

MATERIAL SELECTION-INDUSTRIAL THERMOPLASTICS & ELASTOMERS

Material	General Chemical Resistance	Max. Permissible Temp. (Water)	
		Constant	Short-Term
Polyvinyl Chloride uPVC, PVC	Resistant to most solutions of acids, alkalis and salts and to organic compounds miscible with water. Not resistant to aromatic and chlorinated hydrocarbons.	60°C/140°F	60°C/140°F
Chlorinated Polyvinyl Chloride CPVC	Can be used similarly to PVC but at increased temperatures.	90°C/195°F	110°C/230°F
High-density Polyethylene HD PE, PE	Resistant to water solutions of acids, alkalis and salts as well as to a large number of organic solvents. Unsuitable for concentrated oxidizing acids.	60°C/140°F	80°C/176°F
Polypropylene, heat-stabilized PP	Chemical resistance similar to that of PE but suitable for higher temperatures.	90°C/195°F	110°C/230°F
Polyvinylidene Fluoride PVDF, e.g. SYGEF®	Resistant to acids, solutions of salts, aliphatic, aromatic and chlorinated hydrocarbons, alcohols and halogens. Conditionally suitable for ketones, esters, ethers, organic bases and alkaline solutions.	140°C/285°F	150°C/300°F
Polytetrafluoroethylene, e.g. Teflon® PTFE	Resistant to all chemicals on next four pages.	250°C/480°F	300°C/575°F
Nitrile Rubber, e.g. Buna-N	Good resistance to oil and gasoline. Unsuitable for oxidizing media.	90°C/195°F	120°C/248°F
Butyl Rubber Ethylene Polypropylene, Rubber, e.g. EPDM, EPT, EPR	Good resistance to ozone and weather. Especially suitable for aggressive chemicals. Unsuitable for oils and fats.	90°C/195°F	120°C/248°F
Chloroprene Rubber, e.g. Neoprene®	Chemical resistance very similar to that of PVC and between that of Nitrile and Butyl rubber.	80°C/176°F	110°C/230°F
Fluorine Rubber, e.g. Viton®	Has best chemical resistance to solvents of all elastomers.	150°C/300°F	200°C/393°F

NOTE: The Ryan Herco Products Chemical Resistance Table above is intended only as a guide. Changes in the composition of the medium or special working conditions could lead to deviations. Should there be any doubt, it is advisable to test the behavior of the material under specific working conditions by means of a pilot installation. Consult our chemical resistance charts for more information on pages 629-634.

CAUTION: NO GUARANTEES CAN BE GIVEN FOR THE INFORMATION CONTAINED IN THIS SECTION. The data given corresponds with present knowledge, which is constantly being amended. Alterations due to new developments cannot be avoided.

RECOMMENDED SUPPORT SPACING (IN FEET) FOR PVC

SCHEDULE 40

Pipe Size (in.)	Temperature °F							
	20°	40°	60°	80°	100°	120°	140°	160°
1/4	5-1/2	5	5	4-1/2	4-1/2	3-1/2	3	1-1/2
3/8	5-1/2	5	5	4-1/2	4-1/2	3-1/2	3	1-1/2
1/2	6	5-1/2	5-1/2	5	4-1/2	4	3	1-1/2
3/4	6	5-1/2	5-1/2	5	4-1/2	4	3	1-1/2
1	6-1/2	6-1/2	6	5-1/2	5-1/2	4-1/2	3-1/2	2
1-1/4	6-1/2	6-1/2	6	5-1/2	5-1/2	4-1/2	3-1/2	2
1-1/2	7	6-1/2	6	6	5-1/2	4-1/2	3-1/2	2
2	7	7	6-1/2	6	5-1/2	5	3-1/2	2
2-1/2	8	7-1/2	7-1/2	7	6-1/2	5-1/2	4	2-1/2
3	8	8	7-1/2	7	6-1/2	5-1/2	4-1/2	2-1/2
4	9	8-1/2	8	7-1/2	7	6	4-1/2	2-1/2
5	9	8-1/2	8-1/2	8	7-1/2	6	4-1/2	2-1/2
6	9-1/2	9	8-1/2	8	7-1/2	6-1/2	5	3
8	10-1/2	10	9-1/2	9	8-1/2	7	5-1/2	3
10	11	10-1/2	10	9	8-1/2	7	5-1/2	3
12	11-1/2	11	10-1/2	10	9	8	6	3-1/2

Notes:
The necessary support spacing indicated in the above table assumes:

- Uniform placement of supports
- No concentrated loads
- Maximum fluid weight of 85 lb./cu. ft. (1.35 gravity)

SCHEDULE 80

Pipe Size (in.)	Temperature °F							
	20°	40°	60°	80°	100°	120°	140°	160°
1/4	6	6	5-1/2	5-1/2	5	4	3	2
3/8	6-1/2	6-1/2	6	5-1/2	5-1/2	4-1/2	3-1/2	2
1/2	7	6-1/2	6	6	5-1/2	4-1/2	3-1/2	2
3/4	7	7	6-1/2	6	5-1/2	5	3-1/2	2
1	7-1/2	7	7	6-1/2	6	5	4	2
1-1/4	8	7-1/2	7	6-1/2	6-1/2	5-1/2	4	2-1/2
1-1/2	8	7-1/2	7-1/2	7	6-1/2	5-1/2	4	2-1/2
2	8	8	7-1/2	7	6-1/2	5-1/2	4-1/2	2-1/2
2-1/2	9-1/2	9	8-1/2	8	7-1/2	6-1/2	5	3
3	10	9-1/2	9	8-1/2	8	6-1/2	5	3
4	10-1/2	10	9-1/2	9	8-1/2	7	5-1/2	3
5	11	10-1/2	10	9	8-1/2	7	5-1/2	3
6	12	11-1/2	10-1/2	10	9-1/2	8	6	3-1/2
8	12-1/2	12	11-1/2	11	10	8-1/2	6-1/2	4
10	14	13-1/2	12-1/2	12	11	9-1/2	7	4
12	15	14-1/2	13-1/2	13	12	10	8	4-1/2

Axial movement should be permitted by not fastening support clamps too tightly. Support spacing may be doubled for vertical runs. Valves and heavy fittings should be individually supported. Examine the economies of continuous support at higher temperatures. Standard pipe supports, free of burrs or sharp edges, may be used.