

Pexgol Piping Solutions

Oil & Gas

—
2020

 **TS&M SUPPLY**
FIBERGLASS
A DISTRIBUTION **NOW** COMPANY

PEXGOL
X-LINKED PIPING SOLUTIONS

Pipes and Pexgol Solutions

Pexgol, a division of **Golan Plastic Products**, is a global leader of heavy duty PE-Xa pipes. Pexgol pipes are produced from a special high density polyethylene (HDPE) with a very high molecular weight. During production the raw material is pressed under high temperatures and pressures while the pipe is being extruded the material crosslinks resulting in an unbreakable chemical cross-connection between polyethylene chains.

Pexgol cross-linked polyethylene system with its unique and adaptable design offers an excellent solution for the transport of liquids and other substances that require great chemical and mechanical resistance.

Pexgol presents a wide range of products that respond to different needs and applications for the Oil & Gas industry.



Applications

1. OIL & OILFIELD WATER-BASED FLUIDS

- **Complying with API 15PX** for conveying oil and non-potable water in underground, aboveground and re-liner applications.
- Pexgol is reliable, with **more than 30 years of experience** with installations all over the world.
- **Standard API 15PX upper temperature limit:** -58°F to 203°F. Pexgol has significant experience with application temperatures as high as 230°F. Please contact TS&M for higher temperature applications.
- **50 year UV resistant.**
- **Excellent chemical and corrosion resistance.**
- **Superior abrasion resistance.**



2. NATURAL GAS, LIQUEFIED PETROL GAS (LPG) & LIQUID HYDROCARBONS

- **Complying with API 15PX** for conveying gas in underground, aboveground and re-liner applications.
- **High range working temperature:** -58°F to 203°F. Pexgol has significant experience with application temperatures as high as 230°F. Please contact TS&M for higher temperature applications.
- **Superior abrasion resistance.**
- **50 year UV resistance.**
- **Resistant to slow crack growth.** Pexgol's molecular structure ensures resistance to stress and cracks, preventing the potentially dangerous leaks of gas.
- **No RCP failures.**
- **Long length pipe sections.**
- **No need for sand embedding.**



3.

FIRE EXTINGUISHER SYSTEMS & HYDRANTS

Pexgol pipes are suitable for fire extinguisher systems for Oil & Gas treatment plants.

A must-have requirement for fire extinguisher piping systems in many countries is the ability to withstand earthquakes or other earth movements. Due to its exceptional strength and flexibility, Pexgol is an ideal solution for this application.

Pexgol Advantages:

- The pipes are **very resistant** and can be placed in a trench **without sand embedding**.
- **High range working temperature:** -58°F to 203°F. Pexgol has significant experience with application temperatures as high as 230°F. Please contact TS&M for higher temperature applications.
- **Long length pipe sections:** Continuous sections imply lower risk of leakage and uncoupling.
- **50 years operational lifetime.**
- **50 year UV resistance.**



Maximum Working Pressure (psi)

Of PE-X pipes using the DIN 16892/3 method of design according to API 15PX at various temperatures for oilfield water.

Temperature °F	Dimension Ratio (DR)					
	6	7.4	9	11	13.6	16.2
50	498.8	395.9	314.7	249.4	198.7	164.1
68	440.8	350.9	278.4	220.4	175.5	145.0
86	391.6	310.3	246.5	195.8	155.2	128.8
104	348.0	270.0	219.0	174.0	137.8	114.5
122	310.4	246.5	195.8	155.2	123.3	102.1
140	275.6	220.4	174.0	137.8	110.2	90.7
158	246.6	197.2	156.6	123.3	98.6	81.1
176	220.4	175.5	139.2	110.2	88.5	72.5
194	200.2	159.5	126.2	100.1	79.8	65.9
203	191.4	152.3	120.4	95.7	75.4	63.0

Maximum Working Pressure (psi)

Of PE-X pipes using the DIN 16892/3 method of design according to API 15PX at various temperatures for multiphase fluids, wet natural gas and water containing >2% hydrocarbons.

Temperature °F	Dimension Ratio (DR)					
	6	7.4	9	11	13.6	16.2
50	249.4	197.9	157.3	124.7	99.3	82
68	220.4	175.5	139.2	110.2	87.7	72.5
86	195.8	155.2	123.3	97.9	77.6	64.4
104	174	138.5	109.5	87.0	68.9	57.2
122	155.2	123.3	97.9	77.6	61.6	51.0
140	137.8	110.2	87.0	68.9	55.1	45.3
158	123.3	98.6	78.3	61.6	49.3	40.5
176	110.1	87.7	69.6	55.1	44.2	35.9
194	100.1	79.8	63.1	50.0	39.9	32.9
203	95.7	76.1	60.2	47.9	37.7	31.5



How Pexgol reduces OPEX & CAPEX costs

- **Lower installation costs versus steel pipes.** Less time, manpower and sophisticated tools.
- Pexgol pipes can be **supplied in long length coils**, reducing the number of joints, installation time and risk.
- **Lower maintenance costs.**
- Since no sand embedding is required, **Pexgol saves between 10-25 tons of sand per 300 feet.**

Fittings & Connections

We offer a full piping solution that includes all kinds of fittings and accessories to provide an easy, cost-efficient and quick installation.

PREFABRICATED ELBOWS

Prefabricated elbows are produced from **Pexgol** pipes of all classes according to a proprietary process. **Prefabricated elbows** with flared-ends are available in any length between 63 mm (2") and 710 mm (28"). Each part can be ordered with plain ends or with flared ends with or without flanges.

The length of each part can be different. The elbows are produced with leg length tolerance of up to +/- 3/8".



GP FLANGED COUPLERS

Available sizes from diameters 63 mm (2" flange) to 710 mm (28" flange). **The flange has oval holes designed to fit most international standards.** The couplers can be used for the full range of temperatures and pressures, the same as Pexgol pipes. Bolts are included.

Pexgol flanged couplers consist of either two halves or four quarters, depending on the pipe size.



ELECTROFUSION FITTINGS

Electrofusion fittings are used to connect **Pexgol cross-linked polyethylene pipes**. The pipes and fitting are joined by electrofusion welding, creating a leak-proof seal. During the electrofusion process, a current is transported through a heating wire. The surrounding material (around the wire) is melted, welding the pipe to the fitting.

Service temperature for the PE 100 electrofusion fittings is limited to 120°F.

Pexgol approves and supplies the following fittings systems and installation tools: Plasson, Friatec, GF/Wavin.



REINFORCED ELECTROFUSION FITTINGS

For higher temperatures (up to 195°F) reinforced electrofusion couplers can be used.



LINED FITTINGS

PE-X lined steel fittings consist of a steel flanged fitting lined with thick black PE-X coating which extends over the full face of the flanges. This type of fitting can be used as a standard fitting such as a Tee, an elbow, or a reducer. The fittings are supplied with an external epoxy coating. Standard fittings are supplied with wall thickness of PE-X layer: 1/6" to 3/16" for corrosion resistance and up to 3/8" for abrasion resistance.

The fittings are usually supplied with weld-neck flanges. Loose flanges are supplied on request. Shorter fittings (with slip-on flanges instead of weld-neck flanges) are supplied on request.



Available Diameters

An outstanding feature of the **Pexgol** pipe is its flexibility, due to the **cross-linked structure**. This structure enables the pipe to return to its original diameter after de-coiling. As a result, Pexgol is able to supply longer lengths of pipe, compared to other suppliers and types of pipes. Pexgol pipes can be shipped in coils, coils with cores and straight sections. Pexgol pipes for the Oil & Gas industry in sizes up to 10" are available on a coil. Sizes 12" & 14" are available on a steel core. Sizes 16" to 28" are available on 38.7" lengths.

Pipe		Maximum Length per Coil (ft)
Outside diameter mm (in)	DR	
63 (2")	13.6	14765
63 (2")	11	14765
63 (2")	9	14765
63 (2")	7.4	14765
63 (2")	6	14765
75 (2.5")	13.6	10825
75 (2.5")	11	10825
75 (2.5")	9	10825
75 (2.5")	7.4	10825
75 (2.5")	6	10825
90 (3")	13.6	6560
90 (3")	11	6560

Pipe		Maximum Length per Coil (ft)
Outside diameter mm (in)	DR	
90 (3")	9	6560
90 (3")	7.4	6560
90 (3")	6	6560
110 (4")	13.6	4265
110 (4")*	11	4265
110 (4")	9	4265
110 (4")*	7.4	4265
110 (4")	6	4265
125 (4")	13.6	3280
125 (4")	11	3280
125 (4")	9	3280
125 (4")	7.4	3280
125 (4")	6	3280
140 (6")	13.6	2495
140 (6")*	11	2755
140 (6")	9	2755
140 (6")*	7.4	2755
140 (6")	6	2755
160 (6")	13.6	1640
160 (6")*	11	1970
160 (6")	9	1970
160 (6")*	7.4	1970
160 (6")	6	1970
180 (6")	13.6	1310
180 (6")	11	1475
180 (6")	9	1640
180 (6")	7.4	1640
180 (6")	6	1640
200 (8")	13.6	885

Pipe		Maximum Length per Coil (ft)
Outside diameter mm (in)	DR	
200 (8")*	11	1150
200 (8")	9	1150
200 (8")*	7.4	1150
200 (8")	6	1150
225 (8")	13.6	575
225 (8")	11	805
225 (8")	9	805
225 (8")	7.4	985
225 (8")	6	985
250 (10")	11	490
250 (10")	9	655
250 (10")	7.4	820
250 (10")	6	755
280 (10")	11	410
280 (10")	9	410
280 (10")	7.4	525
280 (10")	6	605**
315 (12")	11	215**
315 (12")	9	395**
315 (12")	7.4	395**
315 (12")	6	395**
355 (14")	7.4	330**
355 (14")	6	330**

(*) Sizes stocked by TS&M.

(**) Provided in coils with cores.

Note: All pipe sizes up to 710 mm (28") are available in 38.7 ft/sections.

About Pexgol:

Pexgol, a division of Golan Plastic Products, is the only worldwide manufacturer that specializes in large diameter, cross-linked polyethylene pipe systems, providing them to industrial, infrastructure, aquaculture and mining sectors throughout the world.

Pexgol Material: PE-Xa

Is a chemically unbreakable cross-connection between polyethylene chains. The result of this chemical reaction is the creation of a material which has extremely high structural integrity, combined with resistance to a wide variety of corrosive and weather conditions.



TS&M SUPPLY FIBERGLASS

pexgol@dnw.com

tsmfiberglass.com



GOLAN PLASTIC PRODUCTS

Kibbutz Shaar Hagolan 15145, Israel

+972 77 902 1000

contact@pexgol.com

Pexgol.com