PARKER INDUSTRIAL HOSE

PVC • POLYURETHANE • EVA

INDUSTRIAL HOSE & TUBING

Catalog 4830

April 2004

Your Job. Our Hose.

Parker

PVC Cross Reference Guide

	Parker IHP Series #	Boston Woven Hose	Gates	Goodyear	Jason Industrial	Kanaflex	Kentak	Kuriyama	Pacific Ecno	Petzetakis	Sun-Flow	Superflex
AG Spray												
600# WP PVC Spray - 1 Pass	7580		AG® 570	Pliovic® 1800				K4131	310			
600# WP PVC Spray - 2 Pass	7584							A1251	320			
300# WP PU/PVC Spray	7585							A1628				
600# WP PU/PVC Spray - 1 Pass	7586				4192							
600# WP PU/PVC Spray - 2 Pass	7587							A1661				
800# WP PU/PVC Spray	7588		AG® 800							A1687		
EVA Spray Hose	7589						EVA	K4350				
Multipurpose												
MEGA Blue & Red ORS Air & Water	7518/7519	Ultraforce™			4105 4115							
Therm-O-Blue & Red Air & Water	–		Tufflex® GP	Pliovic® +300			AT3	Polyair™				
Commercial Duty PVC Air	–			Pliovic® GS	4103		ATH	HS117x				AH
Contractor Water Hose	–	H1987 H1171					CLW 165					
Hydro-Aire Red & Black Air & Water	–	H275		Pliovic® +250			ATL	GP PVC				
400 PSI Mine Water	7527	H1571										
THORO-BRAID Low Temp Thermoplastic ORS Push-On Hose	7534											
Food Grade												
Clear Reinforced Marine Water Hose	7520							136 K3175				
Clear Reinforced Food Grade - FDA	7581		Tufflex® Food	Pliovic® 200	4511		50H	K3155	410	10206		BTC
Clear Reinforced Food Grade - FDA & NSF	7583	H285		Pliovic®FG			K-9500	K3150				
Clear Vinyl Tubing - FDA & NSF	7558						K-9500	K010				
Lay Flat												
Standard Duty - Blue	7541		Master-Flex® 500	SpiralFlex® Grey	4501 4502			NuFlo™ VinylFlow™	11252		SF-10 SF-15	DH
Medium Duty - Red (MSHA)	7542			SpiralFlex® Red	4510			Ironsides™		11298	SF-30 SF-50	
Heavy Duty - Yellow (MSHA)	7545			SpiralFlex® 2700	4520					11294	SF-20	
Lay Flat PVC Yellow Fire Hose (MSHA)	7540			Brigade®								
Material Handling												
Standard Duty - Green Smooth	7560		100 GR			110 GR		G, J	110 113	12500		1000 GR
Multi-Purpose - Green Corrugated	7561					112 CL		WG	120			TX
Heavy Duty - FDA - Clear Smooth	7562							FT		12512		4000
All Clear FDA - Clear Corrugated	7563		201CR	Nutriflex®	4660	200 SFG		WT	145	12426 SE		9000
Medium Duty - Clear Smooth	7564		101CL 200 CL	Nutriflow®	4606			H	090 115			1000 CL
Wire Helix - FDA - Clear Smooth	7570		202SW	Nutriflex® Static Wire				K7160	W145	17009		
Medium Duty - FDA - Clear Smooth	7582					212 MK 210 HFG		MILK	170	12526		

Warning! This guide in intended to help users determine which hoses, as described by their various manufacturers, have been designed to perform similar functions. Care must be taken by the user to compare any variances in materials and construction between manufacturers, and to ensure the selected hose does not constitute a safety risk or change in required performance.

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Industrial PVC, Polyurethane & EVA

Contact IHP Customer Service for special and non-standard hose requirements.

Index by Series

⚠ SAFETY WARNING!

Failure to consider how temperature and other conditions affect hose performance could result in death, personal injury or property damage. As temperature increases or decreases, burst pressure, safe working pressure, coupling retention properties, and other safety characteristics of the hose can significantly decrease. The rated maximum working pressures listed in this catalog are based upon a pressure test temperature of 68°F unless stated otherwise. Deterioration due to wear, impulse, and other environmental conditions should also be considered. The user, through its own analysis and testing, is solely responsible for making the final selection of the hose and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met.

Contact IHP Customer Service for special and non-standard hose requirements.

PVC Hose Selector Guide

ID (in.)	Max WP	Part Number	OD (in.)	Cover Color	Hose Description	Page
1/8	65	7558-125	0.250	Clear	Clear Vinyl Tubing - FDA & NSF	20
3/16	55	7558-187	0.313	Clear	Clear Vinyl Tubing - FDA & NSF	20
3/16	250	7583-187	0.375	Clear	THORO-BRAID Clear Food Grade Hose - FDA & NSF	18
1/4	55	7558-250	0.375	Clear	Clear Vinyl Tubing - FDA & NSF	20
1/4	60	7558-251	0.500	Clear	Clear Vinyl Tubing - FDA & NSF	20
1/4	250	39362	0.500	Red	HYDRO-AIRE Red Air & Water Hose	15
1/4	250	39382	0.500	Black	HYDRO-AIRE Black Air & Water Hose	15
1/4	250	7534-250	0.495	Black	THORO-BRAID Low Temp Thermoplastic ORS Push-On Hose	16
1/4	250	7583-250	0.451	Clear	THORO-BRAID Clear Food Grade Hose - FDA & NSF	18
1/4	300	39390	0.500	Blue	THERM-O-BLUE ORS Air Hose	12
1/4	300	39391	0.500	Blue	THERM-O-BLUE ORS Air Hose	12
1/4	300	39392	0.500	Blue	THERM-O-BLUE ORS Air Hose	12
1/4	300	39374	0.500	Red	THERM-O-RED ORS Air Hose	13
1/4	300	33903	0.500	Yellow	COMMERCIAL DUTY PVC Air Hose	13
1/4	300	33904	0.500	Yellow	COMMERCIAL DUTY PVC Air Hose	13
1/4	300	33905	0.500	Yellow	COMMERCIAL DUTY PVC Air Hose	13
1/4	350	7518-250	0.500	Blue	MEGA BLUE ORS Air & Water Hose	11
1/4	350	7519-250	0.500	Red	MEGA RED ORS Air & Water Hose	11
1/4	355	7581-251	0.490	Clear	THORO-BRAID Clear Food Grade Hose - FDA	19
5/16	50	7558-312	0.438	Clear	Clear Vinyl Tubing - FDA & NSF	20
5/16	250	39363	0.593	Red	HYDRO-AIRE Red Air & Water Hose	15
5/16	250	39383	0.593	Black	HYDRO-AIRE Black Air & Water Hose	15
5/16	250	7583-312	0.522	Clear	THORO-BRAID Clear Food Grade Hose - FDA & NSF	18
3/8	45	7558-381	0.500	Clear	Clear Vinyl Tubing - FDA & NSF	20
3/8	200	7520-375	0.563	Clear	THORO-BRAID Clear Marine Water Hose - FDA & NSF	18
3/8	225	7583-381	0.598	Clear	THORO-BRAID Clear Food Grade Hose - FDA & NSF	18
3/8	250	7589-375	0.595	Natural	THORO-SPRAY EVA Spray Hose	10
3/8	250	39364	0.641	Red	HYDRO-AIRE Red Air & Water Hose	15
3/8	250	39384	0.641	Black	HYDRO-AIRE Black Air & Water Hose	15
3/8	250	7534-381	0.657	Black	THORO-BRAID Low Temp Thermoplastic ORS Push-On Hose	16
3/8	300	7585-375	0.625	Green	THORO-SPRAY 300# Green PU/PVC Spray Hose	8
3/8	300	39393	0.641	Blue	THERM-O-BLUE ORS Air Hose	12
3/8	300	39394	0.641	Blue	THERM-O-BLUE ORS Air Hose	12
3/8	300	39395	0.641	Blue	THERM-O-BLUE ORS Air Hose	12
3/8	300	39375	0.641	Red	THERM-O-RED ORS Air Hose	13
3/8	300	33913	0.595	Yellow	COMMERCIAL DUTY PVC Air Hose	13
3/8	300	33914	0.595	Yellow	COMMERCIAL DUTY PVC Air Hose	13
3/8	300	33915	0.595	Yellow	COMMERCIAL DUTY PVC Air Hose	13
3/8	315	7581-381	0.600	Clear	THORO-BRAID Clear Food Grade Hose - FDA	19
3/8	350	7518-381	0.641	Blue	MEGA BLUE ORS Air & Water Hose	11
3/8	350	7519-381	0.641	Red	MEGA RED ORS Air & Water Hose	11
3/8	600	7580-383	0.640	Yellow	THORO-SPRAY 600# Yellow PVC Spray Hose – 1 Pass (2 Spiral)	7
3/8	600	7584-383	0.650	Yellow	THORO-SPRAY 600# Yellow PVC Spray Hose – 2 Pass (4 Spiral)	7
3/8	600	7586-375	0.650	Yellow	THORO-SPRAY 600# Yellow PU/PVC Spray Hose – 1 Pass (2 Spiral)	8
3/8	600	7587-375	0.650	Yellow	THORO-SPRAY 600# Yellow PU/PVC Spray Hose – 2 Pass (4 Spiral)	8
3/8	800	7588-375	0.660	Blue	THORO-SPRAY 800# Blue PU/PVC Spray Hose	9
1/2	30	7558-500	0.625	Clear	Clear Vinyl Tubing - FDA & NSF	20
1/2	40	7558-501	0.688	Clear	Clear Vinyl Tubing - FDA & NSF	20
1/2	45	7558-502	0.750	Clear	Clear Vinyl Tubing - FDA & NSF	20
1/2	120	7562-500	0.750	Clear - Sm	DYNAFLEX Heavy Duty Clear PVC Suction Hose - FDA	24
1/2	150	7520-500	0.740	Clear	THORO-BRAID Clear Marine Water Hose - FDA & NSF	18
1/2	200	7520-500	0.740	Clear	THORO-BRAID Clear Marine Water Hose - FDA & NSF	18
1/2	200	7583-500	0.740	Clear	THORO-BRAID Clear Food Grade Hose - FDA & NSF	18
1/2	215	7581-501	0.750	Clear	THORO-BRAID Clear Food Grade Hose - FDA	19
1/2	250	7589-500	0.720	Natural	THORO-SPRAY EVA Spray Hose	10
1/2	250	39365	0.781	Red	HYDRO-AIRE Red Air & Water Hose	15
1/2	250	39685	0.781	Black	HYDRO-AIRE Black Air & Water Hose	15
1/2	250	7534-500	0.760	Black	THORO-BRAID Low Temp Thermoplastic ORS Push-On Hose	16
1/2	300	7585-500	0.770	Green	THORO-SPRAY 300# Green PU/PVC Spray Hose	8
1/2	300	7518-500	0.781	Blue	MEGA BLUE ORS Air & Water Hose	11
1/2	300	7519-500	0.781	Red	MEGA RED ORS Air & Water Hose	11
1/2	300	39396	0.781	Blue	THERM-O-BLUE ORS Air Hose	12
1/2	300	39376	0.781	Red	THERM-O-RED ORS Air Hose	13
1/2	300	33923	0.783	Yellow	COMMERCIAL DUTY PVC Air Hose	13

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ID (in.)	Max WP	Part Number	OD (in.)	Cover Color	Hose Description	Page
1/2	300	33924	0.783	Yellow	COMMERCIAL DUTY PVC Air Hose	13
1/2	300	33925	0.783	Yellow	COMMERCIAL DUTY PVC Air Hose	13
1/2	400	7527-500	0.940	Yellow	THORO-BRAID 400 PSI MINE WATER HOSE	16
1/2	600	7580-503	0.640	Yellow	THORO-SPRAY 600# Yellow PVC Spray Hose+F215	7
1/2	600	7584-503	0.790	Yellow	THORO-SPRAY 600# Yellow PVC Spray Hose – 2 Pass (4 Spiral)	7
1/2	600	7586-500	0.705	Yellow	THORO-SPRAY 600# Yellow PU/PVC Spray Hose – 1 Pass (2 Spiral)	8
1/2	600	7587-500	0.705	Yellow	THORO-SPRAY 600# Yellow PU/PVC Spray Hose – 2 Pass (4 Spiral)	8
1/2	800	7588-500	0.840	Blue	THORO-SPRAY 800# Blue PU/PVC Spray Hose	9
5/8	35	7558-625	0.813	Clear	Clear Vinyl Tubing - FDA & NSF	20
5/8	40	7558-626	0.875	Clear	Clear Vinyl Tubing - FDA & NSF	20
5/8	125	7520-625	0.880	Clear	THORO-BRAID Clear Marine Water Hose - FDA & NSF	18
5/8	150	39357	0.881	Black	CONTRACTOR WATER HOSE - PVC	14
5/8	150	39378	0.881	Black	CONTRACTOR WATER HOSE - PVC	14
5/8	185	7581-631	0.870	Clear	THORO-BRAID Clear Food Grade Hose - FDA	19
5/8	200	7520-625	0.880	Clear	THORO-BRAID Clear Marine Water Hose - FDA & NSF	18
5/8	200	7583-625	0.875	Clear	THORO-BRAID Clear Food Grade Hose - FDA & NSF	18
5/8	250	39366	0.921	Red	HYDRO-AIRE Red Air & Water Hose	15
5/8	250	39386	0.921	Black	HYDRO-AIRE Black Air & Water Hose	15
5/8	300	7518-625	0.890	Blue	MEGA BLUE ORS Air & Water Hose	11
5/8	300	7519-625	0.890	Red	MEGA RED ORS Air & Water Hose	11
3/4	35	7558-750	1.000	Clear	Clear Vinyl Tubing - FDA & NSF	20
3/4	90	7564-750	1.000	Clear - Sm	DYNAFLEX Medium Duty Clear PVC Suction Hose - FDA	25
3/4	100	7570-750	1.030	Clear - Sm	DYNAFLEX Wire Helix Clear PVC Suction Hose	25
3/4	115	7520-750	1.020	Clear	THORO-BRAID Clear Marine Water Hose - FDA & NSF	18
3/4	120	7560-750	1.000	Green - Sm	DYNAFLEX Standard Duty PVC Suction Hose	23
3/4	120	7562-750	1.000	Clear - Sm	DYNAFLEX Heavy Duty Clear PVC Suction Hose - FDA	24
3/4	150	7589-750	1.000	Natural	THORO-SPRAY EVA Spray Hose	10
3/4	150	39359	1.030	Black	CONTRACTOR WATER HOSE - PVC	14
3/4	150	39358	1.030	Black	CONTRACTOR WATER HOSE - PVC	14
3/4	150	39379	1.030	Black	CONTRACTOR WATER HOSE - PVC	14
3/4	150	7520-750	1.020	Clear	THORO-BRAID Clear Marine Water Hose - FDA & NSF	18
3/4	150	7583-750	1.020	Clear	THORO-BRAID Clear Food Grade Hose - FDA & NSF	18
3/4	170	7581-751	1.030	Clear	THORO-BRAID Clear Food Grade Hose - FDA	19
3/4	200	39397	1.031	Blue	THERM-O-BLUE ORS Air Hose	12
3/4	200	39377	1.031	Red	THERM-O-RED ORS Air Hose	13
3/4	200	39367	1.031	Red	HYDRO-AIRE Red Air & Water Hose	15
3/4	200	39387	1.031	Black	HYDRO-AIRE Black Air & Water Hose	15
3/4	250	7518-750	1.063	Blue	MEGA BLUE ORS Air & Water Hose	11
3/4	250	7519-750	1.063	Red	MEGA RED ORS Air & Water Hose	11
3/4	300	7585-750	1.060	Green	THORO-SPRAY 300# Green PU/PVC Spray Hose	8
3/4	400	7527-750	1.190	Yellow	THORO-BRAID 400 PSI MINE WATER HOSE	16
3/4	600	7587-750	1.020	Yellow	THORO-SPRAY 600# Yellow PU/PVC Spray Hose – 2 Pass (4 Spiral)	8
3/4	800	7588-750	1.140	Blue	THORO-SPRAY 800# Blue PU/PVC Spray Hose	9
1	25	7558-1000	1.250	Clear	Clear Vinyl Tubing - FDA & NSF	20
1	55	7563-1000	1.220	Clear - Corr	DYNAFLEX All Clear PVC Suction Hose - FDA	24
1	85	7570-1000	1.320	Clear - Sm	DYNAFLEX Wire Helix Clear PVC Suction Hose	25
1	90	7564-1000	1.220	Clear - Sm	DYNAFLEX Medium Duty Clear PVC Suction Hose - FDA	25
1	115	7520-1000	1.302	Clear	THORO-BRAID Clear Marine Water Hose - FDA & NSF	18
1	120	7560-1000	1.240	Green - Sm	DYNAFLEX Standard Duty PVC Suction Hose	23
1	120	7562-1000	1.240	Clear - Sm	DYNAFLEX Heavy Duty Clear PVC Suction Hose - FDA	24
1	125	7583-1000	1.302	Clear	THORO-BRAID Clear Food Grade Hose - FDA & NSF	18
1	140	7581-1001	1.300	Clear	THORO-BRAID Clear Food Grade Hose - FDA	19
1	150	7589-1000	1.305	Natural	THORO-SPRAY EVA Spray Hose	10
1	150	39368	1.281	Red	HYDRO-AIRE Red Air & Water Hose	15
1	150	39388	1.281	Black	HYDRO-AIRE Black Air & Water Hose	15
1	200	7518-1000	1.313	Blue	MEGA BLUE ORS Air & Water Hose	11
1	200	7519-1000	1.313	Red	MEGA RED ORS Air & Water Hose	11
1	200	39098	1.281	Blue	THERM-O-BLUE ORS Air Hose	12
1	400	7527-1000	1.470	Yellow	THORO-BRAID 400 PSI MINE WATER HOSE	16
1-1/4	20	7558-1250	1.500	Clear	Clear Vinyl Tubing - FDA & NSF	20
1-1/4	50	7563-1250	1.480	Clear - Corr	DYNAFLEX All Clear PVC Suction Hose - FDA	24
1-1/4	72	7570-1250	1.580	Clear - Sm	DYNAFLEX Wire Helix Clear PVC Suction Hose	25
1-1/4	80	7564-1250	1.530	Clear - Sm	DYNAFLEX Medium Duty Clear PVC Suction Hose - FDA	25
1-1/4	100	7583-1250	1.672	Clear	THORO-BRAID Clear Food Grade Hose - FDA & NSF	18
1-1/4	115	7581-1251	1.610	Clear	THORO-BRAID Clear Food Grade Hose - FDA	19

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ID (in.)	Max WP	Part Number	OD (in.)	Cover Color	Hose Description	Page
1-1/4	120	7560-1250	1.530	Green - Sm	DYNAFLEX Standard Duty PVC Suction Hose	23
1-1/4	120	7561-1250	1.530	Green - Corr	DYNAFLEX Standard Duty PVC Suction Hose	23
1-1/4	120	7562-1250	1.530	Clear - Sm	DYNAFLEX Heavy Duty Clear PVC Suction Hose - FDA	24
1-1/2	35	7558-1500	2.000	Clear	Clear Vinyl Tubing - FDA & NSF	20
1-1/2	50	7563-1500	1.840	Clear - Corr	DYNAFLEX All Clear PVC Suction Hose - FDA	24
1-1/2	72	7570-1500	1.850	Clear - Sm	DYNAFLEX Wire Helix Clear PVC Suction Hose	25
1-1/2	75	7564-1500	1.810	Clear - Sm	DYNAFLEX Medium Duty Clear PVC Suction Hose - FDA	25
1-1/2	80	7541-1501	1.602	Blue	GULLY WASHER Standard Duty Lay Flat PVC Discharge Hose	21
1-1/2	80	7561-1500	1.780	Green - Corr	DYNAFLEX Standard Duty PVC Suction Hose	23
1-1/2	100	7581-1501	1.890	Clear	THORO-BRAID Clear Food Grade Hose - FDA	19
1-1/2	100	7583-1500	1.931	Clear	THORO-BRAID Clear Food Grade Hose - FDA & NSF	18
1-1/2	100	7560-1500	1.780	Green - Sm	DYNAFLEX Standard Duty PVC Suction Hose	23
1-1/2	100	7562-1500	1.750	Clear - Sm	DYNAFLEX Heavy Duty Clear PVC Suction Hose - FDA	24
1-1/2	115	7582-1500	1.820	Clear - Sm	DYNAFLEX Medium Duty Clear PVC Suction Hose - FDA	25
1-1/2	150	7540-1501	1.278	Yellow	YELLOW BIRD Lay Flat PVC Fire Hose (MSHA)	17
1-1/2	150	7540-1501300	1.278	Yellow	YELLOW BIRD Lay Flat PVC Fire Hose (MSHA)	17
1-1/2	150	7542-1501	1.658	Brick Red	GULLY WASHER Medium Duty Lay Flat PVC Discharge Hose	21
1-1/2	230	7545-1501	1.720	Yellow	GULLY WASHER Heavy Duty Lay Flat PVC Discharge Hose	22
2	150	7540-2001	2.166	Yellow	YELLOW BIRD Lay Flat PVC Fire Hose (MSHA)	17
2	35	7558-2000	2.500	Clear	Clear Vinyl Tubing - FDA & NSF	20
2	40	7563-2000	2.360	Clear - Corr	DYNAFLEX All Clear PVC Suction Hose - FDA	24
2	65	7561-2000	2.320	Green - Corr	DYNAFLEX Standard Duty PVC Suction Hose	23
2	72	7570-2000	2.420	Clear - Sm	DYNAFLEX Wire Helix Clear PVC Suction Hose	25
2	75	7583-2000	2.480	Clear	THORO-BRAID Clear Food Grade Hose - FDA & NSF	18
2	75	7564-2000	2.340	Clear - Sm	DYNAFLEX Medium Duty Clear PVC Suction Hose - FDA	25
2	80	7541-2001	2.102	Blue	GULLY WASHER Standard Duty Lay Flat PVC Discharge Hose	21
2	85	7581-2001	2.400	Clear	THORO-BRAID Clear Food Grade Hose - FDA	19
2	85	7582-2000	2.360	Clear - Sm	DYNAFLEX Medium Duty Clear PVC Suction Hose - FDA	25
2	95	7560-2000	2.320	Green - Sm	DYNAFLEX Standard Duty PVC Suction Hose	23
2	95	7562-2000	2.320	Clear - Sm	DYNAFLEX Heavy Duty Clear PVC Suction Hose - FDA	24
2	150	7542-2001	2.166	Brick Red	GULLY WASHER Medium Duty Lay Flat PVC Discharge Hose	21
2	230	7545-2001	2.220	Yellow	GULLY WASHER Heavy Duty Lay Flat PVC Discharge Hose	22
2-1/2	40	7563-2500	2.870	Clear - Corr	DYNAFLEX All Clear PVC Suction Hose - FDA	24
2-1/2	57	7570-2500	2.950	Clear - Sm	DYNAFLEX Wire Helix Clear PVC Suction Hose	25
2-1/2	60	7561-2500	2.830	Green - Corr	DYNAFLEX Standard Duty PVC Suction Hose	23
2-1/2	65	7541-2501	2.618	Blue	GULLY WASHER Standard Duty Lay Flat PVC Discharge Hose	21
2-1/2	75	7560-2500	2.810	Green - Sm	DYNAFLEX Standard Duty PVC Suction Hose	23
2-1/2	75	7562-2500	2.810	Clear - Sm	DYNAFLEX Heavy Duty Clear PVC Suction Hose - FDA	24
2-1/2	75	7564-2500	2.850	Clear - Sm	DYNAFLEX Medium Duty Clear PVC Suction Hose - FDA	25
2-1/2	75	7582-2500	2.900	Clear - Sm	DYNAFLEX Medium Duty Clear PVC Suction Hose - FDA	25
2-1/2	150	7542-2501	2.682	Brick Red	GULLY WASHER Medium Duty Lay Flat PVC Discharge Hose	21
2-1/2	230	7545-2501	2.744	Yellow	GULLY WASHER Heavy Duty Lay Flat PVC Discharge Hose	22
3	40	7563-3000	3.500	Clear - Corr	DYNAFLEX All Clear PVC Suction Hose - FDA	24
3	45	7561-3000	3.400	Green - Corr	DYNAFLEX Standard Duty PVC Suction Hose	23
3	57	7570-3000	3.550	Clear - Sm	DYNAFLEX Wire Helix Clear PVC Suction Hose	25
3	60	7541-3001	3.110	Blue	GULLY WASHER Standard Duty Lay Flat PVC Discharge Hose	21
3	65	7560-3000	3.430	Green - Sm	DYNAFLEX Standard Duty PVC Suction Hose	23
3	65	7562-3000	3.430	Clear - Sm	DYNAFLEX Heavy Duty Clear PVC Suction Hose - FDA	24
3	65	7564-3000	3.450	Clear - Sm	DYNAFLEX Medium Duty Clear PVC Suction Hose - FDA	25
3	65	7582-3000	3.440	Clear - Sm	DYNAFLEX Medium Duty Clear PVC Suction Hose - FDA	25
3	150	7542-3001	3.182	Brick Red	GULLY WASHER Medium Duty Lay Flat PVC Discharge Hose	21
3	175	7545-3001	3.244	Yellow	GULLY WASHER Heavy Duty Lay Flat PVC Discharge Hose	22
4	35	7563-4000	4.640	Clear - Corr	DYNAFLEX All Clear PVC Suction Hose - FDA	24
4	36	7570-4000	4.650	Clear - Sm	DYNAFLEX Wire Helix Clear PVC Suction Hose	25
4	40	7561-4000	4.500	Green - Corr	DYNAFLEX Multi-Purpose PVC Suction Hose	23
4	45	7541-4001	4.120	Blue	GULLY WASHER Standard Duty Lay Flat PVC Discharge Hose	21
4	50	7582-4000	4.520	Clear - Sm	DYNAFLEX Medium Duty Clear PVC Suction Hose - FDA	25
4	55	7560-4000	4.450	Green - Sm	DYNAFLEX Standard Duty PVC Suction Hose	23
4	55	7562-4000	4.450	Clear - Sm	DYNAFLEX Heavy Duty Clear PVC Suction Hose - FDA	24
4	55	7564-4000	4.500	Clear - Sm	DYNAFLEX Medium Duty Clear PVC Suction Hose - FDA	25
4	150	7542-4001	4.204	Brick Red	GULLY WASHER Medium Duty Lay Flat PVC Discharge Hose	21
4	160	7545-4001	4.268	Yellow	GULLY WASHER Heavy Duty Lay Flat PVC Discharge Hose	22
6	28	7570-6000	6.650	Clear - Sm	DYNAFLEX Wire Helix Clear PVC Suction Hose	25
6	30	7563-6000	6.500	Clear - Corr	DYNAFLEX All Clear PVC Suction Hose - FDA	24
6	35	7564-6000	6.650	Clear - Sm	DYNAFLEX Medium Duty Clear PVC Suction Hose - FDA	25

Continued on the following page

PVC Hose Selector Guide

ID (in.)	Max WP	Part Number	OD (in.)	Cover Color	Hose Description	Page
6	40	7541-6001	6.140	Blue	GULLY WASHER Standard Duty Lay Flat PVC Discharge Hose	21
6	40	7560-6000	6.600	Green - Sm	DYNAFLEX Standard Duty PVC Suction Hose	23
6	40	7562-6000	6.600	Clear - Sm	DYNAFLEX Heavy Duty Clear PVC Suction Hose - FDA	24
6	120	7542-6001	6.228	Brick Red	GULLY WASHER Medium Duty Lay Flat PVC Discharge Hose	21
6	150	7545-6001	6.314	Yellow	GULLY WASHER Heavy Duty Lay Flat PVC Discharge Hose	22
8	35	7560-8000	8.800	Green - Sm	DYNAFLEX Standard Duty PVC Suction Hose	23
8	35	7562-8000	8.800	Clear - Sm	DYNAFLEX Heavy Duty Clear PVC Suction Hose - FDA	24
8	40	7541-8001	8.160	Blue	GULLY WASHER Standard Duty Lay Flat PVC Discharge Hose	21
8	100	7542-8001	8.240	Brick Red	GULLY WASHER Medium Duty Lay Flat PVC Discharge Hose	21
8	150	7545-8001	8.314	Yellow	GULLY WASHER Heavy Duty Lay Flat PVC Discharge Hose	22

How to Select a Hose (STAMPED)

Size	The appropriate inside and outside diameters and length of the hose should be determined.
Temperature	The maximum temperature of the material being conveyed.
Application	External conditions including abrasion, climate, heat, flexing, crushing, kinking, and degrees of bending.
Media	The composition of the substance being conveyed and chemical compatibility with the hose inner core and, if applicable, the outer jacket.
Pressure	The maximum pressure of the system, including pressure spikes.
Ends	The appropriate end connections and attachment method for the application.
Delivery	Testing, quality, packaging, and delivery requirements.

Series 7580

THORO-SPRAY® 600# Yellow PVC Spray Hose – 1 Pass (2 Spiral)

Tube ..... Light Green PVC
Cover ..... Yellow Ribbed PVC
Reinforcement ..... 2 Spiral Polyester Yarn
Temperature Range .... +25°F to +150°F (-4°C to +66°C)
Branding ..... PARKER 7580 PVC AG SPRAY - (SIZE)" - 600 PSI WP - MADE IN USA
Applications ..... Weed and lawn spraying, nurseries, agricultural and orchards, wettable powders.
Description ..... This superior quality spray hose is produced with premium grade PVC compounds for agricultural spraying of insecticides and fertilizers. Can also be used for air, water and many light chemical solutions. High adhesion between the layers provide for a long service life. Light weight and non-marking. Ribbed cover for easy coiling and greater abrasion resistance. **Not for use with Aromatic Hydrocarbons such as Xylene.**

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7580-383	3/8	9.5	0.640	16.3	600	1800	2	11.2
7580-503	1/2	12.7	0.770	19.6	600	1800	3	14.3

***Compare to*:** Gates AG 570; Goodyear Pliovic 1800; Kuriyama K4131; Pacific Echo 310.

Series 7584

THORO-SPRAY® 600# Yellow PVC Spray Hose – 2 Pass (4 Spiral)

Tube ..... Black PVC
Cover ..... Yellow Ribbed PVC
Reinforcement ..... 4 Spiral Polyester Yarn
Temperature Range .... +25°F to +150°F (-4°C to +66°C)
Branding ..... PARKER 7584 PVC AG SPRAY - (SIZE)" - 600 PSI WP - MADE IN USA
Applications ..... Lawn care, golf courses, boom trucks, agricultural, nursery and pest control spraying. Suitable for wettable powder chemicals.
Description ..... This superior quality spray hose is produced with premium grade PVC compounds for agricultural spraying of insecticides and fertilizers. Can also be used for air, water and many light chemical solutions. High adhesion between the layers provide for a long service life. Light weight and non-marking. Ribbed cover for easy coiling and greater abrasion resistance. **Not for use with Aromatic Hydrocarbons such as Xylene.**

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7584-383	3/8	9.5	0.650	16.5	600	2400	2	13.4
7584-503	1/2	12.7	0.790	20.1	600	2400	3	17.6

***Compare to*:** Kuriyama A1251; Pacific Echo 320.

Contact IHP Customer Service for special and non-standard hose requirements.

Series 7585

THORO-SPRAY® 300# Green PU/PVC Spray Hose

Tube ..... Blended Polyurethane/PVC - Black
Cover ..... Green Ribbed PVC
Reinforcement ..... 2 Spiral Polyester Yarn
Temperature Range .... +15°F to +160°F (-9°C to +71°C)
Branding ..... PARKER 7585 PU/PVC AG SPRAY - (SIZE)" - 300 PSI WP - MADE IN USA
Applications ..... Weed and lawn spraying, nurseries, agricultural and orchards.
Description ..... Tube is made of a special Polyurethane/PVC blended compound for the agricultural spraying of insecticides, pesticides and fertilizers. Can also be used for air, water and many light chemical solutions. High adhesion between the layers provide for a long service life. Light weight and non-marking. Ribbed cover for easy coiling and greater abrasion resistance. **Approved for use with Aromatic Hydrocarbon based chemical spraying (including Xylene).**

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7585-375	3/8	9.5	0.625	15.9	300	1000	2-1/4	12
7585-500	1/2	12.7	0.770	19.6	300	1000	3	17
7585-750	3/4	19.1	1.060	26.9	300	1000	4	29

***Compare to*:** Kuriyama A1628.

Series 7586

THORO-SPRAY® 600# Yellow PU/PVC Spray Hose – 1 Pass (2 Spiral)

Tube ..... Blended Polyurethane/PVC - White
Cover ..... Yellow Ribbed Blended PVC
Reinforcement ..... 2 Spiral Polyester Yarn
Temperature Range .... +15°F to +160°F (-9°C to +71°C)
Branding ..... PARKER 7586 PU/PVC AG SPRAY - (SIZE)" - 600 PSI WP - MADE IN USA
Applications ..... Lawn care, golf courses, boom trucks, agricultural, nursery and pest control spraying. Suitable for wettable powder chemicals.
Description ..... This superior quality spray hose is produced with premium grade PVC compounds for agricultural spraying of insecticides and fertilizers. Can also be used for air, water and many light chemical solutions. High adhesion between the layers provide for a long service life. Light weight and non-marking. Ribbed cover for easy coiling and greater abrasion resistance. **Approved for use with Aromatic Hydrocarbon based chemical spraying (including Xylene).**

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7586-375	3/8	9.5	0.650	16.5	600	1800	2	11.2
7586-500	1/2	12.7	0.770	19.6	600	1800	3	14.3

***Compare to*:** Jason 4192.

Contact IHP Customer Service for special and non-standard hose requirements.

Series 7587

THORO-SPRAY® 600# Yellow PU/PVC Spray Hose – 2 Pass (4 Spiral)

Tube ..... Blended Polyurethane/PVC - Black
Cover ..... Yellow Ribbed Blended PVC
Reinforcement ..... 4 Spiral Polyester Yarn
Temperature Range .... +15°F to +160°F (-9°C to +71°C)
Branding ..... PARKER 7587 PU/PVC AG SPRAY - (SIZE)" - 600 PSI WP - MADE IN USA
Applications ..... Lawn care, golf courses, boom trucks, agricultural, nursery and pest control spraying. Suitable for wettable powder chemicals.
Description ..... This superior quality spray hose is produced with premium grade PVC compounds for agricultural spraying of insecticides and fertilizers. Can also be used for air, water and many light chemical solutions. High adhesion between the layers provide for a long service life. Light weight and non-marking. Ribbed cover for easy coiling and greater abrasion resistance. **Approved for use with Aromatic Hydrocarbon based chemical spraying (including Xylene).**

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7587-375	3/8	9.5	0.650	16.5	600	2400	2-1/4	13.2
7587-500	1/2	12.7	0.705	17.9	600	2400	3-1/2	17.3
7587-750	3/4	19.1	1.020	25.9	600	2400	4	34.5

Compare to: Kuriyama A1661.

Series 7588

THORO-SPRAY® 800# Blue PU/PVC Spray Hose

Tube ..... Blended Polyurethane/PVC - Black
Cover ..... Blue Ribbed PVC
Reinforcement ..... 4 Spiral Polyester Yarn
Temperature Range .... +15°F to +160°F (-9°C to +71°C)
Branding ..... PARKER 7588 PU/PVC AG SPRAY - (SIZE)" - 800 PSI WP - MADE IN USA
Applications ..... Lawn care, golf courses, boom trucks, agricultural, nursery and pest control spraying.
Description ..... This superior quality spray hose is produced with premium grade PVC compounds for agricultural spraying of insecticides and fertilizers. Can also be used for air, water and many light chemical solutions. High adhesion between the layers provide for a long service life. Light weight and non-marking. Ribbed cover for easy coiling and greater abrasion resistance. **Approved for use with Aromatic Hydrocarbon based chemical spraying (including Xylene).**

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7588-375	3/8	9.5	0.660	16.8	800	3200	2-1/4	13.4
7588-500	1/2	12.7	0.840	21.3	800	3200	3-1/2	21.4
7588-750	3/4	19.1	1.140	29.0	800	3200	4	35.9

Compare to: Kuriyama A1687.

Contact IHP Customer Service for special and non-standard hose requirements.

Series 7589

THORO-SPRAY® EVA Spray Hose

Tube ..... Natural EVA (Also available in Black)
Cover ..... Natural EVA (Also available in Black)
Reinforcement ..... Polyester Yarn
Temperature Range .... -50°F to +125°F (-46°C to +52°C)
Branding ..... PARKER 7589 EVA SPRAY – (SIZE)" – (SIZE) MM – (PRESSURE) PSI WP – MADE IN USA
Applications ..... Anhydrous ammonia, agricultural, lawn and chemical transfer, seeder tubing, air and water transfer, Conduit paint fluid, light vacuum.
Description ..... EVA tube and cover hose provides good chemical and weather resistance.

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7589-375	3/8	9.5	0.595	15.1	250	1000	5	3.2
7589-500	1/2	12.7	0.720	18.3	250	1000	5-1/2	3.9
7589-750	3/4	19.1	1.000	25.4	150	600	7	6.5
7589-1000	1	25.4	1.305	33.1	150	500	10	10.5

***Compare to*:** Kentak EVA; Kuriyama K4350.

Contact IHP Customer Service for special and non-standard hose requirements.

Series 7518

MEGA BLUE ORS Air & Water Hose

Tube ..... Modified PVC
Cover ..... Blue Rubber Modified Thermoplastic
Reinforcement ..... Polyester Yarn
Temperature Range .... -20°F to +180°F (-29°C to +82°C)
Branding ..... PARKER MEGA BLUE ORS - (PRESSURE) PSI WP - (ID)" - (ID)MM - MADE IN USA
Description ..... Meets or exceeds RMA Grade 1, Class A Oil Resistance Standard. Specially blended tube and cover compounds provide users with the weight and flexibility of thermoplastics combined with the feel and many physical properties of rubber. Excellent for most applications where a more rugged, durable hose is required. Reels are 90% one piece. Balance are in multiples of 50 foot lengths.

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7518-250	1/4	6.4	0.500	12.7	350	1400	1	9
7518-375	3/8	9.5	0.641	16.3	350	1400	1-1/2	12
7518-500	1/2	12.7	0.781	19.8	300	1200	2-1/2	17
7518-625	5/8	15.9	0.890	22.6	250	1000	2-3/4	20
7518-750	3/4	19.1	1.063	27.0	250	1000	6	26
7518-1000	1	25.4	1.313	33.4	200	800	7	35

Compare to: Boston Ultraforce; Jason 4105.

Series 7519

MEGA RED ORS Air & Water Hose

Tube ..... Modified PVC
Cover ..... Red Rubber Modified Thermoplastic
Reinforcement ..... Polyester Yarn
Temperature Range .... -20°F to +180°F (-29°C to +82°C)
Branding ..... PARKER MEGA RED ORS - (PRESSURE) PSI WP - (ID)" - (ID)MM - MADE IN USA
Typical Applications .... Meets or exceeds RMA Grade 1, Class A Oil Resistance Standard. Specially blended tube and cover compounds provide users with the weight and flexibility of thermoplastics combined with the feel and many physical properties of rubber. Excellent for most applications where a more rugged, durable hose is required. Reels are 90% one piece. Balance are in multiples of 50 foot lengths.

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7519-250	1/4	6.4	0.500	12.7	350	1400	1	9
7519-375	3/8	9.5	0.641	16.3	350	1400	1-1/2	12
7519-500	1/2	12.7	0.781	19.8	300	1200	2-1/2	17
7519-625	5/8	15.9	0.890	22.6	250	1000	2-3/4	20
7519-750	3/4	19.1	1.063	27.0	250	1000	6	26
7519-1000	1	25.4	1.313	33.4	200	800	7	35

Compare to: Boston Ultraforce; Jason 4105.

Contact IHP Customer Service for special and non-standard hose requirements.

THERM-O-BLUE® ORS Air Hose

Tube ..... Orange Prime PVC with ORS additives
Cover ..... Blue Prime PVC
Reinforcement ..... Polyester Yarn
Temperature Range .... -20°F to +140°F (-29°C to +60°C)
Branding ..... - - - SWAN THERM-O-BLUE ORS - - - (PRESSURE) PSI WP - - - MADE IN USA - - - (ID) IN - (ID) MM - -
Description: ..... THERM-O-BLUE ORS hoses are made for air, water and moderate chemical applications. The tube is formulated with special additives to significantly increase the amount of oil resistance compared to normal PVC hoses. This special tube is protected by a non-marking cover. Combined, they provide a light weight and highly flexible hose which is ideal for many industrial applications. 4:1 Design Factor.

BULK HOSE

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	Max WP @ 68°F (PSI)	Min. Burst Pressure @ 68°F	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
39390	1/4	6.4	0.500	12.7	300	1200	3	8.4
39393	3/8	9.5	0.641	16.3	300	1200	4	11.9
39396	1/2	12.7	0.781	19.8	300	1200	5	15.9
39397	3/4	19.1	1.031	26.2	200	800	8	21.6
39098	1	25.4	1.281	32.5	200	800	11	27.9

Compare to: Gates 7746; Goodyear Pliovic Plus 300; Jason 4115; Kentak AT3; Kuriyama K113.

CUT LENGTHS

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	Max WP @ 68°F (PSI)	Min. Burst Pressure @ 68°F	Length (ft.)	Package	Package Weight (lbs)
39391	1/4	6.4	0.500	12.7	300	1200	50	5/Carton	22
39392	1/4	6.4	0.500	12.7	300	1200	100	3/Carton	27
39394	3/8	9.5	0.641	16.3	300	1200	50	5/Carton	30
39395	3/8	9.5	0.641	16.3	300	1200	100	3/Carton	37

Compare to: Gates 7746; Goodyear Pliovic Plus 300; Jason 4115; Kentak AT3; Kuriyama K113.

Contact IHP Customer Service for special and non-standard hose requirements.

THERM-O-RED® ORS Air Hose

Tube ..... Orange Prime PVC with ORS additives
Cover ..... Red Prime PVC
Reinforcement ..... Polyester Yarn
Temperature Range .... -20°F to +140°F (-29°C to +60°C)
Branding ..... - - - SWAN THERM-O-RED ORS - - - (PRESSURE) PSI WP - - - MADE IN USA - - - (ID) IN - (ID) MM - -
Description: ..... THERM-O-RED ORS hoses are made for air, water and moderate chemical applications. The tube is formulated with special additives to significantly increase the amount of oil resistance compared to normal PVC hoses. This special tube is protected by a non-marking cover. Combined, they provide a light weight and highly flexible hose which is ideal for many industrial applications. 4:1 Design Factor.

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
39374	1/4	6.4	0.500	12.7	300	1200	3	8.4
39375	3/8	9.5	0.641	16.3	300	1200	4	11.9
39376	1/2	12.7	0.781	19.8	300	1200	5	15.9
39377	3/4	19.1	1.031	26.2	200	800	8	21.6

Compare to: Gates 7746; Goodyear Pliovic Plus 300; Jason 4115; Kentak AT3; Kuriyama K113.

COMMERCIAL DUTY PVC Air Hose

Tube ..... PVC
Cover ..... Yellow PVC
Reinforcement ..... Polyester Yarn
Temperature Range .... 0°F to +130°F (-18°C to +54°C)
Branding ..... - - - (SIZE)" ID - - (SIZE) MM - - - 300 PSI WP - - MADE IN USA - - -
Description: ..... This profesional duty PVC air hose is designed to withstand working pressures up to 300 PSI. It is flexible and light weight. Assemblies are coupled with 3/8" NPT male brass fittings each end and are equipped with PVC strain relief sleeves and descriptive hose boards.

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	Coupling Size (in.)	Max WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Length (ft.)	Package	Package Weight (Lbs)
33903	1/4	6.4	0.500	12.7	1/4	300	1,200	25	10/Carton	21
33904	1/4	6.4	0.500	12.7	1/4	300	1,200	50	5/Carton	21
33905	1/4	6.4	0.500	12.7	–	300	1,200	500	Reel	44
33913	3/8	9.5	0.595	15.1	1/4	300	1,200	25	10/Carton	25
33914	3/8	9.5	0.595	15.1	1/4	300	1,200	50	5/Carton	25
33915	3/8	9.5	0.595	15.1	–	300	1,200	500	Reel	53
33923	1/2	12.7	0.783	19.9	1/2	300	1,200	25	10/Carton	42
33924	1/2	12.7	0.783	19.9	1/2	300	1,200	50	5/Carton	42
33925	1/2	12.7	0.783	19.9	–	300	1,200	500	Reel	88

Compare to: Goodyear Pliovic GS; Jason 4103; Kentak ATH; Kuriyama HS 117; Superflex AH.

Contact IHP Customer Service for special and non-standard hose requirements.

CONTRACTOR WATER HOSE – PVC

Tube ..... Black PVC
Cover ..... Black PVC
Reinforcement ..... Polyester Yarn
Temperature Range .... -20°F to +130°F (-29°C to +54°C)
Branding ..... - - - SWAN CONTRACTOR WATER HOSE - - - 150 PSI WP - - - MADE IN USA - - - (SIZE)" ID - (SIZE) MM
Description: ..... This is an economical water hose designed for general contractor use. The PVC cover provides excellent abrasion resistance, which relates to longer service life. 3:1 Design factor.

BULK HOSE

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Length	Wt. Per 100 Ft. (lbs.)
39357	5/8	15.9	0.881	22.4	150	450	6	500'/Reel	19
39359	3/4	19.1	1.030	26.2	150	450	7	500'/Reel	21

UNCOUPLED

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Length (ft.)	Package	Package Weight (lbs.)
39358	3/4	19.1	1.030	26.2	150	450	50	5/Carton	55

COUPLED*

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Length (ft.)	Package	Package Weight (lbs.)
39378	5/8	15.9	0.881	22.4	150	450	50	5/Carton	52
39379	3/4	19.1	1.030	26.2	150	450	50	5/Carton	56

*Coupled with machined brass male/female garden hose threads and external crimped ferrules.
***Compare to*:** Boston H1987, H1171; Kentak CLW, 165.

Contact IHP Customer Service for special and non-standard hose requirements.

HYDRO-AIRE™ Red Air & Water Hose

Tube ..... Black PVC
Cover ..... Red PVC
Reinforcement ..... Polyester Yarn
Temperature Range .... -20°F to +130°F (-29°C to +54°C)
Branding ..... SWAN HYDRO-AIRE - - - (PRESSURE) PSI WP - - - MADE IN USA - - - (SIZE) IN - (SIZE) MM
Description: ..... Hydro-Aire is an extremely flexible and light weight PVC hose designed for air and water applications. 4:1 Design Factor.

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
39362	1/4	6.4	0.500	12.7	250	1000	2.5	10
39363	5/16	7.9	0.593	15.1	250	1000	3.0	12
39364	3/8	9.5	0.641	16.3	250	1000	3.5	14
39365	1/2	12.7	0.781	19.8	250	1000	5.0	18
39366	5/8	15.9	0.921	23.4	250	1000	6.5	22
39367	3/4	19.1	1.031	26.2	200	800	7.5	27
39368	1	25.4	1.281	32.5	150	600	10.0	36

Compare to: Boston H275; Goodyear Pliovic Plus 250; Kentak ATL; Kuriyama K115.

HYDRO-AIRE™ Black Air & Water Hose

Tube ..... Black PVC
Cover ..... Black PVC
Reinforcement ..... Polyester Yarn
Temperature Range .... -20°F to +130°F (-29°C to +54°C)
Branding ..... SWAN HYDRO-AIRE - - - (PRESSURE) PSI WP - - - MADE IN USA - - - (SIZE) IN - (SIZE) MM
Description: ..... Hydro-Aire is an extremely flexible and light weight PVC hose designed for air and water applications. 4:1 Design Factor.

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
39382	1/4	6.4	0.500	12.7	250	1000	2.5	10
39383	5/16	7.9	0.593	15.1	250	1000	3.0	12
39384	3/8	9.5	0.641	16.3	250	1000	3.5	14
39385	1/2	12.7	0.781	19.8	250	1000	5.0	18
39386	5/8	15.9	0.921	23.4	250	1000	6.5	22
39387	3/4	19.1	1.031	26.2	200	800	7.5	27
39388	1	25.4	1.281	32.5	150	600	10.0	36

Compare to: Boston H275; Goodyear Pliovic Plus 250; Kentak ATL; Kuriyama K115.

Contact IHP Customer Service for special and non-standard hose requirements.

Series 7527

THORO-BRAID® 400 PSI Mine Water Hose

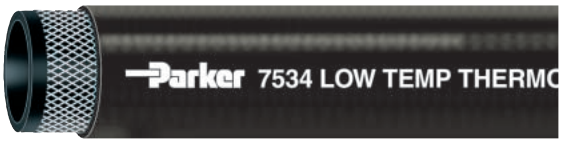
Tube ..... Black PVC Blend
Cover ..... Yellow Thermoplastic Rubber
Reinforcement ..... Polyester Yarn
Temperature Range .... -28°F to +150°F (-33°C to +66°C)
Branding ..... PARKER 7527 MINE WATER – (SIZE)" – (SIZE) MM – 400 PSI WP – MADE IN USA –
Description: ..... This highly flexible, light weight, non-marking hose is designed for use in mine air, water transfer and light chemical transfer. It has a wrapped, sure grip cover for enhanced ease of coiling and abrasion resistance. Good resistance to oil, ozone and ultraviolet. Available in special lengths, packaging and colors.

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7527-500	1/2	12.7	0.940	23.9	400	1600	3	30
7527-750	3/4	19.1	1.190	30.2	400	1600	4-3/4	40
7527-1000	1	25.4	1.470	37.3	400	1600	6-1/2	55

Compare to: Boston H1571.

Series 7534

THORO-BRAID® Low Temp Thermoplastic ORS Push-On Hose



Tube ..... Black ORS Thermoplastic Rubber
Cover ..... Black ORS Thermoplastic Rubber
Reinforcement ..... Polyester Yarn
Temperature Range .... -45°F to +180°F (-43°C to +82°C)
Branding ..... PARKER 7534 LOW TEMP THERMO-PLASTIC ORS PUSH-ON – (SIZE)" – (SIZE) MM – 250 PSI WP – MADE IN USA –
Description: ..... Excellent for shop air lines, water transfer, light chemical, light vacuum and general industrial applications. Non-conductive. Excellent low temperature flexibility. Available in special lengths, packaging and colors.

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7534-250	1/4	6.4	0.495	12.6	250	1000	1-3/4	4.0
7534-381	3/8	9.5	0.657	16.7	250	1000	2-1/4	6.2
7534-500	1/2	12.7	0.760	19.3	250	1000	3-1/4	7.0

Contact IHP Customer Service for special and non-standard hose requirements.

Series 7540

YELLOW BIRD® Lay Flat PVC Fire Hose (MSHA)

Tube ..... PVC/Nitrile
Cover ..... Yellow PVC
Reinforcement ..... Two Spiral Polyester Plies, One Polyester Longitudinal Ply
Temperature Range .... -10°F to +150°F (-23°C to +66°C)
Branding ..... FLAME RESISTANT USMSHA 2G-60/1
Description ..... Light weight hose designed for fire protection service in underground mines. Brightly colored for high visibility. Not recommended where ambient temperatures exceed 125°F. Rolls up flat for easy storage.

Part Number	Nominal ID (in.)	Nominal ID (mm)	WP @ 68°F (PSI)	Approx. Wall Thickness (in.)	Wt. Per 100 Ft. (lbs.)
7540-1501	1-1/2	38.1	150	0.074	20
7540-1501300	1-1/2	38.1	150	0.074	20
7540-2001	2	50.8	150	0.083	30

***Compare to*:** Goodyear Brigade.

Contact IHP Customer Service for special and non-standard hose requirements.

Series 7520

THORO-BRAID® Clear Marine Water Hose – FDA & NSF

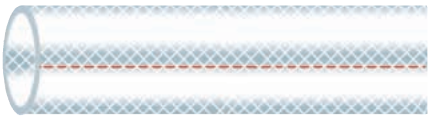
Tube ..... Clear PVC
Cover ..... Clear PVC with Blue Tint
Reinforcement ..... Polyester Yarn with Red/Blue Tracer
Temperature Range .... -20°F to +175°F (-29°C to +79°C)
Branding ..... PARKER 7520 MARINE WATER – (SIZE)" – (SIZE) MM – (PRESSURE) PSI WP – NSF-51 (LOT#) (DATE CODE) – MADE IN USA
Description ..... Drinking water safe. May be used for either cold or hot water marine systems. Not recommended for use with thru-hull connections. No taste or odor. Light weight, non-marking and flexible. Complies with FDA CFR Title 21 parts 170-199. Certified under NSF Standard 51.

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7520-375	3/8	9.5	0.563	14.3	200	800	2	8.0
7520-500	1/2	12.7	0.740	18.8	150	600	2-1/4	11.0
7520-625	5/8	15.9	0.880	22.4	125	500	2-3/4	13.5
7520-750	3/4	19.1	1.020	25.9	115	460	3-1/4	15.0
7520-1000	1	25.4	1.313	33.4	115	460	5-3/4	23.0

Compare to: Kuriyama 136, K3175.

Series 7581

THORO-BRAID® Clear Food Grade Hose – FDA



Tube ..... Clear PVC
Cover ..... Clear PVC with Blue Tint
Reinforcement ..... Polyester Yarn (2-Spiral & 1 Longitudinal)
Temperature Range .... -10°F to + 150°F (-23°C to +66°C)
Branding ..... None
Description ..... Excellent for conveying liquids, air and powdered foods. Hose is transparent, allowing for easy inspections during service. Complies with FDA CFR Title 21 parts 170 - 199. Available in special lengths and packaging.

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7581-251	1/4	6.4	0.490	12.4	355	1065	3	7
7581-381	3/8	9.5	0.600	15.2	315	945	4	10
7581-501	1/2	12.7	0.750	19.1	215	645	5	12
7581-631	5/8	15.9	0.870	22.1	185	555	6	17
7581-751	3/4	19.1	1.030	26.2	170	510	7	21
7581-1001	1	25.4	1.300	33.0	140	420	9	28
7581-1251	1-1/4	31.8	1.610	40.9	115	345	12	42
7581-1501	1-1/2	38.1	1.890	48.0	100	300	15	58
7581-2001	2	50.8	2.400	61.0	85	255	18	75

Compare to: Gates 7744; Goodyear Pliovic 200; Jason 4511; Kentak 50H; Pacific Echo 410; Petzetakis 10206; Superflex BTC.

Contact IHP Customer Service for special and non-standard hose requirements.

Series 7583

THORO-BRAID® Clear Food Grade Hose – FDA & NSF

Tube ..... Clear PVC
Cover ..... Clear PVC
Reinforcement ..... Polyester Yarn with Red Tracer
Temperature Range .... +25°F to +150°F (-4°C to +66°C)
Branding ..... PARKER 7583 PVC - MAX TEMP 150°F - (SIZE)" - (SIZE) MM - (PRESSURE) PSI WP - NSF-51 (LOT #) (DATE CODE) - MADE IN USA
Applications ..... Air, water and food transfer. Light vacuum lines. Wire conduit.
Description ..... Excellent for conveying liquids, air and powdered foods. Hose is transparent, allowing for easy inspections during service. Complies with FDA CFR Title 21 parts 170 - 199. Certified under NSF standard 51. Light weight, non-marking and flexible.

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7583-187	3/16	4.8	0.375	9.5	250	1000	3/4	4.5
7583-250	1/4	6.4	0.451	11.5	250	1000	1	6.5
7583-312	5/16	7.9	0.522	13.3	250	1000	1-1/4	7.5
7583-381	3/8	9.5	0.598	15.2	225	900	1-3/8	9.0
7583-500	1/2	12.7	0.740	18.8	200	800	2-1/4	14.5
7583-625	5/8	15.9	0.875	22.2	200	800	2-1/2	16.5
7583-750	3/4	19.1	1.020	25.9	150	600	5-3/4	23.0
7583-1000	1	25.4	1.302	33.1	125	500	6-3/4	32.0
7583-1250	1-1/4	31.8	1.672	42.5	100	400	11	58.0
7583-1500	1-1/2	38.1	1.931	49.0	100	400	12	69.0
7583-2000	2	50.8	2.480	63.0	75	300	15	100.0

Also available in heavy wall construction. Contact Parker IHP Customer Service.
***Compare to*:** Boston H285; Goodyear Pliovic FG; Kentak K-9500 (Hose); Kuriyama K3150.

Contact IHP Customer Service for special and non-standard hose requirements.

Series 7558

Clear Vinyl Tubing – FDA & NSF

Tube ..... Clear Food Grade PVC
Temperature Range .... +25°F to +150°F (-4°C to +66°C)
Branding ..... PARKER 7558 PVC - MAX TEMP 150F - (SIZE)" - (SIZE) MM - (PRESSURE) PSI WP - NSF-51 (LOT#) (DATE CODE) - MADE IN USA
Applications ..... Food transfer. Drain lines. Light vacuum lines. Sight gauges. Low pressure air and water. Potable water.
Description ..... Light weight, non-marking, flexible tubing made with tight tolerances. Will not support combustion. Materials comply with FDA Specifications. NSF Certified under Standard NSF-51.

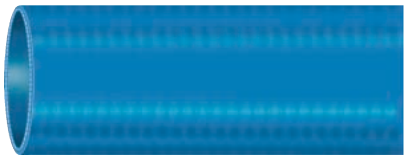
Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7558-125	1/8	3.2	1/4	6.4	65	260	1/4	2.0
7558-187	3/16	4.8	5/16	7.9	55	220	5/8	2.6
7558-250	1/4	6.4	3/8	9.5	55	220	3/4	3.2
7558-251	1/4	6.4	1/2	12.7	60	240	1/2	7.6
7558-312	5/16	7.9	7/16	11.1	50	200	3/4	3.8
7558-381	3/8	9.5	1/2	12.7	45	180	1-3/4	4.5
7558-500	1/2	12.7	5/8	15.9	30	120	1-1/4	5.7
7558-501	1/2	12.7	11/16	17.5	40	160	2	9.0
7558-502	1/2	12.7	3/4	19.1	45	180	1-3/4	13.0
7558-625	5/8	15.9	13/16	20.6	35	140	3	11.0
7558-626	5/8	15.9	7/8	22.2	40	160	3-3/4	13.0
7558-750	3/4	19.1	1	25.4	35	140	4	18.0
7558-1000	1	25.4	1-1/4	31.8	25	100	7-1/2	23.0
7558-1250	1-1/4	31.8	1-1/2	38.1	20	80	11	28.0
7558-1500	1-1/2	38.1	2	50.8	35	140	12	72.0
7558-2000	2	50.8	2-1/2	63.5	35	140	15	92.0

***Compare to*:** Kentak K-9500 (Tubing); Kuriyama K010; New Age CLEARFLO.

Contact IHP Customer Service for special and non-standard hose requirements.

Series 7541

GULLY WASHER® Standard Duty Lay Flat PVC Discharge Hose



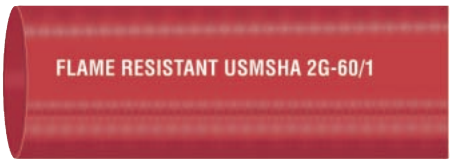
Tube ..... Blue PVC
Cover ..... Blue PVC
Reinforcement ..... Two Spiral Polyester Plies, One Polyester Longitudinal Ply
Temperature Range .... -10°F to + 150°F (-23°C to +66°C)
Branding ..... None
Description ..... For water discharge in agriculture, mining, construction and other industrial applications. Strong, economical and light weight hose that rolls up flat for easy storage. 3:1 Design Factor.

Part Number	Nominal ID (in.)	Nominal ID (mm)	WP @ 68°F (PSI)	Approx. Wall Thickness (in.)	Wt. Per 100 Ft. (lbs.)
7541-1501	1-1/2	38.1	80	0.051	14
7541-2001	2	50.8	80	0.051	20
7541-2501	2-1/2	63.5	65	0.053	26
7541-3001	3	76.2	60	0.055	30
7541-4001	4	101.6	45	0.060	40
7541-6001	6	152.4	40	0.070	75
7541-8001	8	203.2	40	0.080	110

Compare to: Gates Master-Flex 500; Goodyear Spiralflex Gray; Kanaflex 4501, 4502; Kuriyama NuFlo, VinylFlow; Petzetakis 11252; Sun-Flow SF-10, SF-15; Superflex DH.

Series 7542

GULLY WASHER® Medium Duty Lay Flat PVC Discharge Hose



Tube ..... Brick Red PVC/Nitrile
Cover ..... Brick Red PVC
Reinforcement ..... Two Spiral Polyester Plies, One Polyester Longitudinal Ply
Temperature Range .... -10°F to +150°F (-23°C to +66°C)
Branding ..... FLAME RESISTANT USMSHA 2G-60/1
Description ..... For medium duty water discharge applications in construction, agriculture, general industry and mining. Abrasion resistant construction provides long service life. Rolls up flat for easy storage. 3:1 Design Factor.

Part Number	Nominal ID (in.)	Nominal ID (mm)	WP @ 68°F (PSI)	Approx. Wall Thickness (in.)	Wt. Per 100 Ft. (lbs.)
7542-1501	1-1/2	38.1	150	0.079	20
7542-2001	2	50.8	150	0.083	30
7542-2501	2-1/2	63.5	150	0.091	40
7542-3001	3	76.2	150	0.091	52
7542-4001	4	101.6	150	0.102	74
7542-6001	6	152.4	120	0.114	125
7542-8001	8	203.2	100	0.120	189

Compare to: Goodyear Spiralflex Red; Jason 4510; Kuriyama Ironsides; Petzetakis 11298; Sun-Flow SF-30, SF-50.

Contact IHP Customer Service for special and non-standard hose requirements.

Lay Flat Water Discharge

Series 7545

GULLY WASHER® Heavy Duty Lay Flat PVC Discharge Hose

Tube ..... Black PVC/Nitrile
Cover ..... Yellow PVC
Reinforcement ..... 2 Spiral Polyester Plies, One Polyester Longitudinal Ply
Temperature Range .... -10°F to +150°F (-23°C to +66°C)
Branding ..... FLAME RESISTANT USMSHA 2G-60/1
Description ..... For heavy duty water discharge service in applications such as agriculture, construction, industry and mining. Abrasion resistant PVC cover and Nitrile/PVC tube plus high adhesions between the layers provide for long service life. Rolls up flat for easy storage. MSHA brand. 3:1 Design Factor.

Part Number	Nominal ID (in.)	Nominal ID (mm)	WP @ 68°F (PSI)	Approx. Wall Thickness (in.)	Wt. Per 100 Ft. (lbs.)
7545-1501	1-1/2	38.1	230	0.110	32
7540-2001	2	50.8	230	0.110	42
7545-2501	2-1/2	63.5	230	0.122	56
7545-3001	3	76.2	175	0.122	68
7545-4001	4	101.6	160	0.134	101
7545-6001	6	152.4	150	0.157	185
7545-8001	8	203.2	150	0.157	268

***Compare to*:** Goodyear Spiralflex 2700; Jason 4520; Petzetakis 11294; Sun-Flow SF-20.

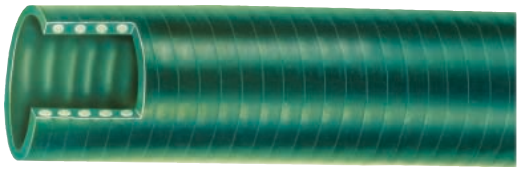
Lay-Flat Discharge Hose Comparison Guide

Duty	Name	Color	1-1/2" WP	1-1/2" Wgt	2" WP	2" Wgt	2-1/2" WP	2-1/2" Wgt	3" WP	3" Wgt	4" WP	4" Wgt	6" WP	6" Wgt
Standard	Parker 7541	Blue	80	14	80	20	65	26	60	30	45	40	40	75
	Gates Master-Flex	Blue	75	17	65	21	60	28	60	39	60	53	45	88
	Goodyear SpFlx	Gray	75	19	60	24	60	36	50	39	45	65	35	107
	Jason 4501	Blue	100	24	100	27	75	33	75	44	75	63	50	120
	Jason 4502	Blue	85	21	85	25	75	29	70	39	70	60	50	115
	Kuriyama NuFlo	Blue	70	15	65	20	60	28	60	34	60	45	45	81
	Kuriyama VinylFlow	Blue	80	16	80	23	80	29	70	39	70	52	50	86
	Petzetakis 11252	Blue	75	12	75	18	62	23	53	24	45	35	45	84
	Sun-Flow SF-10	Blue	80	20	80	28	65	31	80	39	70	55	60	88
	Sun-Flow SF-15	Green	80	21	80	30	–	–	80	41	70	58	60	99
	Superflex DH	Blue	75	17	60	22	60	29	45	40	60	53	60	82
Medium	Parker 7542	Red	150	20	150	30	150	40	150	52	150	74	120	125
	Goodyear SpFlx	Red	150	23	150	36	150	41	125	46	100	73	100	118
	Jason 4510	Red	170	28	170	30	160	37	160	46	150	67	150	108
	Kuriyama Ironsides	Rust	150	23	150	32	150	41	150	52	125	76	115	121
	Petzetakis 11298	R or Y	120	20	120	28	120	39	120	47	120	71	60	108
	Sun-Flow SF-30	Red	110	22	100	29	–	–	100	43	80	60	100	110
	Sun-Flow SF-50	Red	150	21	150	28	150	40	150	53	150	75	150	125
Heavy	Parker 7545	Yellow	230	32	250	42	250	56	175	68	160	101	150	185
	Goodyear SpFlx	Yellow	200	32	200	42	200	66	200	76	150	100	150	169
	Jason 4520	Yellow	250	48	250	60	250	79	250	98	200	144	160	216
	Petzetakis 11294	Red	250	30	250	40	230	56	175	65	156	94	105	168
	Sun-Flow SF-20	R or G	200	26	200	36	175	40	200	67	200	113	150	219

Contact IHP Customer Service for special and non-standard hose requirements.

Series 7560

DYNAFLEX® Standard Duty PVC Suction Hose



Tube ..... Green PVC - Smooth
Cover ..... Green PVC - Smooth
Reinforcement ..... Rigid white PVC helix
Temperature Range .... -5°F to +140°F (-21°C to +50°C)
Description ..... A flexible hose that will withstand full suction and discharge pressure. Will handle a variety of liquid and solid materials such as water, slurry, sewage, air, chemicals, grains and pellets. A versatile hose for agriculture, mining, construction and industry. 3:1 Design Factor.

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7560-750	3/4	19.1	1.00	25.0	120	360	3.5	20
7560-1000	1	25.4	1.24	31.5	120	360	4.5	25
7560-1250	1-1/4	31.8	1.53	38.9	120	360	5.7	32
7560-1500	1-1/2	38.1	1.78	45.2	100	300	6.7	39
7560-2000	2	50.8	2.32	58.9	95	285	9.0	57
7560-2500	2-1/2	63.5	2.81	71.4	75	225	11.0	80
7560-3000	3	76.2	3.43	87.1	65	195	14.0	105
7560-4000	4	101.6	4.45	113.0	55	165	18.0	164
7560-6000	6	152.4	6.60	167.6	40	120	30.0	308
7560-8000	8	203.2	8.80	223.5	35	105	39.0	507

Compare to: Gates 100 GR; Kanaflex 110 GR; Kuriyama G and J; Pacific Echo 110, 113; Petzetakis 12500; Superflex 1000 GR.

Series 7561

DYNAFLEX® Multi-Purpose PVC Suction Hose

Tube ..... Green PVC - Smooth
Cover ..... Green PVC - Corrugated
Reinforcement ..... Rigid white PVC helix
Temperature Range .... -5°F to +140°F (-21°C to +50°C)
Description ..... Extremely light weight and flexible for general service, low pressure applications. Will handle both full suction and discharge pressure. Smooth bore design allows unrestricted flow. 3:1 Design Factor.

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7561-1500	1-1/2	38.1	1.78	45.2	80	240	5	33
7561-2000	2	50.8	2.32	58.9	65	195	7	46
7561-2500	2-1/2	63.5	2.83	63.8	60	180	9	60
7561-3000	3	76.2	3.40	86.4	45	135	12	75

Compare to: Kanaflex 112 CL; Kuriyama WG; Pacific Echo 120; Superflex TX.

Contact IHP Customer Service for special and non-standard hose requirements.

Series 7562

DYNAFLEX® Heavy Duty Clear PVC Suction Hose – FDA

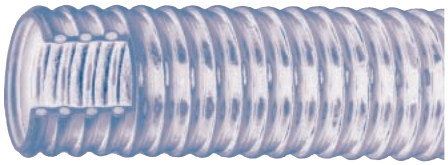
Tube ..... Clear PVC - Smooth
Cover ..... Clear PVC - Smooth
Reinforcement ..... Rigid white PVC helix
Temperature Range .... -5°F to +140°F (-21°C to +50°C)
Description ..... This heavy duty food grade material handling hose complies with all applicable FDA specifications. Smooth tube construction is excellent for transferring liquid or dry products without material build-up. Clear PVC construction permits visual observation of materials being conveyed. Complies with FDA CFR Title 21 parts 170-199. 3:1 Design Factor.

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7562-500	1/2	12.7	0.75	19.0	120	360	2.5	12
7562-750	3/4	19.1	1.00	25.4	120	360	3.5	20
7562-1000	1	25.4	1.24	31.5	120	360	4.5	25
7562-1250	1-1/4	31.8	1.53	38.9	120	360	5.7	32
7562-1500	1-1/2	38.1	1.75	44.5	100	300	6.8	39
7562-2000	2	50.8	2.32	58.9	95	285	9.0	57
7562-2500	2-1/2	63.5	2.81	71.4	75	225	11.0	80
7562-3000	3	76.2	3.43	87.1	65	195	14.0	105
7562-4000	4	101.6	4.45	113.0	55	165	18.0	164
7562-6000	6	152.4	6.60	167.6	40	120	30.0	308
7562-8000	8	203.2	8.80	223.5	35	105	39.0	507

Compare to: Kuriyama FT; Petzetakis 12512; Superflex 4000.

Series 7563

DYNAFLEX® All Clear PVC Suction Hose – FDA



Tube ..... Clear PVC - Smooth
Cover ..... Clear PVC - Corrugated
Reinforcement ..... Rigid clear PVC helix
Temperature Range .... -5°F to +140°F (-21°C to +50°C)
Description ..... Heavy duty food grade material handling hose complies with all applicable FDA specifications. Smooth tube construction is excellent for transfering powder, pellets, or other dry materials without build-up. Clear PVC construction permits visual observation of materials being conveyed. Complies with FDA CFR Title 21 parts 170-199. 3:1 Design Factor.

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7563-1000	1	25.4	1.22	31.0	55	165	2	17
7563-1250	1-1/4	31.8	1.48	37.6	50	150	3	21
7563-1500	1-1/2	38.1	1.84	46.7	50	150	3	34
7563-2000	2	50.8	2.36	59.9	40	120	4	50
7563-2500	2-1/2	63.5	2.87	72.9	40	120	5	68
7563-3000	3	76.2	3.50	88.9	40	120	6	100
7563-4000	4	101.6	4.64	117.9	35	105	8	152
7563-6000	6	152.4	6.50	165.1	30	90	12	300

Compare to: Gates 201 CR; Goodyear Nutriflex; Jason 4660; Kanaflex 200 SFG; Kuriyama WT; Pacific Echo 145; Petzetakis 12426SE; Superflex 9000.

▶ ***Contact IHP Customer Service for special and non-standard hose requirements.***

Series 7564

DYNAFLEX® Medium Duty PVC Clear Suction Hose

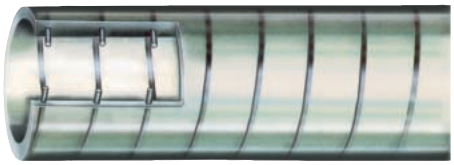
Tube ..... Clear PVC - Smooth
Cover ..... Clear PVC - Smooth
Reinforcement ..... Rigid white PVC helix
Temperature Range .... -5°F to +140°F (-21°C to +50°C)
Description ..... Rugged, medium duty general purpose PVC suction and transfer hose for the agricultural, construction, mining and general industrial markets. Smooth tube ensures full flow. 3:1 Design Factor.

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7564-750	3/4	19.1	1.00	25.4	90	270	3	20
7564-1000	1	25.4	1.22	31.0	90	270	4	26
7564-1250	1-1/4	31.8	1.53	38.9	80	340	5	37
7564-1500	1-1/2	38.1	1.81	46.0	75	225	6	44
7564-2000	2	50.8	2.34	59.4	75	225	8	67
7564-2500	2-1/2	63.5	2.85	72.4	75	225	10	90
7564-3000	3	76.2	3.45	87.6	65	195	12	114
7564-4000	4	101.6	4.50	114.3	55	165	16	181
7564-6000	6	152.4	6.65	168.9	35	105	24	336

Compare to: Gates 101 CL, 200 CL; Goodyear Nutriflow; Jason 4606; Kuriyama H; Pacific Echo 090, 115; Superflex 1000CL.

Series 7570

DYNAFLEX® Wire Helix Clear PVC Suction Hose – FDA



Tube ..... Clear PVC Smooth
Cover ..... Clear PVC - Smooth
Reinforcement ..... Wire Helix
Temperature Range .... -5°F to +140°F (-21°C to +50°C)
Description ..... Designed to handle a wide variety of applications where a light weight, flexible suction/discharge hose is required. A steel helix wire combined with thick wall construction gives the hose excellent kink, abrasion and crush resistance. Transparency allows for easy inspection of product being conveyed. Flexible to -10°F. The steel helix wire provides static conductivity. Complies with FDA CFR Title 21 parts 170-199. 3:1 Design Factor.

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7570-750	3/4	19.1	1.03	26.2	100	300	2.00	21
7570-1000	1	25.4	1.32	33.5	85	255	2.50	34
7570-1250	1-1/4	31.8	1.58	40.1	72	216	3.25	42
7570-1500	1-1/2	38.1	1.85	47.0	72	216	3.50	52
7570-2000	2	50.8	2.42	61.5	72	216	5.00	84
7570-2500	2-1/2	63.5	2.95	74.9	57	171	6.50	121
7570-3000	3	76.2	3.55	90.2	57	171	8.00	148
7570-4000	4	101.6	4.65	118.1	36	108	12.00	235
7570-6000	6	152.4	6.65	168.9	28	84	18.00	429

Compare to: Gates 202SW; Goodyear Nutriflex Static Wire; Kuriyama 7160; Pacific Echo W145; Petzetakis 17009.

Contact IHP Customer Service for special and non-standard hose requirements.

Series 7582

DYNAFLEX® Medium Duty Clear PVC Suction Hose – FDA

Tube ..... Clear PVC - Smooth
Cover ..... Clear PVC - Smooth
Reinforcement ..... Rigid White PVC
Temperature Range .... -5°F to +140°F (-21°C to +50°C)
Description ..... For conveying milk and other food products in full suction applications. Smooth bore tube will not impart taste or odor into product being conveyed. Complies with FDA CFR Title 21 parts 170 - 199. 3:1 Design Factor.

Part Number	Hose ID (in.)	Hose ID (mm)	Hose OD (in.)	Hose OD (mm)	WP @ 68°F (PSI)	Min. Burst Press. @ 68°F (PSI)	Min. Bend Radius (in.)	Wt. Per 100 Ft. (lbs.)
7582-1500	1-1/2	38.1	1.82	46.2	115	345	7.5	47
7582-2000	2	50.8	2.36	59.9	85	255	10.0	68
7582-2500	2-1/2	63.5	2.90	73.7	75	225	12.5	90
7582-3000	3	76.2	3.44	87.4	65	195	15.5	114
7582-4000	4	101.6	4.52	114.8	50	150	20.0	174

***Compare to*:** Kanaflex 212 MK, 210 HFG; Kuriyama MILK; Pacific Echo 170; Petzetakis 12526.

Contact IHP Customer Service for special and non-standard hose requirements.

Corrosion Resistance of Coupling Materials

REPRINTED FROM RMA/IP-2/1996

CAUTION: ⚠ The following data has been compiled from generally available sources and should not be relied upon without consulting and following the specific recommendations of the manufacturer regarding particular coupling materials.

Chemical or Material Conveyed	Mall. from Steel	Brass	Bronze	Aluminum	Glass	Stainless 410, 416, 430	Stainless 302, 202 304, 308	Stainless 316	Monel
Acetate, Solvents, Crude		3				2	1	1	2
Acetate, Solvents, Pure		1	1	1		1	1	1	1
Acetic Acid	X	X	X	2	1	X	2	2	2
Acetic Acid Vapors	X	X		3		X	2	2	2
Acetic Anhydride	X	X		2		X	2	2	2
Acetone	1	1	1	1	1	1	1	1	1
Acetylene	1	2		1		1	1	1	2
Alcohols	1	2		1		1	1	1	1
Aluminum Sulfate	X	3	3	3	1	X	3	2	2
Alums	X	3	2	3	1	X	3	2	2
Ammonia Gas	1	X	3	1	3	1	1	1	X
Ammonium Chloride	1	3		1*		3	3	1	1
Ammonium Hydroxide	2	X		2		1	1	1	3
Ammonium Nitrate	1	X		2		1	1	1	3
Ammonium Phosphate (Ammoniacal)		X				1	1	1	2
Ammonium Phosphate (Neutral)		3				1	1	1	2
Ammonium Phosphate (Acid)		3				3	2	1	2
Ammonium Sulfate	1	3				2	1	1	2
Asphalt	1	2				2	1	1	1
Beer	2	2	1	1		X	1	1	1
Beet Sugar Liquors	1	2		1		2	1	1	1
Benzene, Benzol	1	1	1	1	1	1	1	1	1
Benzine (petroleum – naphtha)	1	1		1		1	1	1	1
Borax	2	2				1	1	1	1
Boric Acid	X	3		1		3	2	1	1
Butane, Butylene	1	1	1	1		1	1	1	1
Butadiene		1				1	1	1	1
Calcium Bisulfate		X				X	2	1	X
Calcium Hypochlorite	3	3	3	X	3	X	3	2	3
Cane Sugar Liquors	1	2		1		2	1	1	1
Carbon Dioxide (Dry)	1	1		1		1	1	1	1
Carbon Dioxide (Wet & Aqueous Sol)	2	3		2		2	1	1	2
Carbon Disulfide	2	3		2		2	1	1	3
Carbon Tetrachloride	3	1	2	3	1	1	1	1	1
Chlorine (Dry)	2	2	2	1	2	2	2	2	1
Chlorine (Wet)	X	X	3	X	2	X	X	3	3
Chromic Acid		X	X	X	1	3	2	2	3
Citric Acid	X	3		1		3	X	1	2
Coke Oven Gas	1	3		2		1	1	1	2
Copper Sulfate	X	X		X		1	1	1	3
Core Oils		1	1			1	1	1	1
Cottonseed Oil	1	1	1	1		1	1	1	1
Creosote	2	3		1		1	1	1	1
Ethers	2	1		1		1	1	1	1
Ethylene Glycol	2	2				1	1	1	1
Ferric Chloride	X	X	X	X	1	X	X	X	X
Ferric Sulfate	X	X		X		1	1	1	3
Formaldehyde	2	2		2		1	1	1	1
Formic Acid	X	2		X		X	2	1	2
Freon	3	1	1	1		1	1	1	1

KEY: 1 = Excellent 2 = Good 3 = Fair or Conditional X = Not Satisfactory

NOTE: No rating indicates no data available.

*3 to X at high temperatures

Continued on the following page

Corrosion Resistance of Coupling Materials

Chemical or Material Conveyed	Mall. from Steel	Brass	Bronze	Aluminum	Glass	Stainless 410, 416, 430	Stainless 302, 202 304, 308	Stainless 316	Monel
Furfural	1	2		1		1	1	1	1
Gasoline (Sour)	3	3		3		3	1	1	X
Gasoline (Refined)	1	1	1	1		1	1	1	1
Gelatin	1	3		1		1	1	1	1
Glucose	1	1		1		1	1	1	1
Glue	1	3		1		1	1	1	1
Glycerine or Glycerol	1	2		1		1	1	1	1
Hydrochloric Acid	X	X	X	X	1	X	X	X	X
Hydrocyanic Acid	3	X		1		3	1	1	2
Hydrofluoric Acid	X	3	3	X	X	X	X	X	1
Hydrogen Fluoride		3				X	X	3	1
Hydrogen	1	1		1		1	1	1	1
Hydrogen Peroxide	X	X		1		1	2	1	2
Hydrogen Sulfide (Dry)	3	3		2		3	2	1	3
Hydrogen Sulfide (Wet)	3	3		2		3	2	1	3
Lacquers and Lacquer Solvents	3	2		1		1	1	1	1
Lactic Acid	X			3			3	2	1
Lime - Sulfur	2	X		2		1	1	2	
Linseed Oil	1	1		1			1	1	1
Magnesium Chloride	3	3		X		3	2	1	1
Magnesium Hydroxide	1	2		X		1	1	1	1
Magnesium Sulfate	2	2		3		1	1	1	1
Mercuric Chloride	3	X		X		X	X	3	X
Mercury	1	X		X		1	1	1	2
Milk	3	3		1		2	1	1	3
Molasses	2	X		2		2	1	1	1
Natural Gas	1	2		1		1	1	1	1
Nickel Chloride		X		X		X	3	2	2
Nickel Sulfate		3		X		3	2	1	1
Nitric Acid	X	X	X	3	1	2	2	2	X
Oleic Acid	2	3		1		2	2	1	1
Oxalic Acid	3	3		2		3	2	1	1
Oxygen	1	1	1	1		1	1	1	1
Palmitic Acid	1	3		1		2	2	1	1
Petroleum Oils (Sour)		3				3	1	1	X
Petroleum Oils (Refined)	1	1	1	1		1	1	1	1
Phosphoric Acid — 25%	3	X		3	3	X	3	1	2
Phosphoric Acid — 25%–50%	X	X		X	3	X	X	2	2
Phosphoric Acid — 50%–85%	X	X		X	X	X	X	2	2
Picric Acid	3	X		3		2	1	1	X
Potassium Chloride	2	3		3		3	2	1	1
Potassium Hydroxide	3	X		X		1	1	1	1
Potassium Sulfate	2	2		1		1	1	1	1
Propane	1	1				1	1	1	1
Rosin (Dark)	1	2			1	1	1	1	1
Rosin (Light)		X		1		1	1	1	2
Shellac		2		2		1	1	1	1
Sludge Acid		X				X	X	3	2
Soda Ash (Sodium Carbonate)	1	2		X		1	1	1	1
Sodium Bicarbonate	3	1		X		1	1	1	1
Sodium Bisulfate	X	3		3		X	1	1	1
Sodium Chloride	2	3	2	X	1	3	2	1	1
Sodium Cyanide	2	X		X		1	1	1	2
Sodium Hydroxide	3	X	3	X	X	2	2	2	1
Sodium Hypochlorite	X	X		X		X	3	2	3
Sodium Metaphosphate	X	3		1		2	1	1	1
Sodium Nitrate	1	3		1		1	1	1	1
Sodium Perborate	3	3		1		1	1	1	1
Sodium Peroxide	3	3		1		1	1	1	1

KEY: 1 = Excellent 2 = Good 3 = Fair or Conditional X = Not Satisfactory

NOTE: No rating indicates no data available.

*3 to X at high temperatures

(Reprinted from RMA Hose Handbook IP-2 Sixth Edition)

Continued on the following page

Corrosion Resistance of Coupling Materials

Chemical or Material Conveyed	Mall. from Steel	Brass	Bronze	Aluminum	Glass	Stainless 410, 416, 430	Stainless 302, 202 304, 308	Stainless 316	Monel
Sodium Phosphate – Alkaline		3				1	1	1	1
Sodium Phosphate – Neutral		2				1	1	1	1
Sodium Phosphate – Acid		2				X	2	1	1
Sodium Silicate	1	3		X		1	1	1	1
Sodium Sulfate	1	2		3		1	1	1	1
Sodium Sulfide	1	X				1	1	1	2
Sodium Thiosulfate (Hypo)	3	X		X		1	1	1	2
Stearic Acid	3	3		3		2	2	1	1
Sulfate Liquors		X				1	1	1	2
Sulfur	2	X		2		2	2	1	3
Sulfur Chloride	X	X				X	3	2	2
Sulfur Dioxide (Dry)	2	1		1		1	1	1	1
Sulfur Dioxide (Wet)		X				X	2	1	X
Sulfuric Acid — 10%	X	X	3	3		X	X	2	2
Sulfuric Acid — 10% – 75%	X	X	X	X		X	X	X	2
Sulfuric Acid — 75% – 95%	3	X	X	X		3	3	2	3
Sulfuric Acid — 95%	2	X	X			2	2	2	X
Sulfurous Acid	X	X		X		X	3	2	X
Tannic Acid	3	3	1	X		1	1	1	
Tar	1	2		1		2	1	1	1
Toluene, Toluol	1	1		1		1	1	1	1
Trichlorethylene	3	1		3		1	1	1	1
Turpentine		3		1		3	1	1	1
Varnish	2	2				1	1	1	1
Vegetable Oils	1	2		1		1	1	1	1
Vinegar	3	3		3		3	2	1	2
Water (Acid Mine Water)	3	X		3		2	1	1	3
Water (Fresh)	3	1		1		1	1	1	1
Water (Salt)	3	3	2	X		3	2	2	1
Whiskey	X	2				3	1	1	2
Wines	X	2				3	1	1	2
Xylene, Xylol	2	1		1		1	1	1	1
Zinc Chloride	X	X		X		3	2	1	1
Zinc Sulfate	3	3		3		3	2	1	1

KEY: 1 = Excellent 3 = Fair or Conditional
2 = Good X = Not Satisfactory

NOTE: No rating indicates no data available.

*3 to X at high temperatures

(Reprinted from RMA Hose Handbook IP-2 Sixth Edition)

General Thermoplastic Chemical Resistance Guide

⚠ **Warning!** The following data is based on test and believed to be reliable. However, tabulations should be used as a guide only since it does not take into consideration all possible variables. All critical applications should be tested.

Key: E = Excellent • G = Good • C = Conditional • U = Unsatisfactory

Material Handled	PVC		PVC/PU Blend		Rubber Blend		EVA		TPU	
	Temperature (°F)									
	68	150	68	125	68	150	68	150	68	150
Acetaldehyde	U	U	U	U	C	U	G	U	U	U
Acetate Solvents-Pure	U	U	U	U	G	C	C	U	C	U
Acetic Acid - Glacial	C	U	C	U	U	U	U	U	U	U
Acetic Acid 0-10%	E	G	G	G	E	G	E	E	U	U
Acetic Acid 10-20%	G	C	G	G	G	C	E	G	U	U
Acetic Acid 20-30 Pct	G	C	G	C	G	C	E	C	U	U
Acetic Acid 30-60%	G	C	G	C	C	C	C	U	U	U
Acetic Acid 80%	C	C	C	C	U	U	C	U	U	U
Acetic Acid Vapors	G	G	G	G	G	C	G	C	U	U
Acetic Anhydride	U	U	U	U	U	U	C	C	U	U
Acetone	U	U	U	U	C	U	C	U	C	U
Acetylene	C	C	C	C	U	U	U	U	C	C
Acrylonitrile	C	U	C	U	–	–	–	–	–	–
Adipic Acid	G	C	G	C	G	C	E	G	U	U
Alcohol (see type)	–	–	–	–	–	–	–	–	–	–
Allyl Alcohol 96%	U	U	U	U	E	G	E	G	U	U
Allyl Chloride	U	U	U	U	G	C	C	U	U	U
Alum	E	E	E	E	E	E	E	G	E	E
Aluminum Chloride	E	E	E	E	G	G	G	C	G	G
Aluminum Fluoride	G	G	G	G	G	G	G	C	G	C
Aluminum Hydroxide	E	E	E	E	G	G	G	G	G	C
Aluminum Nitrate	E	E	E	E	E	E	E	–	C	C
Aluminum Oxychloride	E	E	E	E	G	G	G	–	–	–
Aluminum Sulfate	E	E	E	E	E	E	E		G	G
Ammonia - Aqueous	C	U	C	U	G	G	E	–	U	U
Ammonia - Dry Gas	C	U	C	U	E	E	E	–	U	U
Ammonia - Liquid	U	U	U	U	G	C	E	U	U	U
Ammonium Carbonate	E	E	E	E	E	E	E	–	E	E
Ammonium Chloride	E	E	E	E	E	E	E	–	G	C
Ammonium Fluoride 25%	U	U	U	U	G	G	G	–	C	U
Ammonium Hydroxide 28%	C	U	C	U	G	G	E	E	C	U
Ammonium Metaphosphate	E	E	E	E	G	G	E	E	G	G
Ammonium Nitrate	E	E	E	E	E	E	E	–	G	G
Ammonium Persulfate	E	E	E	E	E	E	E	–	G	G
Ammonium Phosphate	G	G	G	G	G	G	E	–	G	G
Ammonium Phosphate Neutral	E	E	E	E	G	G	E	–	G	G
Ammonium Sulfate	E	E	E	E	E	E	E	–	E	E
Ammonium Sulfide	E	E	E	E	E	E	E	–	E	E
Ammonium Thiocyanate	E	E	E	E	E	E	E	–	G	G
Amyl Acetate	U	U	U	U	U	U	U	–	U	U
Amyl Alcohol	C	U	C	U	G	C	G	C	U	U
Amyl Chloride	U	U	U	U	U	U	U	–	–	–
Aniline	U	U	U	U	U	U	U	U	U	U
Aniline Chlorohydrate	U	U	U	U	U	U	U	U	U	U
Aniline Hydrochloride	U	U	U	U	U	U	U	U	U	U
Animal Oils	C	U	C	U	U	U	C	U	G	C
Anthraquinone	E	E	E	E	E	E	E	–	–	–
Anthraqunonesulfonic Acid	E	E	E	E	E	E	E	–	U	U
Antimony Trichloride	E	E	E	E	E	E	E	–	E	E
Apple (sauce or juice)	E	E	–	–	–	–	–	–	–	–
Aqua Regia	C	U	C	U	U	U	U	U	U	U
Aromatic Hydrocarbons	U	U	–	–	–	–	–	–	–	–
Arsenic Acid 80%	E	G	E	G	E	E	G	–	U	U
Arylsulfonic Acid	C	U	C	U	–	–	–	–	U	U
Asphalt	C	U	C	U	C	U	U	U	G	C
ASTM # 1 Oil	C	U	C	U	–	–	–	–	G	G
ASTM # 3 Oil	C	U	C	U	–	–	–	–	G	G
ASTM Fuel A	C	U	C	U	–	–	–	–	G	G
ASTM Fuel B	U	U	U	U	–	–	–	–	G	C
ASTM Fuel C	U	U	U	U	–	–	–	–	G	C
Barium Carbonate	E	E	E	E	E	E	E	–	E	E
Barium Chloride	E	E	E	E	E	E	E	–	E	E
Barium Hydroxide	E	E	E	E	E	E	E	–	E	E
Barium Sulfate	E	E	E	E	E	E	E	–	E	E
Barium Sulfide	E	E	E	E	E	E	E	–	E	E
Beer	E	C	–	–	–	–	–	–	–	–
Beet-Sugar Liquor	E	E	–	–	E	E	E	–	–	–
Benzaldehyde	U	U	U	U	U	U	C	U	U	U
Benzene	U	U	C	U	U	U	U	U	C	U
Benzoic Acid	G	C	G	C	G	G	G	–	U	U
Benzol	U	U	C	U	U	U	U	U	C	U
Bismuth Carbonate	E	E	E	E	E	E	E	–	E	E
Black Liquor (paper industry)	E	E	E	E	E	E	E	–	–	–
Bleach-12.5% Active CL	G	C	G	C	G	C	G	–	C	U
Borax	E	E	E	E	E	E	E	–	E	E
Boric Acid	E	E	E	E	E	E	E	–	G	U
Boron Trifluoride	E	E	E	E	E	E	E	–	E	E
Brake Fluid	U	U	U	U	–	–	–	–	U	U
Brine	E	E	E	E	E	E	E	–	G	U
Bromic Acid	E	C	E	C	G	G	G	–	U	U
Bromine - Liquid	U	U	U	U	U	U	U	U	U	U
Bromine - Water	U	U	U	U	U	U	U	U	U	U
Butadiene	C	U	C	C	U	U	U	U	–	–
Butane	C	C	C	C	U	U	U	U	C	C
Butanol - Primary	U	U	U	U	E	G	G	–	C	U
Butanol - Secondary	U	U	U	U	E	G	G	–	C	U
Butter	C	C	–	–	–	–	–	–	–	–
Butyl Acetate	U	U	C	U	U	U	U	U	C	U
Butyl Alcohol	C	U	C	C	E	G	E	–	C	U
Butyl Cellosolve	U	U	U	U	G	C	–	–	–	–
Butyl Phenol	C	U	C	U	U	U	U	U	–	–
Butylene	C	C	C	C	U	U	–	–	C	C
Butyric Acid 20%	C	U	C	U	U	U	U	U	C	U
Calcium Bisulfite	E	E	E	E	E	E	E	–	E	E
Calcium Carbonate	E	E	E	E	E	E	E	–	E	E
Calcium Chlorate	E	E	E	E	E	E	E	–	G	C
Calcium Chloride	E	E	E	E	E	E	E	–	E	G
Calcium Hydroxide	E	E	E	E	E	E	E	–	G	C
Calcium Hypochlorite	E	E	E	E	E	E	G	–	U	U
Calcium Nitrate	E	E	E	E	E	E	E	–	E	E
Calcium Sulfate	E	E	E	E	E	E	E	–	E	E
Cane Sugar Liquors	E	E	–	–	G	G	G	–	–	–
Carbon Bisulfide	U	U	U	U	U	U	U	U	–	–
Carbon Dioxide (Aqueous Solution)	E	E	E	E	E	E	E	–	E	E
Carbon Dioxide Gas (wet)	E	E	E	E	E	E	E	–	E	E
Carbon Monoxide	E	E	E	E	G	G	G	–	E	E
Carbon Tetrachloride	U	U	C	U	U	U	U	U	C	U
Carbonic Acid	C	U	G	G	G	G	G	G	U	U
Casein	E	C	E	E	E	E	E	–	E	E
Casto Oil	E	E	E	E	U	U	C	U	E	E
Catsup	E	G	–	–	–	–	–	–	–	–
Caustic Potash	E	E	E	E	C	C	C	–	C	U
Caustic Soda	E	E	E	E	G	C	G	–	C	U
Cellosolve	C	U	G	C	G	C	C	U	G	C
Chloracetic Acid	E	U	E	U	U	U	U	U	U	U
Chloral Hydrate	E	E	E	E	U	U	C	U	G	C
Chloric Acid 20%	E	E	E	E	–	–	–	–	U	U
Chlorinated Hydrocarbons	U	U	U	U	U	U	U	U	U	U
Chlorine Gas (dry)	G	G	G	G	U	U	U	U	U	U
Chlorine Gas (moist)	C	U	C	C	U	U	U	U	U	U
Chlorine Water 2%	G	C	G	C	C	U	G	C	C	U
Chlorine Water Saturated	C	U	C	U	–	–	E	C	–	–

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General Thermoplastic Chemical Resistance Guide

Material Handled	PVC 68	PVC 150	PVC/PU Blend 68	PVC/PU Blend 125	Rubber Blend 68	Rubber Blend 150	EVA 68	EVA 150	TPU 68	TPU 150
					Temperature (°F)					
Chlorobenzene	U	U	U	U	U	U	U	U	U	U
Chloroform	U	U	U	U	U	U	U	U	U	U
Chlorsulfonic Acid	C	U	C	U	U	U	U	U	U	U
Chrome Alum	E	E	E	E	G	G	E	G	E	E
Chromic Acid 10%	G	C	G	C	G	C	G	–	U	U
Chromic Acid 25%	G	C	G	C	G	C	G	–	U	U
Chromic Acid 30%	C	U	C	U	C	U	C	U	U	U
Chromic Acid 40%	C	U	C	U	C	U	C	U	U	U
Chromic Acid 50%	C	U	C	U	C	U	C	U	U	U
Chromic Acid Plating Solution	–	–	–	–	–	–	E	E	U	U
Cider	E	C	–	–	–	–	E	C	–	–
Citric Acid	E	E	E	E	E	E	E	E	U	U
Coal Tar	U	U	U	U	U	U	U	U	U	U
Coconut Oil	G	C	E	G	G	C	C	U	E	E
Copper Chloride	E	E	E	E	E	E	E	–	E	E
Copper Cyanide	E	E	E	E	E	E	E	–	–	–
Copper Fluoride 2%	E	E	E	E	E	E	E	–	E	E
Copper Nitrate	E	G	E	E	E	G	E	–	E	E
Copper Sulfate	E	G	E	E	E	E	E	–	E	E
Corn Oils	E	G	–	–	–	–	–	–	–	–
Cottonseed Oil	G	C	E	E	E	G	E	–	E	E
Cresote	U	U	U	U	U	U	U	U	–	–
Cresol	U	U	–	–	U	U	U	U	C	U
Cresylic Acid 50%	U	U	C	C	U	U	U	U	U	U
Crude Oil - Sour	C	U	C	U	U	U	U	U	E	E
Crude Oil - Sweet	C	U	C	U	U	U	U	U	E	E
Cyclohexane	U	U	U	U	C	U	C	U	G	C
Cyclohexanol	U	U	U	U	C	U	E	C	C	U
Cyclohexanone	U	U	U	U	U	U	E	C	U	U
Demineralized Water	E	E	E	E	E	E	E	E	E	C
Dextrin	E	E	E	E	E	E	E	–	E	E
Dextrose	E	G	–	–	E	E	E	–	E	E
Di-acetone Alcohol	–	–	–	–	–	–	–	–	–	–
Diazo Salts	E	E	E	E	E	G	E	–	–	–
Dichlorobenzene	U	U	U	U	–	–	U	U	–	–
Diesel Oils	C	U	C	U	–	–	–	–	G	C
Diethyl Ether	U	U	U	U	–	–	U	U	G	C
Diethylene Glycol	G	C	G	C	E	C	G	C	U	U
Diglycolic Acid	E	G	E	E	E	G	E	–	–	–
Di-isodecyl Phthalate	U	U	–	–	–	–	–	–	–	–
Dimethylamine	U	U	U	U	U	U	U	U	U	U
Dioctyl Phthalate	U	U	U	U	–	–	G	U	–	–
Disodium Phosphate	E	E	E	E	E	E	E	–	E	E
Distilled Water	E	E	E	E	E	E	E	E	E	C
Ethers	U	U	C	U	U	U	U	U	G	C
Ethyl Acetate	U	U	C	U	C	U	C	U	C	U
Ethyl Acrylate	U	U	U	U	–	–	–	–	–	–
Ethyl Alcohol 0 - 50%	G	C	E	G	G	C	G	C	G	C
Ethyl Alcohol 50%-98%	C	U	G	C	C	U	C	U	E	G
Ethyl Chloride	U	U	U	U	U	U	U	U	U	U
Ethyl Ether	U	U	U	U	U	U	U	U	G	C
Ethylene Bromide	E	U	U	U	U	U	U	U	U	U
Ethylene Dichloride	U	U	U	U	U	U	U	U	U	U
Ethylene Glycol	E	E	E	E	E	G	E	G	G	C
Ethylene Oxide	U	U	U	U	U	U	U	U	U	U
Fatty Acids	E	E	E	E	G	C	C	U	G	C
Ferric Chloride	E	E	E	E	E	E	E	–	E	E
Ferric Nitrate	E	E	E	E	E	E	E	–	E	E
Ferric Sulfate	E	E	E	E	E	E	E	–	E	E
Ferrous Chloride	E	E	E	E	E	E	E	–	E	E
Ferrous Sulfate	E	E	E	E	E	E	E	–	E	E
Fish Solubles	E	E	E	U	E	E	E	–	E	g
Fluorine Gas - Dry	U	U	U	U	U	U	U	U	U	U
Fluorine Gas - Wet	U	U	U	U	U	U	U	U	U	U
Fluoroboric Acid	E	E	E	E	E	E	E	–	E	E
Fluorosilicic Acid	E	E	E	E	G	C	G	–	U	U
Foric Acid	E	C	E	C	E	G	E	E	U	U
Fomaldehyde (40% aqueouse)	U	U	G	G	G	C	E	G	–	–
Formic Acid 3%	–	–	–	–	–	–	E	E	–	–
Formic Acid 10%	–	–	–	–	–	–	E	E	–	–
Formic Acid 25%	–	–	–	–	–	–	E	E	–	–
Formic Acid 50%	–	–	–	–	–	–	E	E	–	–
Formic Acid 100%	–	–	–	–	–	–	U	U	–	–
Freon-12	C	U	G	C	G	C	G	–	E	E
Fructose	E	E	–	–	E	E	E	–	E	E
Fruit Pulps & Juices	E	E	–	–	E	E	E	–	E	E
Fuel Oil	G	C	G	C	U	U	U	U	E	G
Furfural	U	U	U	U	U	U	U	U	U	U
Furfuryl Alcohol	–	–	–	–	–	–	U	U	–	–
Gallic Acid	E	E	E	E	E	E	E	–	–	–
Gas - Coke Oven	G	G	G	G	–	–	–	–	G	G
Gas - Natural (dry)	C	C	C	C	U	U	U	U	C	C
Gas - Natural (wet)	C	C	C	C	U	U	U	U	C	C
Gasoline	U	U	U	U	U	U	–	–	E	G
Gasoline - Refined	C	U	G	U	C	U	U	U	E	G
Gasoline - Sour	C	U	G	U	U	U	U	U	E	G
Gelatine	E	E	E	E	E	E	E	–	E	E
Glucose	E	E	E	E	E	E	E	–	E	E
Glycerine (glycerol)	E	E	E	E	E	E	E	–	E	E
Glycol	E	E	E	E	E	E	E	–	G	G
Glycolic Acid 30%	E	E	E	E	E	E	E	–	U	U
Grease	E	C	E	G	–	–	–	–	E	G
Green Liquor (paper industry)	E	E	E	E	E	E	E	–	–	–
Heptane	C	U	G	U	U	U	U	U	E	–
Hexadecanol	–	–	–	–	–	–	U	U	–	–
Hexane	C	U	C	U	G	C	–	–	–	–
Hexanol, Tertiary	C	U	C	U	G	C	C	U	G	–
Hydrobromic Acid 20%	E	G	E	G	G	G	G	–	U	U
Hydrochloric Acid 10%	E	G	E	G	E	E	E	E	U	U
Hydrochloric Acid 48%	E	G	E	G	E	G	G	–	U	U
Hydrofluoric Acid 4%	G	G	G	G	G	G	E	E	U	U
Hydrofluoric Acid 10%	G	C	G	C	G	G	E	E	U	U
Hydrofluoric Acid 48%	G	U	G	C	G	C	E	E	U	U
Hydrofluoric Acid 60%	G	U	G	U	G	C	E	E	U	U
Hydrofluorosilic Acid	G	C	G	C	–	–	–	–	U	U
Hydrogen	C	C	C	C	C	C	C	–	C	C
Hydrogen Bromide (dry)	–	–	–	–	–	–	E	E	–	–
Hydrogen Chloride (dry)	–	–	–	–	–	–	E	E	–	–
Hydrogen Cyanide	C	C	C	C	C	C	C	C	U	U
Hydrogen Peroxide 3 - 12%	E	G	E	G	G	C	G	C	G	C
Hydrogen Peroxide 30%	E	G	E	G	G	C	G	C	G	C
Hydrogen Peroxide 50%	E	C	E	C	C	U	U	U	C	U
Hydrogen Peroxide 90%	U	U	U	U	U	U	U	U	U	U
Hydrogen Phosphide	E	C	E	C	G	G	E	E	–	–
Hydrogen Sulfide (aqueous solution)	E	E	E	E	E	G	E	–	–	–
Hydrogen Sulfide - Dry	E	E	E	E	E	G	E	–	–	–
Hydrombromic Acid 20%	E	G	E	G	G	G	G	–	U	U
Hydroquinone	E	E	E	E	E	E	E	–	E	E
Hypochlorous Acid	E	E	E	E	E	G	C	U	C	U
Inks	–	–	–	–	–	–	E	E	–	–
Iodine (in alcohol)	U	U	U	U	U	U	U	U	U	U
Iso-octane	C	U	C	U	–	–	–	–	–	–
Isopropyl Acetate	U	U	–	–	–	–	–	–	–	–
Isopropyl Alcohol	E	G	E	G	E	E	E	–	–	–
Jelly	E	E	–	–	–	–	–	–	–	–
Jet Fuels JP 3,4,5	U	U	U	U	U	U	–	–	G	C
Kerosene	U	U	C	U	U	U	U	U	E	G
Ketones	U	U	U	U	C	U	C	U	G	C
Kraft Liquor (paper industry)	E	E	E	E	E	G	G	–	–	–
Lacquer Thinners	U	U	U	U	G	C	C	U	G	–
Lactic Acid 28%	E	E	E	E	E	E	E	–	C	U
Lard Oil	E	G	E	E	G	C	G	C	E	G
Lauric Acid	E	E	E	E	–	–	–	–	C	U
Lauryl Chloride	E	E	E	E	C	U	C	–	E	G

Key: E = Excellent • G = Good • C = Conditional • U = Unsatisfactory

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General Thermoplastic Chemical Resistance Guide

Material Handled	PVC 68	PVC 150	PVC/PU Blend 68	PVC/PU Blend 125	Rubber Blend 68	Rubber Blend 150	EVA 68	EVA 150	TPU 68	TPU 150
					Temperature (°F)					
Lauryl Sulfate	E	E	E	E	U	U	U	U	–	–
Lead Acetate	E	E	E	E	E	E	E	–	E	E
Lead Arsenate	E	E	E	E	–	–	E	E	–	–
Lead Nitrate	E	E	E	E	–	–	E	E	–	–
Lead Tetra-ethyl	E	E	E	E	–	–	E	E	–	–
Lemon Juice	E	G	–	–	–	–	–	–	–	–
Lime Sulfur	E	E	E	E	G	G	G	–	–	–
Linoleic Acid	E	E	E	E	–	–	–	–	C	U
Linseed Oil	E	E	E	E	U	U	C	U	E	E
Liquors (chemical)	E	G	E	G	–	–	E	G	–	–
Lubricating Oils	G	C	G	G	U	U	U	U	E	E
Magnesium Carbonate	E	E	E	E	E	E	E	–	E	E
Magnesium Chloride	E	E	E	E	E	E	E	–	E	E
Magnesium Hydroxide	E	E	E	E	E	E	E	–	G	C
Magnesium Nitrate	E	E	E	E	E	E	E	–	E	E
Magnesium Sulfate	E	E	E	E	E	E	E	–	E	E
Maleic Acid 25% Aqueous	E	E	E	E	G	G	E	E	C	U
Maleic Acid 50%	–	–	–	–	–	–	E	E	–	–
Maleic Acid Concentrated	–	–	–	–	–	–	E	G	–	–
Malic Acid	E	E	E	E	G	G	G	–	C	U
Mayonnaise	E	E	–	–	–	–	–	–	–	–
Mercuric Chloride	G	C	G	G	G	G	G	G	G	C
Mercuric Cyanide	U	U	U	U	G	G	G	G	–	–
Mercurous Nitrate	G	G	G	G	G	G	G	–	G	G
Mercury	G	G	G	G	G	G	G	C	–	–
Methyl Acetate	U	U	U	U	–	–	U	U	–	–
Methyl Alcohol	C	U	C	U	G	G	E	–	C	U
Methyl Bromide	U	U	U	U	–	–	U	U	–	–
Methyl Chloride	U	U	U	U	U	U	U	U	U	U
Methyl Ethyl Ketone	U	U	U	U	C	U	C	U	C	U
Methyl Isobutyl Ketone	U	U	U	U	C	U	C	U	–	–
Methyl Sulfate	E	G	E	G	–	–	–	–	E	G
Methyl Sulfuric Acid	E	E	E	E	G	G	E	E	U	U
Methylated Spirit	–	–	–	–	–	–	E	G	–	–
Methylene Chloride	U	U	C	U	U	U	U	U	U	U
Milk	E	E	–	–	–	–	G	C	–	–
Mineral Oils	G	C	E	E	C	U	C	U	E	E
Mineral Spirits	–	–	–	–	–	–	–	–	–	–
Molasses	E	E	E	E	E	E	E	–	E	E
Monochlorobenzene	U	U	U	U	–	–	–	–	–	–
Naphtha	U	U	C	U	U	U	U	U	G	U
Napthalene	U	U	U	U	C	U	U	U	–	–
Nickel Acetate	E	E	E	E	E	E	E	–	E	E
Nickel Chloride	E	E	E	E	E	E	E	–	E	E
Nickel Nitrate	E	E	E	E	E	E	E	–	E	E
Nickel Sulphate	E	E	E	E	E	E	E	–	E	E
Nicotine	E	E	E	E	E	E	E	–	C	C
Nicotine Acid	E	G	E	E	E	E	E	–	C	C
Nitric Acid (anhydrous)	U	U	U	U	U	U	U	U	U	U
Nitric Acid 10%	E	G	G	C	G	C	G	G	U	U
Nitric Acid 25%	G	C	G	C	G	C	G	C	U	U
Nitric Acid 35%	G	C	G	C	C	U	C	U	U	U
Nitric Acid 40%	G	C	G	C	C	U	C	U	U	U
Nitric Acid 50%	G	U	G	U	C	U	C	U	U	U
Nitric Acid 60%	G	U	G	U	U	U	U	U	U	U
Nitric Acid 68%	C	U	C	U	U	U	U	U	U	U
Nitric Acid 70%	U	U	U	U	U	U	U	U	U	U
Nitrobenzene	U	U	U	U	U	U	U	U	U	U
Nitrous Oxide	E	E	E	E	–	–	–	–	E	E
Oils & Fats	E	G	E	E	G	C	G	U	E	E
Oils, Petroleum	E	G	E	E	G	C	G	U	E	E
Oleic Acid	G	C	G	C	C	U	U	U	U	U
Oleum	U	U	U	U	U	U	U	U	U	U
Orange Juice	E	E	–	–	–	–	–	–	–	–
Oxalic Acid	E	G	E	G	G	G	G	G	U	U
Oxygen	E	G	E	G	G	–	G	C	E	E
Ozone	C	U	C	U	U	U	U	U	–	–
Palmitic Acid 10%	E	E	E	E	G	C	E	G	U	U
Palmitic Acid 70%	C	U	C	U	G	U	C	U	U	U
Paraffin	E	G	E	G	–	–	C	U	E	G
Pentane	C	U	C	U	–	–	–	–	–	–
Peracetic Acid 40%	U	U	U	U	–	–	–	–	U	U
Perchlorethylene	U	U	U	U	U	U	–	–	–	–
Perchloric Acid 10%	G	C	G	C	G	G	G	G	U	U
Perchloric Acid 70%	C	U	C	U	G	C	G	–	U	U
Petrol	U	U	U	U	U	U	U	U	–	–
Petroleum Ether	C	C	C	C	–	–	U	U	–	–
Phenol	U	U	U	U	U	U	U	U	U	U
Phenylhydrazine	U	U	U	U	C	U	–	–	–	–
Phenylhydrazine Hydrochloride	C	U	C	U	C	U	–	–	–	–
Phosgene (gas)	C	C	C	C	–	–	C	U	–	–
Phosgene (liquid)	U	U	–	–	–	–	–	–	–	–
Phosphoric Acid 0 - 25%	E	G	E	G	E	G	E	G	U	U
Phosphoric Acid 25 - 50%	E	G	E	G	E	G	E	G	U	U
Phosphoric Acid 50 - 90%	E	G	E	G	G	C	E	C	U	U
Phosphorus (yellow)	G	C	G	C	C	C	U	U	–	–
Phosphorus Pentoxide	C	U	C	U	C	C	G	C	–	–
Phosphorus Trichloride	U	U	U	U	C	U	C	U	–	–
Photographic Developers	C	U	C	U	–	–	E	E	C	–
Photographic Emulsions	C	U	C	U	–	–	E	E	–	–
Photographic Fixers	C	U	C	U	–	–	E	E	–	–
Picric Acid	U	U	U	U	G	U	G	C	U	U
Pitch	G	C	G	C	–	–	–	–	–	–
PLATING SOLUTIONS										
Brass	E	E	E	E	G	G	C	–	E	E
Cadmium	E	E	E	E	G	G	C	–	E	E
Chromium	G	G	G	G	U	U	U	U	G	G
Copper	E	E	E	E	G	G	C	–	E	E
Gold	E	E	E	E	G	G	C	–	E	E
Judium	E	E	E	E	G	G	C	–	E	E
Lead	E	E	E	E	G	G	C	–	E	E
Nickel	E	E	E	E	G	G	C	–	E	E
Rhodium	E	E	E	E	G	G	C	–	E	E
Silver	E	E	E	E	G	G	C	–	E	E
Tin	E	E	E	E	G	G	C	–	E	E
Zinc	E	G	E	E	G	G	C	–	E	E
Potable Water	E	G	–	–	–	–	E	G	–	–
Potassium Acid Sulfate	E	E	E	E	E	G	G	–	E	E
Potassium Antimonate	E	E	E	E	E	E	E	–	E	E
Potassium Bicarbonate	E	E	E	E	E	E	E	–	E	E
Potassium Bichromate	E	E	E	E	E	E	E	–	E	E
Potassium Bisulfite	E	E	E	E	E	E	E	–	E	E
Potassium Bisulphate	G	C	–	–	–	–	E	–	–	–
Potassium Borate 1%	E	E	E	E	E	E	E	–	E	E
Potassium Bromate 10%	E	E	E	E	E	G	E	–	E	E
Potassium Bromide	E	E	E	E	E	G	E	–	E	E
Potassium Carbonate	E	E	E	E	E	E	E	–	E	E
Potassium Chlorate	E	E	E	E	E	E	E	–	G	G
Potassium Chloride	E	E	E	E	E	E	E	–	E	G
Potassium Chromate 40%	E	E	E	E	E	E	E	–	G	G
Potassium Cuprocyanide	E	E	E	E	E	E	E	–	–	–
Potassium Cyanide	C	C	C	C	C	C	C	C	C	C
Potassium Dichromate 40%	E	E	E	E	E	E	E	–	G	G
Potassium Ferricyanide	E	E	E	E	E	E	E	–	E	E
Potassium Fluoride	E	E	E	E	E	E	E	–	E	G
Potassium Hydroxide 10%	E	E	E	E	E	E	E	–	C	U
Potassium Hydroxide 20%	E	E	E	E	E	E	E	–	U	U
Potassium Hydroxide 35%	E	E	E	E	G	C	G	–	U	U
Potassium Hydroxide Conc.	–	–	–	–	–	–	E	C	–	–
Potassium Hypochlorite	G	C	G	C	G	G	E	–	U	U
Potassium Nitrate	E	E	E	E	G	G	E	E	E	E
Potassium Perborate	E	E	E	E	G	C	E	E	E	E

Key: E = Excellent • G = Good • C = Conditional • U = Unsatisfactory

Continued on the following page

General Thermoplastic Chemical Resistance Guide

Material Handled	PVC 68	PVC 150	PVC/PU Blend 68	PVC/PU Blend 125	Rubber Blend 68	Rubber Blend 150	EVA 68	EVA 150	TPU 68	TPU 150
					Temperature (°F)					
Potassium Perchlorite	E	E	E	E	G	G	G	–	G	C
Potassium Permanganate 10%	G	G	E	E	E	E	U	U	G	C
Potassium Persulfate	E	E	E	E	E	E	E	–	E	E
Potassium Phosphate	–	–	–	–	–	–	E	E	–	–
Potassium Sulfate	E	E	E	E	E	E	E	–	E	E
Potassium Sulfide	E	E	E	E	E	E	E	–	E	E
Potassium Thiosulfate	E	E	E	E	E	E	E	–	E	E
Power Steering Fluid	E	C	E	C	–	–	–	–	E	E
Propane	C	C	C	C	U	U	U	U	C	C
Propargyl Alcohol	E	E	E	E	G	G	E	E	–	–
Propyl Alcohol	E	C	E	E	E	E	E	–	G	C
Propylene Dichloride	U	U	U	U	U	U	U	U	U	U
Propylene Glycol	–	–	–	–	–	–	E	E	–	–
Prune Juice	E	E	–	–	–	–	–	–	–	–
Ritchfield "A" Weed Killer	E	C	E	G	–	–	–	–	–	–
Salicylic Acid	–	–	–	–	–	–	E	E	–	–
Salt Water	E	E	E	E	E	E	E	E	E	C
Selenic Acid	E	G	E	G	G	C	G	C	U	U
Shortening	G	C	–	–	–	–	E	E	–	–
Silicic Acid	E	E	E	E	E	E	E	–	U	U
Silicone Fluids	–	–	–	–	–	–	E	E	–	–
Silver Cyanide	E	E	E	E	E	E	E	–	E	E
Silver Nitrate	E	E	E	E	E	E	E	–	E	E
Silver Plating Solutions	E	G	E	G	E	G	E	–	E	E
Soap Solution	E	G	E	G	E	G	G	C	G	U
Sodium Acetate	E	E	E	E	E	E	E	–	E	E
Sodium Acid Sulfate	E	E	E	E	E	E	E	–	E	E
Sodium Antimonate	E	E	E	E	E	E	E	–	E	E
Sodium Arsenite	E	E	E	E	E	E	E	–	E	E
Sodium Benzoate	E	G	E	E	E	E	E	–	E	E
Sodium Bicarbonate	E	E	E	E	E	E	E	–	E	E
Sodium Bisulfate	E	E	E	E	E	E	E	–	E	E
Sodium Bisulfite	E	E	E	E	E	E	E	–	E	E
Sodium Bromide	E	E	E	E	E	E	E	–	E	G
Sodium Carbonate (soda ash)	E	E	E	E	E	E	E	–	E	E
Sodium Chlorate	G	C	G	C	E	E	E	–	G	G
Sodium Chloride	E	E	E	E	E	E	E	–	E	G
Sodium Cyanide	E	E	E	E	E	E	E	–	E	E
Sodium Dichromate	E	G	E	G	E	E	E	–	E	G
Sodium Ferricyanide	E	E	E	E	E	E	E	–	E	E
Sodium Ferrocyanide	E	E	E	E	E	E	E	–	E	E
Sodium Fluoride	E	E	E	E	E	E	E	–	E	G
Sodium Hydroxide 10%	E	E	E	E	E	E	E	–	G	C
Sodium Hydroxide 35%	E	G	E	E	E	E	E	–	C	U
Sodium Hydroxide 50%	G	C	–	–	–	–	–	–	–	–
Sodium Hypochlorite	E	E	E	E	E	E	E	–	U	U
Sodium Nitrate	E	E	E	E	E	E	E	–	E	E
Sodium Nitrite	E	E	E	E	E	E	E	–	E	E
Sodium Phosphate-Acid	G	G	G	G	E	E	E	–	U	U
Sodium Silicate	E	E	E	E	E	E	E	–	E	E
Sodium Sulfate	E	E	E	E	E	E	E	–	E	E
Sodium Sulfide	E	E	E	E	E	E	E	–	E	E
Sodium Sulfite	E	E	E	E	E	E	E	–	E	E
Sodium Thisulfate (hypo)	E	E	E	E	E	E	E	–	E	G
Soft Drinks	E	G	–	–	–	–	G	E	–	–
Soya Oil	E	G	–	–	–	–	–	–	–	–
Soybean Oil	G	C	–	–	–	–	–	–	–	–
Stannic Chloride	E	E	E	E	E	E	E	–	E	G
Stannous Chloride	E	G	E	G	E	E	E	–	E	G
Starch	–	–	–	–	–	–	E	E	–	–
Stearic Acid	C	C	C	C	E	E	E	–	C	U
Stoddard Solvent	C	U	G	C	G	C	C	U	G	U
Styrene	U	U	U	U	–	–	–	–	–	–
Sucrose	–	–	–	–	–	–	E	E	–	–
Sulfur	G	G	G	G	E	E	–	–	–	–
Sulfuric Acid 0 - 10%	E	G	E	G	E	G	G	–	U	U
Sulfuric Acid 10 - 40%	E	G	E	G	G	G	G	G	U	U
Sulfuric Acid 50 - 60%	E	G	E	G	G	C	G	C	U	U
Sulfuric Acid 70%	E	G	E	G	C	U	C	U	U	U
Sulfuric Acid 95%	U	U	U	U	U	U	U	U	U	U
Sulfuric Acid 95% Fuming	C	C	C	C	U	U	U	U	U	U
Sulfurous Acid	E	E	E	E	G	C	C	U	U	U
Sulphur Dioxide - Liquid	C	U	C	U	U	U	U	U	–	–
Sulphur Dioxide Gas - Dry	E	E	E	E	G	G	E	G	–	–
Sulphur Dioxide Gas - Wet	C	U	C	U	G	C	E	C	–	–
Sulphur Trioxide	E	G	E	G	U	U	U	U	–	–
Sulphurous Acid 10%	–	–	–	–	–	–	E	E	–	–
Sulphurous Acid 30%	–	–	–	–	–	–	U	U	–	–
Tallow	–	–	–	–	–	–	E	U	–	–
Tannic Acid	E	E	E	E	E	E	E	E	C	U
Tanning Extracts	–	–	–	–	–	–	E	E	–	–
Tanning Liquors	E	E	E	E	G	C	C	–	–	–
Tartaric Acid	E	E	E	E	E	E	E	–	C	U
Tea (brewed)	E	G	–	–	–	–	G	C	–	–
Tetraethyl Lead	G	C	G	G	–	–	–	–	G	G
Tetrahydrofurane	U	U	U	U	U	U	U	U	U	U
Thionyl Chloride	U	U	U	U	U	U	U	U	U	U
Tin Chloride	E	E	E	E	–	–	–	–	E	E
Titanium Tertachloride	E	U	E	U	–	–	–	–	C	U
Titanium Trichloride	–	–	–	–	–	–	U	U	–	–
Toluol or Toluene	U	U	C	U	U	U	U	U	C	U
Tomato Juice	E	E	–	–	–	–	C	U	–	–
Transformer Oil	–	–	–	–	–	–	U	U	–	–
Transmission Fluid	E	C	E	C	–	–	–	–	E	E
Tributyl Phosphate	U	U	U	U	–	–	–	–	–	–
Trichlorobenzene	U	U	U	U	–	–	U	U	–	–
Trichloroethylene	U	U	C	U	U	U	U	U	C	U
Tricresyl Phosphate	U	U	U	U	C	C	U	U	U	U
Triethanolamine	C	U	G	U	G	C	C	–	–	–
Triethylamine	G	C	G	C	–	–	–	–	–	–
Triemethyl Propane	C	U	C	U	–	–	–	–	–	–
Trisodium Phosphate	E	E	E	E	E	E	E	–	E	E
Turpentine	C	U	G	C	C	U	U	–	E	G
Urea	E	E	E	E	E	E	E	–	E	E
Urine	E	E	E	E	E	E	E	–	E	E
Varnish	U	U	U	U	G	C	U	U	E	G
Varsol	–	–	–	–	–	–	–	–	–	–
Vegetable Oils	G	C	G	C	–	–	U	U	–	–
Vinegar	E	E	–	–	E	G	E	–	G	C
Vinyl Acetate	U	U	U	U	C	U	U	U	U	U
Vinyl Chloride	U	U	U	U	–	–	–	–	–	–
Water-Acid Mine Water	E	E	E	E	E	E	E	–	G	U
Water-Distilled	E	E	E	E	E	E	E	–	G	U
Water-Fresh	E	E	E	E	E	E	E	–	G	U
Water-Salt	E	E	E	E	E	E	E	–	G	U
Whey	E	G	–	–	–	–	G	C	–	–
Whiskey	C	U	–	–	–	–	–	–	–	–
White Gasoline	E	E	E	E	U	U	U	U	E	G
White Liquor (paper industry)	E	E	E	E	–	–	–	–	–	–
Wines	G	C	–	–	–	–	–	–	–	–
Xylene or Xylol	U	U	C	U	U	U	U	U	G	C
Zinc Chloride	E	E	E	E	E	E	E	–	E	E
Zinc Chromate	E	E	E	E	E	E	E	–	E	E
Zinc Cyanide	E	E	E	E	E	E	E	–	E	E
Zinc Nitrate	E	E	E	E	E	E	E	–	E	E
Zinc Sulfate	E	E	E	E	E	E	E	–	E	E
MIXTURES OF ACIDS										
Nitric 15%, Hydrofluoric 4%	E	G	E	G	–	–	–	–	U	U
Sodium Dichromate 13%, Nictric Acid 16%, Water	E	G	E	G	E	E	E	E	E	C

Key: E = Excellent • G = Good • C = Conditional • U = Unsatisfactory

Continued on the following page

⚠ Parker Safety Guide
for Selecting and Using Hose, Tubing, Fittings and Related Accessories

Parker Publication No. 4400-B.1
Revised: May, 2002

WARNING: Failure or improper selection or improper use of hose, tubing, fittings, assemblies or related accessories ("Products") can cause death, personal injury and property damage. Possible consequences of failure or improper selection or improper use of these Products include but are not limited to:

- Fittings thrown off at high speed.
- High velocity fluid discharge.
- Explosion or burning of the conveyed fluid.
- Electrocution from high voltage electric powerlines.
- Contact with suddenly moving or falling objects that are controlled by the conveyed fluid.
- Injections by high-pressure fluid discharge.
- Dangerously whipping Hose.
- Contact with conveyed fluids that may be hot, cold, toxic or otherwise injurious.
- Sparking or explosion caused by static electricity buildup or other sources of electricity.
- Sparking or explosion while spraying paint or flammable liquids.
- Injuries resulting from inhalation, ingestion or exposure to fluids.

Before selecting or using any of these Products, it is important that you read and follow the instructions below. Only Hose from Parker's Stratoflex Products Division is approved for in-flight aerospace applications, and no other Hose can be used for such in-flight applications.

1.0 GENERAL INSTRUCTIONS

1.1 Scope: This safety guide provides instructions for selecting and using (including assembling, installing, and maintaining) these Products. For convenience, all rubber and/or thermoplastic products commonly called "hose" or "tubing" are called "Hose" in this safety guide. All assemblies made with Hose are called "Hose Assemblies". All products commonly called "fittings" or "couplings" are called "Fittings". All related accessories (including crimping and swaging machines and tooling) are called "Related Accessories". This safety guide is a supplement to and is to be used with, the specific Parker publications for the specific Hose, Fittings and Related Accessories that are being considered for use.

1.2 Fail-Safe: Hose, and Hose Assemblies and Fittings can and do fail without warning for many reasons. Design all systems and equipment in a fail-safe mode, so that failure of the Hose or Hose Assembly or Fitting will not endanger persons or property.

1.3 Distribution: Provide a copy of this safety guide to each person that is responsible for selecting or using Hose and Fitting products. Do not select or use Parker Hose or Fittings without thoroughly reading and understanding this safety guide as well as the specific Parker publications for the products considered or selected.

1.4 User Responsibility: Due to the wide variety of operating conditions and applications for Hose and Fittings, Parker and its distributors do not represent or warrant that any particular Hose or Fitting is suitable for any specific end use system. This safety guide does not analyze all technical parameters that must be considered in selecting a product. The user, through its own analysis and testing, is solely responsible for:

- Making the final selection of the Hose and Fitting.
- Assuring that the user's requirements are met and that the application presents no health or safety hazards.
- Providing all appropriate health and safety warnings on the equipment on which the Hose and Fittings are used.
- Assuring compliance with all applicable government and industry standards.

1.5 Additional Questions: Call the appropriate Parker technical service department if you have any questions or require any additional information. See the Parker publication for the product being considered or used, or call 1-800-CPARKER, or go to www.parker.com, for telephone numbers of the appropriate technical service department.

2.0 HOSE AND FITTING SELECTION INSTRUCTIONS

2.1 Electrical Conductivity: Certain applications require that the Hose be nonconductive to prevent electrical current flow. Other applications require the Hose and the Fitting and the Hose/Fitting interface to be sufficiently conductive to drain off static electricity. Extreme care must be exercised when selecting Hose and Fittings for these or any other applications in which electrical conductivity or nonconductivity is a factor.

The electrical conductivity or nonconductivity of Hose and Fittings is dependent upon many factors and may be susceptible to change. These factors include but are not limited to the various materials used to make the Hose and the Fittings, Fitting finish (some Fitting finishes are electrically conductive while others are nonconductive), manufacturing methods (including moisture control), how the Fittings contact the Hose, age and amount of deterioration or damage or other changes, moisture content of the Hose at any particular time, and other factors.

The following are considerations for electrically nonconductive and conductive Hose. For other applications consult the individual catalog pages and the appropriate industry or regulatory standards for proper selection.

2.1.1 Electrically Nonconductive Hose: Certain applications require that the Hose be nonconductive to prevent electrical current flow or to maintain electrical isolation. For these applications that require Hose to be electrically nonconductive, including but not limited to applications near high voltage electric lines, only special nonconductive Hose can be used. The manufacturer of the equipment in which the nonconductive Hose is to be used must be consulted to be certain that the Hose and Fittings that are selected are proper for the application. Do not use any Parker Hose or Fitting for any such application requiring nonconductive Hose, including but not limited to applications near high voltage electric lines, unless (i) the application is expressly approved in the Parker technical publication for the product, (ii) the Hose is marked "nonconductive", and (iii) the manufacturer of the equipment on which the Hose is to be used specifically approves the particular Parker Hose and Fitting for such use.

2.1.2 Electrically Conductive Hose: Parker manufactures special Hose for certain applications that require electrically conductive Hose.

Parker manufactures special Hose for conveying paint in airless paint spraying applications. This Hose is labeled "Electrically Conductive Airless Paint Spray Hose" on its layline and packaging. This Hose must be properly connected to the appropriate Parker Fittings and properly grounded in order to dissipate dangerous static charge buildup, which occurs in all airless paint spraying applications. Do not use any other Hose for airless paint spraying, even if electrically conductive. Use of any other Hose or failure to properly connect the Hose can cause a fire or an explosion resulting in death, personal injury, and property damage.

Parker manufactures a special Hose for certain compressed natural gas ("CNG") applications where static electricity buildup may occur. Parker CNG Hose assemblies comply with AGA Requirements 1-93, "Hoses for Natural Gas Vehicles and Fuel Dispensers". This Hose is labeled "Electrically Conductive for CNG Use" on its layline and packaging. This Hose must be properly connected to the appropriate Parker Fittings and properly grounded in order to dissipate dangerous static charge buildup, which occurs in, for example, high velocity CNG dispensing or transfer. Do not use any other Hose for CNG applications where static charge buildup may occur, even if electrically conductive. Use of other Hoses in CNG applications or failure to properly connect or ground this Hose can cause a fire or an explosion resulting in death, personal injury, and property damage. Care must also be taken to protect against CNG permeation through the Hose wall. See section 2.6, Permeation, for more information. Parker CNG Hose is intended for dispenser and vehicle use at a maximum temperature of 180°F. Parker CNG Hose should not be used in confined spaces or unventilated areas or areas exceeding 180°F. Final assemblies must be tested for leaks. CNG Hose Assemblies should be tested on a monthly basis for conductivity per AGA 1-93.

Parker manufactures special Hose for aerospace in-flight applications. Aerospace in-flight applications employing Hose to transmit fuel, lubricating fluids and hydraulic fluids require a special Hose with a conductive inner tube. This Hose for in-flight applications is available only from Parker's Stratoflex Products Division. Do not use any other Parker Hose for in-flight applications, even if electrically conductive. Use of other Hoses for in-flight applications or failure to properly connect or ground this Hose can

cause a fire or an explosion resulting in death, personal injury , and property damage. These Hose assemblies for in-flight applications must meet all applicable aerospace industry, aircraft engine, and aircraft requirements.

2.2 Pressure: Hose selection must be made so that the published maximum recommended working pressure of the Hose is equal to or greater than the maximum system pressure. Surge pressures or peak transient pressures in the system must be below the published maximum working pressure for the Hose. Surge pressures and peak pressures can usually only be determined by sensitive electrical instrumentation that measures and indicates pressures at millisecond intervals. Mechanical pressure gauges indicate only average pressures and cannot be used to determine surge pressures or peak transient pressures. Published burst pressure ratings for Hose is for manufacturing test purposes only and is no indication that the Product can be used in applications at the burst pressure or otherwise above the published maximum recommended working pressure.

2.3 Suction: Hoses used for suction applications must be selected to insure that the Hose will withstand the vacuum and pressure of the system. Improperly selected Hose may collapse in suction application.

2.4 Temperature: Be certain that fluid and ambient temperatures, both steady and transient, do not exceed the limitations of the Hose. Temperatures below and above the recommended limit can degrade Hose to a point where a failure may occur and release fluid. Properly insulate and protect the Hose Assembly when routing near hot objects (e.g. manifolds). Do not use any Hose in any application where failure of the Hose could result in the conveyed fluids (or vapors or mist from the conveyed fluids) contacting any open flame, molten metal, or other potential fire ignition source that could cause burning or explosion of the conveyed fluids or vapors.

2.5 Fluid Compatibility: Hose Assembly selection must assure compatibility of the Hose tube, cover, reinforcement, and Fittings with the fluid media used. See the fluid compatibility chart in the Parker publication for the product being considered or used. This information is offered only as a guide. Actual service life can only be determined by the end user by testing under all extreme conditions and other analysis.
Hose that is chemically compatible with a particular fluid must be assembled using Fittings and adapters containing likewise compatible seals.

2.6 Permeation: Permeation (that is, seepage through the Hose) will occur from inside the Hose to outside when Hose is used with gases, liquid and gas fuels, and refrigerants (including but not limited to such materials as helium, diesel fuel, gasoline, natural gas, or LPG). This permeation may result in high concentrations of vapors which are potentially flammable, explosive, or toxic, and in loss of fluid. Dangerous explosions, fires, and other hazards can result when using the wrong Hose for such applications. The system designer must take into account the fact that this permeation will take place and must not use Hose if this permeation could be hazardous. The system designer must take into account all legal, government, insurance, or any other special regulations which govern the use of fuels and refrigerants. Never use a Hose even though the fluid compatibility is acceptable without considering the potential hazardous effects that can result from permeation through the Hose Assembly.
Permeation of moisture from outside the Hose to inside the Hose will also occur in Hose assemblies, regardless of internal pressure. If this moisture permeation would have detrimental effects (particularly, but not limited to refrigeration and air conditioning systems), incorporation of sufficient drying capacity in the system or other appropriate system safeguards should be selected and used.

2.7 Size: Transmission of power by means of pressurized fluid varies with pressure and rate of flow. The size of the components must be adequate to keep pressure losses to a minimum and avoid damage due to heat generation or excessive fluid velocity.

2.8 Routing: Attention must be given to optimum routing to minimize inherent problems (kinking or flow restriction due to Hose collapse, twisting of the Hose, proximity to hot objects or heat sources).

2.9 Environment: Care must be taken to insure that the Hose and Fittings are either compatible with or protected from the environment (that is, surrounding conditions) to which they are exposed. Environmental conditions including but not limited to ultraviolet radiation, sunlight, heat, ozone, moisture, water, salt water, chemicals, and air pollutants can cause degradation and premature failure.

2.10 Mechanical Loads: External forces can significantly reduce Hose life or cause failure. Mechanical loads which must be considered include excessive flexing, twist, kinking, tensile or side loads, bend radius, and vibration. Use of swivel type Fittings or adapters may be required to insure no twist is put into the Hose. Unusual applications may require special testing prior to Hose selection.

2.11 Physical Damage: Care must be taken to protect Hose from wear, snagging, kinking, bending smaller that minimum bend radius, and cutting, any of which can cause premature Hose failure. Any Hose that has been kinked or bent to a radius smaller than the minimum bend radius, and any Hose that has been cut or is cracked or is otherwise damaged, should be removed and discarded.

2.12 Proper End Fitting: See instructions 3.2 through 3.5. These recommendations may be substantiated by testing to industry standards such as SAE J517 for hydraulic applications, or MIL-A-5070, AS1339, or AS3517 for Hoses from Parker's Stratoflex Products Division for aerospace applications.

2.13 Length: When establishing a proper Hose length, motion absorption, Hose length changes due to pressure, and Hose and machine tolerances and movement must be considered.

2.14 Specifications and Standards: When selecting Hose and Fittings, government, industry, and Parker specifications and recommendations must be reviewed and followed as applicable.

2.15 Hose Cleanliness: Hose components may vary in cleanliness levels. Care must be taken to insure that the Hose Assembly selected has an adequate level of cleanliness for the application.

2.16 Fire Resistant Fluids: Some fire resistant fluids that are to be conveyed by Hose require use of the same type of Hose as used with petroleum base fluids. Some such fluids require a special Hose, while a few fluids will not work with any Hose at all. See instructions 2.5 and 1.5. The wrong Hose may fail after a very short service. In addition, all liquids but pure water may burn fiercely under certain conditions, and even pure water leakage may be hazardous.

2.17 Radiant Heat: Hose can be heated to destruction without contact by such nearby items as hot manifolds or molten metal. The same heat source may then initiate a fire. This can occur despite the presence of cool air around the Hose.

2.18 Welding or Brazing: When using a torch or arc welder in close proximity to hydraulic lines, the hydraulic lines should be removed or shielded with appropriate fire resistant materials. Flame or weld spatter could burn through the Hose and possibly ignite escaping fluid resulting in a catastrophic failure. Heating of plated parts, including Hose Fittings and adapters, above 450°F (232°C) such as during welding, brazing, or soldering may emit deadly gases.

2.19 Atomic Radiation: Atomic radiation affects all materials used in Hose assemblies. Since the long-term effects may be unknown, do not expose Hose assemblies to atomic radiation.

2.20 Aerospace Applications: The only Hose and Fittings that may be used for in-flight aerospace applications are those available from Parker's Stratoflex Products Division. Do not use any other Hose or Fittings for in-flight applications. Do not use any Hose or Fittings from Parker's Stratoflex Products Division with any other Hose or Fittings, unless expressly approved in writing by the engineering manager or chief engineer of Stratoflex Products Division and verified by the user's own testing and inspection to aerospace industry standards.

2.21 Unlocking Couplings: Ball locking couplings or other couplings with disconnect sleeves can unintentionally disconnect if they are dragged over obstructions or if the sleeve is bumped or moved enough to cause disconnect. Threaded couplings should be considered where there is a potential for accidental uncoupling.

3.0 HOSE AND FITTING ASSEMBLY AND INSTALLATION INSTRUCTIONS

3.1 Component Inspection: Prior to assembly, a careful examination of the Hose and Fittings must be performed. All components must be checked for correct style, size, catalog number, and length. The Hose must be examined for cleanliness, obstructions, blisters, cover looseness, kinks, cracks, cuts or any other visible defects. Inspect the Fitting and sealing surfaces for burrs, nicks, corrosion or other imperfections. Do NOT use any component that displays any signs of nonconformance.

3.2 Hose and Fitting Assembly: Do not assemble a Parker Fitting on a Parker Hose that is not specifically listed by Parker for that Fitting, unless authorized in writing by the engineering manager or chief engineer of the appropriate Parker division. Do not assemble a Parker Fitting on another manufacturer's Hose or a Parker Hose on another manufacturer's Fitting unless (i) the engineering manager or chief engineer of the appropriate Parker division approves the Assembly in writing or that combination is expressly approved in the appropriate Parker literature for the specific Parker product, and (ii) the user verifies the Assembly and the application through analysis and testing. For Parker Hose that does not specify a Parker Fitting, the user is solely responsible for the selection of the proper Fitting and Hose Assembly procedures. See instruction 1.4.
The Parker published instructions must be followed for assembling the

Fittings on the Hose. These instructions are provided in the Parker Fitting catalog for the specific Parker Fitting being used, or by calling 1-800-CPARKER, or at www.parker.com.

3.3 **Related Accessories:** Do not crimp or swage any Parker Hose or Fitting with anything but the listed swage or crimp machine and dies in accordance with Parker published instructions. Do not crimp or swage another manufacturer's Fitting with a Parker crimp or swage die unless authorized in writing by the engineering manager or chief engineer of the appropriate Parker division.

3.4 **Parts:** Do not use any Parker Fitting part (including but not limited to socket, shell, nipple, or insert) except with the correct Parker mating parts, in accordance with Parker published instructions, unless authorized in writing by the engineering manager or chief engineer of the appropriate Parker division.

3.5 **Reusable/Permanent:** Do not reuse any field attachable (reusable) Hose Fitting that has blown or pulled off a Hose. Do not reuse a Parker permanent Hose Fitting (crimped or swaged) or any part thereof. Complete Hose Assemblies may only be reused after proper inspection under section 4.0. Do not assemble Fittings to any previously used hydraulic Hose that was in service, for use in a fluid power application.

3.6 **Pre-Installation Inspection:** Prior to installation, a careful examination of the Hose Assembly must be performed. Inspect the Hose Assembly for any damage or defects. Do NOT use any Hose Assembly that displays any signs of nonconformance.

3.7 **Minimum Bend Radius:** Installation of a Hose at less than the minimum listed bend radius may significantly reduce the Hose life. Particular attention must be given to preclude sharp bending at the Hose to Fitting juncture. Any bending during installation at less than the minimum bend radius must be avoided. If any Hose is kinked during installation, the Hose must be discarded.

3.8 **Twist Angle and Orientation:** Hose Assembly installation must be such that relative motion of machine components does not produce twisting.

3.9 **Securement:** In many applications, it may be necessary to restrain, protect, or guide the Hose to protect it from damage by unnecessary flexing, pressure surges, and contact with other mechanical components. Care must be taken to insure such restraints do not introduce additional stress or wear points.

3.10 **Proper Connection of Ports:** Proper physical installation of the Hose Assembly requires a correctly installed port connection insuring that no twist or torque is transferred to the Hose when the Fittings are being tightened or otherwise during use.

3.11 **External Damage:** Proper installation is not complete without insuring that tensile loads, side loads, kinking, flattening, potential abrasion, thread damage, or damage to sealing surfaces are corrected or eliminated. See instruction 2.10.

3.12 **System Checkout:** All air entrapment must be eliminated and the system pressurized to the maximum system pressure (at or below the Hose maximum working pressure) and checked for proper function and freedom from leaks. Personnel must stay out of potential hazardous areas while testing and using.

3.13 **Routing:** The Hose Assembly should be routed in such a manner so if a failure does occur, the escaping media will not cause personal injury or property damage. In addition, if fluid media comes in contact with hot surfaces, open flame, or sparks, a fire or explosion may occur. See section 2.4.

4.0 HOSE AND FITTING MAINTENANCE AND REPLACEMENT INSTRUCTIONS

4.1 Even with proper selection and installation, Hose life may be significantly reduced without a continuing maintenance program. The severity of the application, risk potential from a possible Hose failure, and experience with any Hose failures in the application or in similar applications should determine the frequency of the inspection and the replacement for the Products so that Products are replaced before any failure occurs. A maintenance program must be established and followed by the user and, at minimum, must include instructions 4.2 through 4.7.

4.2 **Visual Inspection Hose/Fitting:** Any of the following conditions require immediate shut down and replacement of the Hose Assembly:

- Fitting slippage on Hose;
- Damaged, cracked, cut or abraded cover (any reinforcement exposed);
- Hard, stiff, heat cracked, or charred Hose;
- Cracked, damaged, or badly corroded Fittings;
- Leaks at Fitting or in Hose;
- Kinked, crushed, flattened or twisted Hose; and
- Blistered, soft, degraded, or loose cover.

4.3 **Visual Inspection All Other:** The following items must be tightened, repaired, corrected or replaced as required:

- Leaking port conditions;
- Excess dirt buildup;
- Worn clamps, guards or shields; and
- System fluid level, fluid type, and any air entrapment.

4.4 **Functional Test:** Operate the system at maximum operating pressure and check for possible malfunctions and leaks. Personnel must avoid potential hazardous areas while testing and using the system. See section 2.2.

4.5 **Replacement Intervals:** Hose assemblies and elastomeric seals used on Hose Fittings and adapters will eventually age, harden, wear and deteriorate under thermal cycling and compression set. Hose Assemblies and elastomeric seals should be inspected and replaced at specific replacement intervals, based on previous service life, government or industry recommendations, or when failures could result in unacceptable downtime, damage, or injury risk. See section 1.2.

4.6 **Hose Inspection and Failure:** Hydraulic power is accomplished by utilizing high-pressure fluids to transfer energy and do work. Hoses, Fittings, and Hose Assemblies all contribute to this by transmitting fluids at high pressures. Fluids under pressure can be dangerous and potentially lethal and, therefore, extreme caution must be exercised when working with fluids under pressure and handling the Hoses transporting the fluids. From time to time, Hose Assemblies will fail if they are not replaced at proper time intervals. Usually these failures are the result of some form of misapplication, abuse, wear, or failure to perform proper maintenance. When Hoses fail, generally the high-pressure fluids inside escape in a stream which may or may not be visible to the user. Under no circumstances should the user attempt to locate the leak by "feeling" with their hands or any other part of their body. High-pressure fluids can and will penetrate the skin and cause severe tissue damage and possibly loss of limb. Even seemingly minor hydraulic fluid injection injuries must be treated immediately by a physician with knowledge of the tissue damaging properties of hydraulic fluid.

If a Hose failure occurs, immediately shut down the equipment and leave the area until pressure has been completely released from the Hose Assembly. Simply shutting down the hydraulic pump may or may not eliminate the pressure in the Hose Assembly. Many times check valves, etc., are employed in a system and can cause pressure to remain in a Hose Assembly even when pumps or equipment are not operating. Tiny holes in the Hose, commonly known as pinholes, can eject small, dangerously powerful but hard to see streams of hydraulic fluid. It may take several minutes or even hours for the pressure to be relieved so that the Hose Assembly may be examined safely.

Once the pressure has been reduced to zero, the Hose Assembly may be taken off the equipment and examined. It must always be replaced if a failure has occurred. Never attempt to patch or repair a Hose Assembly that has failed. Consult the nearest Parker distributor or the appropriate Parker division for Hose Assembly replacement information.

Never touch or examine a failed Hose Assembly unless it is obvious that the Hose no longer contains fluid under pressure. The high-pressure fluid is extremely dangerous and can cause serious and potentially fatal injury.

4.7 **Elastomeric seals:** Elastomeric seals will eventually age, harden, wear and deteriorate under thermal cycling and compression set. Elastomeric seals should be inspected and replaced.

4.8 **Refrigerant gases:** Special care should be taken when working with refrigeration systems. Sudden escape of refrigerant gases can cause blindness if the escaping gases contact the eye and can cause freezing or other severe injuries if it contacts any other portion of the body.

4.9 **Compressed natural gas (CNG):** Parker CNG Hose Assemblies should be tested after installation and before use, and at least on a monthly basis per AGA 1-93 Section 4.2 "Visual Inspection Hose/Fitting". The recommended procedure is to pressurize the Hose and check for leaks and to visually inspect the Hose for damage.

Caution: Matches, candles, open flame or other sources of ignition shall not be used for Hose inspection. Leak check solutions should be rinsed off after use.

Offer of Sale

1. **Terms and Conditions of Sale:** All descriptions, quotations, proposals, offers, acknowledgments, acceptances and sales of Seller's products are subject to and shall be governed exclusively by the terms and conditions stated herein. Buyer's acceptance of any offer to sell is limited to these terms and conditions. Any terms or conditions in addition to, or inconsistent with those stated herein, proposed by Buyer in any acceptance of an offer by Seller, are hereby objected to. No such additional, different or inconsistent terms and conditions shall become part of the contract between Buyer and Seller unless expressly accepted in writing by Seller. Seller's acceptance of any offer to purchase by Buyer is expressly conditional upon Buyer's assent to all the terms and conditions stated herein, including any terms in addition to, or inconsistent with those contained in Buyer's offer. Acceptance of Seller's products shall in all events constitute such assent.

2. **Payment:** Payment shall be made by Buyer net 30 days from the date of delivery of the items purchased hereunder. Parker reserves the right to charge interest on all past due amounts. Any claims by Buyer for omissions or shortages in a shipment shall be waived unless Seller receives notice thereof within 30 days after Buyer's receipt of the shipment.

3. **Delivery:** Unless otherwise provided on the face hereof, delivery shall be made F.O.B. Seller's plant. Regardless of the method of delivery, however, risk of loss shall pass to Buyer upon Seller's delivery to a carrier. Any delivery dates shown are approximate only and Seller shall have no liability for any delays in delivery.

4. **Warranty:** Seller warrants that the items sold hereunder shall be free from defects in material or workmanship for a period of 365 days from the date of shipment to Buyer, or 2,000 hours of use, whichever expires first. **THIS WARRANTY COMPRISES THE SOLE AND ENTIRE WARRANTY PERTAINING TO ITEMS PROVIDED HEREUNDER. SELLER MAKES NO OTHER WARRANTY, GUARANTEE, OR REPRESENTATIONS OF ANY KIND WHATSOEVER. ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR PURPOSE, WHETHER EXPRESS, IMPLIED, OR ARISING BY OPERATION OF LAW, TRADE USAGE, OR COURSE OF DEALING ARE HEREBY DISCLAIMED.**

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6. **Changes, Reschedules and Cancellations:** Buyer may request to modify the designs or specifications for the item sold hereunder as well as the quantities and delivery dates thereof, or may request to cancel all or part of this order, however, no such requested modification or cancellation shall become part of the contract between Buyer and Seller unless accepted by Seller in a written amendment to this Agreement. Acceptance of any such requested modification of cancellation shall be at Seller's discretion, and shall be upon such terms and conditions as Seller may require.

7. **Special Tooling:** A tooling charge may be imposed for any special tooling, including without limitation, dies, fixtures, molds and patterns, acquired to manufacture items sold pursuant to this contract. Such special tooling shall be and remain Seller's property notwithstanding payment of any charges by Buyer. In no event will Buyer acquire any interest in apparatus belonging to Seller which is utilized in the manufacture of the items sold hereunder, even if such apparatus has been specially converted or adapted for such manufacture and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller shall have the right to alter, discard or otherwise dispose of any special tooling or other property in its sole discretion at any time.

8. **Buyer's Property:** Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer, or any other items which become Buyer's property, may be considered obsolete and may be destroyed by Seller after two (2) consecutive years have elapsed without Buyer placing an order for the items which are manufactured using such property. Seller shall not be responsible for any loss or damage to such property while it is in Seller's possession or control.

9. **Taxes:** Unless otherwise indicated on the face hereof, all prices and charges are exclusive of excise, sales, use, property, occupational or like taxes which may be imposed by any taxing authority upon the manufacture, sale or delivery of the items sold hereunder. If any such taxes must be paid by Seller, or if Seller is liable for the collection of such tax, the amount thereof shall be in addition to the amounts for the items sold. Buyer agrees to pay all such taxes or to reimburse Seller therefor upon receipt of its invoice. If Buyer claims exemption from any sales, use or other tax imposed by any taxing authority, Buyer shall save Seller harmless from and against any such tax, together with any interest or penalties thereon which may be assessed if the items are held to be taxable.

10. **Indemnity For Infringement of Intellectual Property Rights:** Seller shall have no liability for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this Part 10. Seller will defend and indemnify Buyer against allegations of infringement of U.S. patents, U.S. trademarks, copyrights, trade dress and trade secrets (hereinafter 'Intellectual Property Rights'). Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on an allegation that an item sold pursuant to this contract infringes in the Intellectual Property Rights of a third party. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of such allegations of infringement, and Seller having sole control over the defense of any allegations or actions, including all negotiations for settlement or compromise. If an item sold hereunder is subject to a claim that it infringes the Intellectual Property Rights of a third party, Seller may, at its sole expense and option, procure for Buyer the right to continue using said item, replace or modify said item so as to make it noninfringing, or offer to accept return of said item and return the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, Seller shall have no liability for claims of infringement based on information provided by Buyer, or directed to items delivered hereunder for which the designs are specified in whole or part by Buyer, or infringements resulting from the modification, combination or use in a system of any item sold hereunder. The foregoing provisions of this Part 10 shall constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for infringement of Intellectual Property Rights.

    If a claim is based on information provided by Buyer or if the design for an item delivered hereunder is specified in whole or in part by Buyer, Buyer shall defend and indemnify Seller for all costs, expenses or judgements resulting from any claim that such item infringes any patent, trademark, copyright, trade dress, trade secret or any similar right.

11. **Force Majeure:** Seller does not assume the risk of and shall not be liable for delay or failure to perform any of Seller's obligations by reason of circumstances beyond the reasonable control of Seller (hereinafter 'Events of Force Majeure'). Events of Force Majeure shall include without limitation, accidents, acts of God, strikes or labor disputes, acts, laws, rules or regulations of any government or government agency, fires, floods, delays or failures in delivery of carriers or suppliers, shortages of materials and any other cause beyond Seller's control.

12. **Entire Agreement/Governing Law:** The terms and conditions set forth herein, together with any amendments, modifications and any different terms or conditions expressly accepted by Seller in writing, shall constitute the entire Agreement concerning the items sold, and there are no oral or other representations or agreements which pertain thereto. This Agreement shall be governed in all respects by the law of the State of Ohio. No actions arising out of the sale of the items sold hereunder or this Agreement may be brought by either party more than two (2) years after the cause of action accrues.

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