellent resistance to abrasion, gouging and scouring, superior to that of most common piping materials.

FLOW CAPACITY

This PVC sewer pipe's long laying lengths, smooth interior, and factory-made close tolerance joints, provides a Manning "N" coefficient of .009. High-carrying capacity makes the use of flatter grades or smaller diameter pipe possible.



SAVE IN HANDLING COSTS

JM Eagle's Ring-Tite™ PVC Sewer pipe is designed for installed-cost savings. Most sizes can be handled manually, so there is no need for costly installation equipment. Use the backhoe for excavating and backfilling only. Dig more trench, lay pipe faster, and save more in cost per foot installed.

FIELD CUTTING AND BEVELING

You can cut Ring-Tite™ PVC sewer pipe with a power saw or an ordinary handsaw. This eliminates the need to invest in costly cutting equipment. The pipe can also be beveled without the use of any expensive or complicated machinery.

LIGHT WEIGHT

A 14 foot length of 8" SDR 35 Ring-Tite™ PVC sewer pipe weighs approximately 55 pounds. That makes it easy to load, easy to transport, and easy to handle. Installers prefer it because it goes into the ground quickly—thus saving on installation costs.

SERVICE LIFE

Since PVC does not corrode and is resistant to most chemicals, this pipe does not lose strength due to either sewer gas corrosion or external galvanic soil conditions. The design of the pipe allows for a long-term deflection of 7.5%, without failure or damage.

INSTALLATION

This product should be installed in accordance with JM Eagle™ Publication JME-05B, "Gravity Sewer Installation Guide."

GRAVITY SEWER O.D.

Available in 4" through 36" diameter sizes, this pipe can be connected directly to most existing sewer equipment. It can also be connected into I.P.S., cast/ductile iron pipe and fittings with adapters and/or transition gaskets.

PRODUCT DESCRIPTION

(CONTINUED)

RING-TITE™ JOINTS WITH LOCKED-IN GASKETS

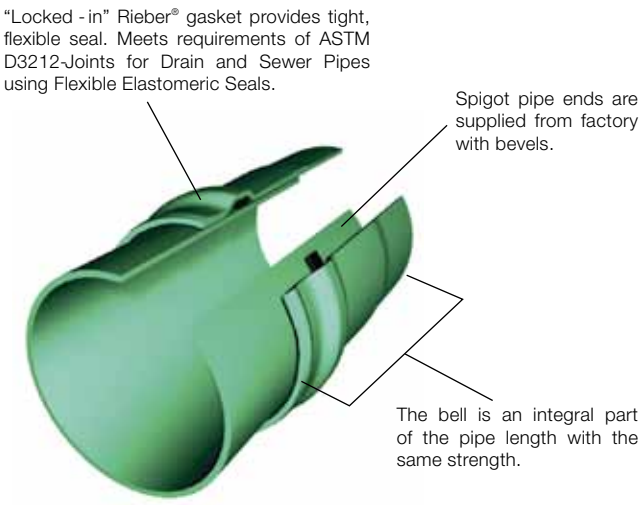
JM Eagle's Ring-Tite™ joint can be assembled quickly. Seated in a deep groove, the flexible elastomeric Rieber®* gasket provides a tight seal that protects the line from shock, vibration, earth movement, and compensates for expansion and contraction of pipe lengths. There's no field mixing or application of cement. It's a simple push together joint that remains tight under normal operating conditions.

The factory installed Rieber® gaskets provide a tight, flexible seal, that resists rolling during installation. Special gasket types are available for use with certain chemical and petroleum products. Spigot pipe ends are supplied from the factory with bevels. The bell is an integral part of the pipe length with the same strength. Joints meet or exceed ASTM D3212 for joint tightness, including a 22 in. Hg vacuum and a 25 feet of Head Pressure test.

Note: Other types of gaskets may be provided. JM Eagle™ is in the process of converting all gasketed products to the Rieber® ring gasket.

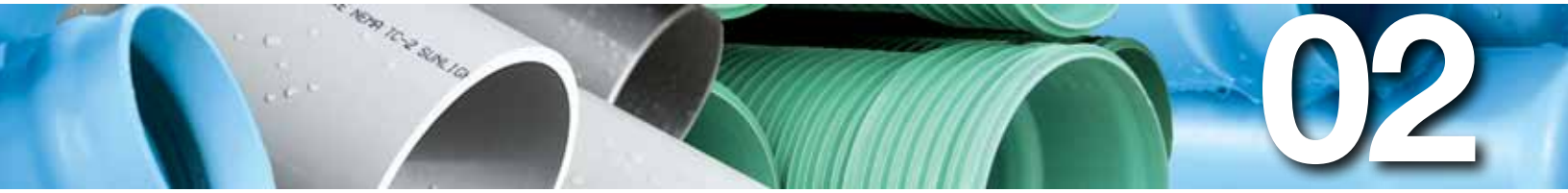
* Rieber® is a registered trademark of TI Specialty Products Inc.

RING-TITE™ JOINT



ACCESSORIES

JM Eagle's Ring-Tite™ PVC sewer pipe is compatible with all the items required for smooth installation of sewer and industrial waste pipelines.



02

SHORT FORM SPECIFICATION

GRAVITY SEWER PIPE AND FITTINGS

SCOPE

This specification designates general requirements for 4" through 36" unplasticized polyvinyl chloride (PVC) plastic Gravity Sewer pipe with integral bell and spigot joints for the conveyance of domestic sanitary sewage as well as certain industrial wastes.

MATERIALS

All pipe and fittings shall meet the requirements of ASTM D3034 for 4" through 15" SDR 35/26 and F679 for 18" through 36" 46PS/115PS sewer pipe. The pipe shall be colored green for in-ground identification as sewer pipe. All pipe shall be made from quality PVC resin, compounded to provide physical and mechanical properties that equal or exceed cell class 12454 or 12364 as defined in ASTM D1784.

LONG LAYING LENGTHS

Standard laying lengths shall be 14 feet and/or 20 feet for all sizes.

PIPE

All pipe shall be suitable for use as a gravity sewer conduit. Provisions must be made for expansion and contraction at each joint with an elastomeric gasket. The bell shall consist of an integral wall section with a solid cross section Rieber® elastomeric gasket which meets the requirements of ASTM F477. Gaskets are factory assembled and securely locked in place to prevent displacement during assembly. The joint design shall meet requirements of ASTM D3212 under both pressure and 22 in. Hg vacuum. Size and dimensions shall be as shown in this specification.

Pipe installation and usage shall be in compliance with the JM Eagle™ Publication JME-05B, "Gravity Sewer Installation Guide."

FITTINGS

All fittings and accessories shall be as manufactured and furnished by the pipe supplier or approved equal and have bell and/or spigot configurations compatible with that of the pipe.

PIPE STIFFNESS

Minimum "pipe stiffness" (F/Δy) at 5% deflection shall be 46 psi for SDR 35 and 115 psi for SDR 26 for all sizes when tested in accordance with ASTM D2412, "External Loading Properties of Plastic Pipe by Parallel-Plate Loading."

DROP IMPACT TEST

A 6" length section of pipe shall be subjected to impact from a free falling tup (20-lb Tup A and flat plate holder B for 4"-15", and 20-lb or 30-lb Tup B and flat plate holder B for 18"-36") in accordance with ASTM D2444.

PIPE SIZE (IN)	IMPACT (FT/LBS)
4	150
6 - 8	210
10 - 36	220

There shall be no visible evidence of shattering or splitting when the energy is imposed.

JOINT TIGHTNESS

Two sections of pipe shall be assembled in accordance with the manufacturer's recommendations. Joint shall be tested in accordance with ASTM D3212, "Joints for Drain and Sewer Plastic Pipe Using Flexible Elastomeric Seals" under 25 feet of Head Pressure and 22 in. Hg vacuum.

FLATTENING

There shall be no evidence of splitting, cracking, or breaking when the pipe is tested as follows:

Flatten specimen of pipe, six inches long between parallel plates in a suitable press until the distance between the plates is forty percent of the outside diameter of the pipe. The rate of loading shall be uniform and such that the compression is completed within two to five minutes.

INSTALLATION

Product should be installed in accordance with JM Eagle™ Publication JME-05B, "Gravity Sewer Installation Guide."

03

DIMENSIONS AND WEIGHTS

SUBMITTAL AND DATA SHEET

PIPE SIZE (IN)	AVERAGE O.D. (IN)	NOM. I.D. (IN)	MIN. T. (IN)	MIN. E (IN)	APPROX. D[9] (IN)	APPROX. WEIGHT (LBS/FT)
SDR 35 (PS46) ASTM D3034						
4	4.215	3.975	0.120	3.50	4.695	1.05
6	6.275	5.915	0.180	4.25	6.995	2.36
8	8.400	7.920	0.240	4.75	9.360	4.24
10	10.500	9.900	0.300	6.00	11.700	6.64
12	12.500	11.780	0.360	6.25	13.940	9.50
15	15.300	14.426	0.437	7.25	17.048	14.19
SDR 26 (PS115) ASTM D3034						
4	4.215	3.891	0.162	3.50	4.863	1.40
6	6.275	5.793	0.241	4.25	7.239	3.11
8	8.400	7.754	0.323	4.75	9.692	5.63
10	10.500	9.692	0.404	6.00	12.116	8.84
12	12.500	11.538	0.481	6.25	14.424	12.56
15	15.300	14.124	0.588	7.25	17.652	18.90
PS46, ASTM F679						
18	18.701	17.629	0.499	8.00	20.845	21.43
21	22.047	20.783	0.588	9.50	24.575	29.88
24	24.803	23.381	0.661	9.60	27.647	38.96
27	27.953	26.351	0.745	10.10	31.157	49.47
30 CIOD	32.000	30.194	0.853	16.75	35.612	64.18
36 CIOD	38.300	36.042	1.021	19.02	42.816	93.00
42 CIOD	44.500	41.948	1.187	22.43	49.604	—
48 CIOD	50.800	47.888	1.355	24.78	56.624	—
PS115, ASTM F679						
18	18.701	17.261	0.671	8.00	21.581	28.49
21	22.047	20.349	0.791	9.50	25.443	—
24	24.803	22.891	0.889	9.60	28.627	—
27	27.953	25.799	1.002	10.10	32.261	—
30 CIOD	32.000	29.070	1.148	16.75	36.348	—
36 CIOD	38.300	35.464	1.373	19.02	45.438	—
42 CIOD	44.500	41.072	1.596	22.43	51.356	—
48 CIOD	50.800	46.886	1.822	24.78	58.628	—

* For data, sizes, or classes not reflected in these charts, please contact JM Eagle™ for assistance.