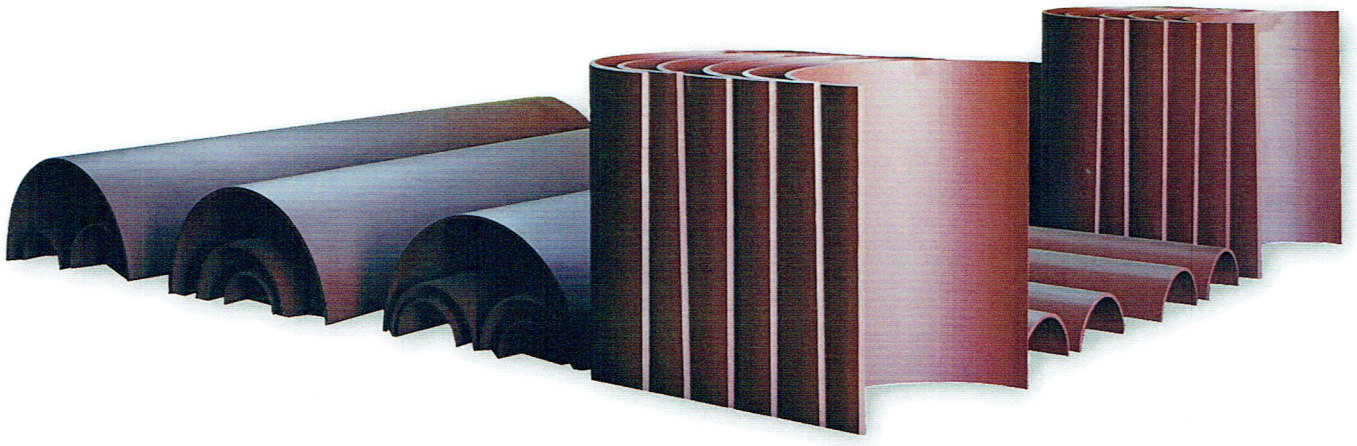
PLIDCO® SOLE+MATES™

Welded reinforcing and pressure containing sleeves

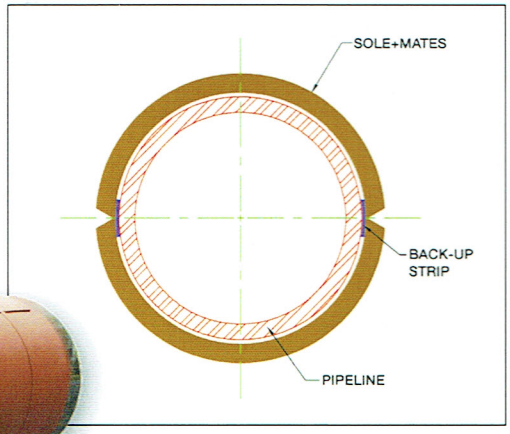


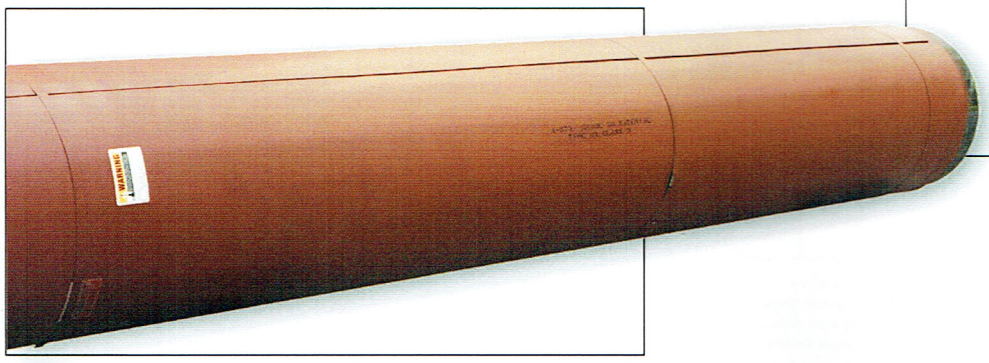
PLIDCO® Sole+Mates™ are designed to reinforce non-leaking, weakened, dented or damaged pipelines. The PLIDCO® Sole+Mates™ must fit snugly around the pipe when used for reinforcement applications. Gaps between the pipe and the sleeve, often caused by dents in the pipe, should be filled with a hard-setting grout. The sleeve must be butt-welded longitudinally but it is not necessary to seal-weld the circumferential ends. The line can remain on-stream. Moisture should be prevented from entering the ends of the sleeve. When used for pressure containment, the PLIDCO® Sole+Mates™ must be fully seal-welded to the pipeline in addition to the longitudinal weld. The line may also remain on-stream but the pressure must be a safe level according to DOT regulation 192.713.

PLIDCO® Sole+Mates™ are fabricated in lengths of 5 or 10 feet. Back-up strips for the longitudinal butt welds are furnished with all sleeves.

PLIDCO® Sole+Mates™ conform to ASME B31.4 and B31.8 as well as US Department of Transportation (US DOT) requirements. Individual company codes and safety practices should be observed. US DOT requires that population density be considered in the installation area for natural and other gas pipelines (DOT section 192.5). Tables showing maximum operating pressure for PLIDCO® Sole+Mates™ by size, materials of construction and class location are shown on the reverse side.

Standard body materials:
- A-516 Gr.70
- A-572 Gr.50





PIP029

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ISO 9001:2008 REGISTERED FIRM
ISO 14001:2004 REGISTERED FIRM

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Recommended Working Pressures (PSI)

Class I
Sparsely Populated Areas



API Nominal Pipe Size (In.)	A-516 Gr.70				A-572 Gr.50			
	1/4" WALL	5/16" WALL	3/8" WALL	1/2" WALL	1/4" WALL	5/16" WALL	3/8" WALL	1/2" WALL
4	2669	3257	3818	4864	3512	4286	5023	6400
6	1887	2319	2736	3530	2483	3051	3600	4645
8	1479	1824	2160	2806	1946	2400	2842	3692
10	1203	1487	1765	2304	1582	1957	2323	3032
12	1023	1267	1506	1972	1346	1667	1982	2595
14	935	1159	1379	1809	1231	1525	1815	2380
16	823	1021	1216	1598	1083	1343	1600	2102
18	734	912	1087	1431	966	1200	1430	1882
20	663	824	983	1295	873	1084	1293	1704
22	605	752	897	1183	796	989	1180	1557
24	556	691	825	1089	731	909	1085	1433
26	514	639	764	1009	676	841	1005	1327
28	478	595	711	939	629	783	935	1236
30	447	556	665	879	588	732	874	1157

Class II
Fringe Areas Around Urban Centers



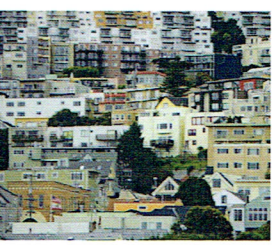
API Nominal Pipe Size (In.)	A-516 Gr.70				A-572 Gr.50			
	1/4" WALL	5/16" WALL	3/8" WALL	1/2" WALL	1/4" WALL	5/16" WALL	3/8" WALL	1/2" WALL
4	2224	2714	3181	4053	2927	3571	4186	2976
6	1572	1932	2280	2942	2069	2542	3000	2119
8	1232	1520	1800	2338	1622	2000	2368	1667
10	1002	1239	1471	1920	1319	1630	1935	1359
12	852	1056	1255	1643	1121	1389	1651	1157
14	779	966	1150	1507	1026	1271	1513	1059
16	686	851	1013	1331	902	1119	1333	933
18	612	760	906	1192	805	1000	1192	833
20	553	687	819	1079	727	904	1078	753
22	504	626	748	986	663	824	984	687
24	504	626	748	986	609	824	984	631
26	428	533	636	841	563	701	837	584
28	398	496	592	783	524	652	779	543
30	372	463	554	733	490	610	729	508

Class III
Average Commercial and Residential Areas



API Nominal Pipe Size (In.)	A-516 Gr.70				A-572 Gr.50			
	1/4" WALL	5/16" WALL	3/8" WALL	1/2" WALL	1/4" WALL	5/16" WALL	3/8" WALL	1/2" WALL
4	1854	2262	2651	3378	2439	2976	3488	4444
6	1310	1610	1900	2452	1724	2119	2500	3226
8	1027	1267	1500	1949	1351	1667	1974	2564
10	835	1033	1226	1600	1099	1359	1613	2105
12	710	880	1046	1369	935	1157	1376	1802
14	650	805	958	1256	855	1059	1261	1653
16	571	709	844	1109	752	933	1111	1460
18	510	633	755	993	671	833	993	1307
20	461	572	683	899	606	753	898	1183
22	420	522	623	822	552	687	820	1081
24	386	480	573	756	508	631	754	995
26	357	444	530	700	469	584	698	922
28	332	413	494	652	437	543	649	858
30	310	386	462	610	408	508	607	803

Class IV
Densely Populated Areas



API Nominal Pipe Size (In.)	A-516 Gr.70				A-572 Gr.50			
	1/4" WALL	5/16" WALL	3/8" WALL	1/2" WALL	1/4" WALL	5/16" WALL	3/8" WALL	1/2" WALL
4	1483	1810	2121	2702	1951	2381	2791	3556
6	1048	1288	1520	1961	1379	1695	2000	2581
8	822	1013	1200	1559	1081	1333	1579	2051
10	668	826	981	1280	879	1087	1290	1684
12	568	704	837	1095	748	926	1101	1441
14	520	644	766	1005	684	847	1008	1322
16	457	567	676	888	602	746	889	1168
18	408	507	604	795	537	667	795	1046
20	368	458	546	720	485	602	719	947
22	336	418	498	657	442	549	656	865
24	309	384	458	605	406	505	603	796
26	285	355	424	560	376	467	558	737
28	266	330	395	522	349	435	519	687
30	248	309	369	488	327	407	486	643

$$P = \frac{2St}{D} \times E \times F \times T$$

(D.O.T. 192.105*)

P = Design Pressure
t = Sole+Mate Wall Thickness
S = Specified Min. Yield Strength
T = Temperature Derating Factor

E = Joint Efficiency Factor
F = Class Locations Factor: I = .72, II = .6, III = .5, IV = .4
D = Sole+Mate Outside Diameter = Pipe OD + 2t + 1/8 In. (for back-up strips)

Note: Formula applies to data in table for Class I through IV locations using a Joint Efficiency Factor of 1 and temperature less than 250°F.

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