

Maxiplast® Polygon™ Welding Parameters

CURRENT AS OF
09/01/2023

Product Line & Material	Pipe Size	Initial Melt Pressure	Bead Height	Melt Pressure	Heatsoak Time	Changeover Time	Welding Pressure	Cooling Time
Air-Pro® (PE)	2" (63mm) SDR7	51.7 lbs	1.5 mm	Almost Zero	86 seconds	7 seconds	51.7 lbs	8.9 min
Air-Pro® (PE)	3" (90mm) SDR7	103.4 lbs	2 mm	Almost Zero	123 seconds	8 seconds	103.4 lbs	12.3 min
Air-Pro® (PE)	4" (110mm) SDR7	152.9 lbs	2 mm	Almost Zero	151 seconds	9 seconds	152.9 lbs	14.8 min
Air-Pro® (PE)	6" (160mm) SDR11	227.1 lbs	2 mm	Almost Zero	146 seconds	9 seconds	227.1 lbs	14.2 min
Asahitec™ Solid Wall (PP-RCT)	2" (63mm) SDR11	24.7 lbs	0.5 mm	Almost Zero	68 seconds	6 seconds	24.7 lbs	6.3 min
Asahitec™ Solid Wall (PP-RCT)	2-1/2" (75mm) SDR11	33.7 lbs	0.5 mm	Almost Zero	79 seconds	6 seconds	33.7 lbs	7.3 min
Asahitec™ Solid Wall (PP-RCT)	3" (90mm) SDR11	49.5 lbs	1 mm	Almost Zero	94 seconds	6 seconds	49.5 lbs	8.6 min
Asahitec™ Solid Wall (PP-RCT)	4" (110mm) SDR11	71.9 lbs	1 mm	Almost Zero	113 seconds	7 seconds	71.9 lbs	10.2 min
Asahitec™ Solid Wall (PP-RCT)	5" (125mm) SDR11	92.2 lbs	1 mm	Almost Zero	129 seconds	7 seconds	92.2 lbs	11.5 min
Asahitec™ Solid Wall (PP-RCT)	6" (160mm) SDR11	150.6 lbs	1 mm	Almost Zero	161 seconds	8 seconds	150.6 lbs	14.2 min
Asahitec™ Solid Wall (PP-RCT)	2" (63mm) SDR7	33.7 lbs	1 mm	Almost Zero	98 seconds	6 seconds	33.7 lbs	8.9 min
Asahitec™ Solid Wall (PP-RCT)	2-1/2" (75mm) SDR7	47.2 lbs	1 mm	Almost Zero	117 seconds	7 seconds	47.2 lbs	10.5 min
Asahitec™ Solid Wall (PP-RCT)	3" (90mm) SDR7	69.7 lbs	1 mm	Almost Zero	138 seconds	7 seconds	69.7 lbs	12.3 min



Please visit the Asahi Weld App
at www.asahi-america.com for
up to date weld parameters

Welding Temperatures

PP: 393°F - 410°F (200°C - 210°C)
 PE: 420°F - 446°F (215°C - 230°C)
 PVDF: 436°F - 446°F (225°C - 230°C)
 ECTFE: 527°F - 536°F (275°C - 280°C)

A reduction in the cooling time of up to 50%, i.e. removal of the welded part from the welding machine, is permitted in the following circumstances:

- the joint connection was created under workshop conditions and
- the removal of the part from the welding machine and its temporary storage until the complete cooling time according to the Cooling Time column causes negligible loading of the joint

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Asahitec™ Solid Wall (PP-RCT)	4" (110mm) SDR7	103.4 lbs	1 mm	Almost Zero	166 seconds	8 seconds	103.4 lbs	14.7 min
Asahitec™ Solid Wall (PP-RCT)	5" (125mm) SDR7	130.4 lbs	1 mm	Almost Zero	187 seconds	8 seconds	130.4 lbs	16.4 min
Chem Proline® (PE)	2" (63mm) SDR11	36.0 lbs	1 mm	Almost Zero	58 seconds	6 seconds	36.0 lbs	6.3 min
Chem Proline® (PE)	3" (90mm) SDR11	71.9 lbs	1.5 mm	Almost Zero	82 seconds	6 seconds	71.9 lbs	8.6 min
Chem Proline® (PE)	4" (110mm) SDR11	107.9 lbs	1.5 mm	Almost Zero	100 seconds	7 seconds	107.9 lbs	10.2 min
Chem Proline® (PE)	6" (160mm) SDR11	227.1 lbs	2 mm	Almost Zero	146 seconds	9 seconds	227.1 lbs	14.2 min
Climatec™ (PP-RCT)	2" (63mm) SDR11	24.7 lbs	0.5 mm	Almost Zero	68 seconds	6 seconds	24.7 lbs	6.3 min
Climatec™ (PP-RCT)	2-1/2" (75mm) SDR11	33.7 lbs	0.5 mm	Almost Zero	79 seconds	6 seconds	33.7 lbs	7.3 min
Climatec™ (PP-RCT)	3" (90mm) SDR11	49.5 lbs	1 mm	Almost Zero	94 seconds	6 seconds	49.5 lbs	8.6 min
Climatec™ (PP-RCT)	4" (110mm) SDR11	71.9 lbs	1 mm	Almost Zero	113 seconds	7 seconds	71.9 lbs	10.2 min
Climatec™ (PP-RCT)	5" (125mm) SDR11	92.2 lbs	1 mm	Almost Zero	129 seconds	7 seconds	92.2 lbs	11.5 min
Climatec™ (PP-RCT)	6" (160mm) SDR17	101.2 lbs	1 mm	Almost Zero	108 seconds	6 seconds	101.2 lbs	9.8 min
Proline® PRO150 (PP)	2" (63mm) SDR11	24.7 lbs	0.5 mm	Almost Zero	68 seconds	6 seconds	24.7 lbs	6.3 min



Welding Temperatures

PP:	393°F - 410°F (200°C - 210°C)
PE:	420°F - 446°F (215°C - 230°C)
PVDF:	436°F - 446°F (225°C - 230°C)
ECTFE:	527°F - 536°F (275°C - 280°C)

A reduction in the cooling time of up to 50%, i.e. removal of the welded part from the welding machine, is permitted in the following circumstances:

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- the removal of the part from the welding machine and its temporary storage until the complete cooling time according to the Cooling Time column causes negligible loading of the joint

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Product Line & Material	Pipe Size	Initial Melt Pressure	Bead Height	Melt Pressure	Heatsoak Time	Changeover Time	Welding Pressure	Cooling Time
Proline® PRO150 (PP)	2-1/2" (75mm) SDR11	33.7 lbs	0.5 mm	Almost Zero	79 seconds	6 seconds	33.7 lbs	7.3 min
Proline® PRO150 (PP)	3" (90mm) SDR11	49.5 lbs	1 mm	Almost Zero	94 seconds	6 seconds	49.5 lbs	8.6 min
Proline® PRO150 (PP)	4" (110mm) SDR11	71.9 lbs	1 mm	Almost Zero	113 seconds	7 seconds	71.9 lbs	10.2 min
Proline® PRO150 (PP)	4-1/2" (125mm) SDR11	92.2 lbs	1 mm	Almost Zero	129 seconds	7 seconds	92.2 lbs	11.5 min
Proline® PRO150 (PP)	5" (140mm) SDR11	114.7 lbs	1 mm	Almost Zero	142 seconds	7 seconds	114.7 lbs	12.6 min
Proline® PRO150 (PP)	6" (160mm) SDR11	150.6 lbs	1 mm	Almost Zero	161 seconds	8 seconds	150.6 lbs	14.2 min
Proline® PRO90 (PP)	2" (63mm) SDR17.6	15.0 lbs	0.5 mm	Almost Zero	42 seconds	5 seconds	15.0 lbs	5.0 min
Proline® PRO90 (PP)	2-1/2" (75mm) SDR17.6	22.0 lbs	0.5 mm	Almost Zero	51 seconds	5 seconds	22.0 lbs	5.0 min
Proline® PRO90 (PP)	3" (90mm) SDR17.6	31.0 lbs	0.5 mm	Almost Zero	60 seconds	5 seconds	31.0 lbs	5.4 min
Proline® PRO90 (PP)	4" (110mm) SDR17.6	46.0 lbs	0.5 mm	Almost Zero	73 seconds	6 seconds	46.0 lbs	6.5 min
Proline® PRO90 (PP)	4-1/2" (125mm) SDR17.6	60.0 lbs	1 mm	Almost Zero	82 seconds	6 seconds	60.0 lbs	7.4 min
Proline® PRO90 (PP)	5" (140mm) SDR17.6	75.0 lbs	1 mm	Almost Zero	92 seconds	6 seconds	75.0 lbs	8.2 min
Proline® PRO90 (PP)	6" (160mm) SDR17.6	97.0 lbs	1 mm	Almost Zero	104 seconds	6 seconds	97.0 lbs	9.2 min



Welding Temperatures

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- PE: 420°F - 446°F (215°C - 230°C)
- PVDF: 436°F - 446°F (225°C - 230°C)
- ECTFE: 527°F - 536°F (275°C - 280°C)

A reduction in the cooling time of up to 50%, i.e. removal of the welded part from the welding machine, is permitted in the following circumstances:

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- the removal of the part from the welding machine and its temporary storage until the complete cooling time according to the Cooling Time column causes negligible loading of the joint

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Product Line & Material	Pipe Size	Initial Melt Pressure	Bead Height	Melt Pressure	Heatsoak Time	Changeover Time	Welding Pressure	Cooling Time
Proline® PRO45 (PP)	4" (110mm) SDR33	27.0 lbs	0.5 mm	Almost Zero	40 seconds	5 seconds	27.0 lbs	5.0 min
Proline® PRO45 (PP)	4-1/2" (125mm) SDR33	33.7 lbs	0.5 mm	Almost Zero	46 seconds	5 seconds	33.7 lbs	5.0 min
Proline® PRO45 (PP)	5" (140mm) SDR33	42.7 lbs	0.5 mm	Almost Zero	51 seconds	5 seconds	42.7 lbs	5.0 min
Proline® PRO45 (PP)	6" (160mm) SDR33	54.0 lbs	0.5 mm	Almost Zero	57 seconds	5 seconds	54.0 lbs	5.4 min
Proline® PRO90 (PP)	4-1/2" (125mm) SDR17.6	60.0 lbs	1 mm	Almost Zero	82 seconds	6 seconds	60.0 lbs	7.4 min
Proline® PRO90 (PP)	5" (140mm) SDR17.6	75.0 lbs	1 mm	Almost Zero	92 seconds	6 seconds	75.0 lbs	8.2 min
Proline® PRO90 (PP)	6" (160mm) SDR17.6	97.0 lbs	1 mm	Almost Zero	104 seconds	6 seconds	97.0 lbs	9.2 min
Proline® PRO45 (PP)	4" (110mm) SDR33	27.0 lbs	0.5 mm	Almost Zero	40 seconds	5 seconds	27.0 lbs	5.0 min
Proline® PRO45 (PP)	4-1/2" (125mm) SDR33	33.7 lbs	0.5 mm	Almost Zero	46 seconds	5 seconds	33.7 lbs	5.0 min
Proline® PRO45 (PP)	5" (140mm) SDR33	42.7 lbs	0.5 mm	Almost Zero	51 seconds	5 seconds	42.7 lbs	5.0 min
Proline® PRO45 (PP)	6" (160mm) SDR33	54.0 lbs	0.5 mm	Almost Zero	57 seconds	5 seconds	54.0 lbs	5.4 min
Super Proline® (PVDF)	4" (110mm) SDR33	25.0 lbs	0.5 mm	Almost Zero	74 seconds	3 seconds	25.0 lbs	6.0 min
Super Proline® (PVDF)	6" (160mm) SDR33	52.0 lbs	0.5 mm	Almost Zero	89 seconds	3 seconds	52.0 lbs	8.0 min



Welding Temperatures

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 PVDF: 436°F - 446°F (225°C - 230°C)
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A reduction in the cooling time of up to 50%, i.e. removal of the welded part from the welding machine, is permitted in the following circumstances:

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Ultra Proline® (ECTFE)	2" (63mm) SDR21	11.0 lbs	0.5 mm	Almost Zero	25 seconds	4 seconds	11.0 lbs	5.0 min
Ultra Proline® (ECTFE)	3" (90mm) SDR21	22.0 lbs	0.5 mm	Almost Zero	34 seconds	4 seconds	22.0 lbs	6.0 min
Ultra Proline® (ECTFE)	4" (110mm) SDR21	33.0 lbs	0.5 mm	Almost Zero	40 seconds	4 seconds	33.0 lbs	7.0 min
Ultra Proline® (ECTFE)	6" (160mm) SDR21	81.0 lbs	1 mm	Almost Zero	117 seconds	4 seconds	81.0 lbs	11.0 min
Watertec™ (PP-RCT)	2" (63mm) SDR9	29.2 lbs	1 mm	Almost Zero	82 seconds	6 seconds	29.2 lbs	7.6 min
Watertec™ (PP-RCT)	2-1/2" (75mm) SDR9	40.5 lbs	1 mm	Almost Zero	96 seconds	6 seconds	40.5 lbs	8.7 min
Watertec™ (PP-RCT)	3" (90mm) SDR9	58.5 lbs	1 mm	Almost Zero	114 seconds	7 seconds	58.5 lbs	10.3 min
Watertec™ (PP-RCT)	4" (110mm) SDR9	85.4 lbs	1 mm	Almost Zero	138 seconds	7 seconds	85.4 lbs	12.3 min
Watertec™ (PP-RCT)	5" (125mm) SDR9	110.2 lbs	1 mm	Almost Zero	155 seconds	8 seconds	110.2 lbs	13.7 min
Watertec™ (PP-RCT)	6" (160mm) SDR11	150.6 lbs	1 mm	Almost Zero	161 seconds	8 seconds	150.6 lbs	14.2 min
Chem Prolok® (PE)	2" X 4" (63mm X 110mm) SDR11X33	76.3 lbs	0.5 mm	Almost Zero	58 seconds	5 seconds	76.3 lbs	6.3 min
Chem Prolok® (PE)	3" X 6" (90mm X 160mm) SDR11X33	152.6 lbs	1 mm	Almost Zero	82 seconds	6 seconds	152.6 lbs	8.6 min
Chem Prolok® (PE)	2" X 6" (63mm X 160mm) SDR11X33	116.7 lbs	1 mm	Almost Zero	58 seconds	5 seconds	116.7 lbs	6.3 min



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Duo-Pro® PRO150X150 (PP)	2" X 4" (63mm X 110mm) SDR11X11	96.7 lbs	1 mm	Almost Zero	113 seconds	7 seconds	96.7 lbs	10.2 min
Duo-Pro® PRO150X150 (PP)	3" X 6" (90mm X 160mm) SDR11X11	200.1 lbs	1 mm	Almost Zero	161 seconds	8 seconds	200.1 lbs	14.2 min
Duo-Pro® PRO150X150 (PP)	2" X 6" (63mm X 160mm) SDR11X11	175.4 lbs	1 mm	Almost Zero	161 seconds	8 seconds	175.4 lbs	14.2 min
Duo-Pro® PRO150X45 (PP)	2" X 4" (63mm X 110mm) SDR11X33	51.7 lbs	0.5 mm	Almost Zero	68 seconds	6 seconds	51.7 lbs	6.3 min
Duo-Pro® PRO150X45 (PP)	3" X 6" (90mm X 160mm) SDR11X33	103.4 lbs	0.5 mm	Almost Zero	94 seconds	6 seconds	103.4 lbs	8.6 min
Duo-Pro® PRO150X45 (PP)	2" X 6" (63mm X 160mm) SDR11X33	78.7 lbs	0.5 mm	Almost Zero	68 seconds	6 seconds	78.7 lbs	6.3 min
Duo-Pro® PVDFXPVDF (PVDF)	2" X 4" (63mm X 110mm) SDR21X33	38.0 lbs	0.5 mm	Almost Zero	74 seconds	3 seconds	38.0 lbs	6.0 min
Duo-Pro® PVDFXPVDF (PVDF)	3" X 6" (90mm X 160mm) SDR33X33	69.0 lbs	0.5 mm	Almost Zero	89 seconds	3 seconds	69.0 lbs	8.0 min
Duo-Pro® PVDFXPVDF (PVDF)	1" X 4" (32mm X 110mm) SDR21X33	30.0 lbs	0.5 mm	Almost Zero	74 seconds	3 seconds	30.0 lbs	6.0 min
Duo-Pro® PVDFXPVDF (PVDF)	2" X 6" (63mm X 160mm) SDR21X33	65.0 lbs	0.5 mm	Almost Zero	89 seconds	3 seconds	65.0 lbs	8.0 min
Poly-Flo® PE100RC (PE)	2" X 3" (63mm X 90mm) SDR11X17	65.0 lbs	1 mm	Almost Zero	35 seconds	5 seconds	65.0 lbs	8.0 min
Poly-Flo® PE100RC (PE)	4" X 6" (110mm X 160mm) SDR11X17	223.0 lbs	1.5 mm	Almost Zero	80 seconds	7 seconds	223.0 lbs	14.0 min
Poly-Flo® PPR (PP)	2" X 3" (63mm X 90mm) SDR11X17	60.0 lbs	0.5 mm	Almost Zero	80 seconds	6 seconds	60.0 lbs	9.0 min



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Poly-Flo® PPR (PP)	4" X 6" (110mm X 160mm) SDR11X17	185.0 lbs	1 mm	Almost Zero	150 seconds	7 seconds	185.0 lbs	17.0 min



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