



# ARC SPRAY EQUIPMENT GUIDELINES

## **Application Recommendations for the ARC “S” Series and Other Sprayable ARC Products**

Application recommendations for the ARC “S” series of products are listed on the following pages. Important recommendations for spray equipment and material temperatures are provided along with specific notes pertaining to spray application of these products. This bulletin provides recommendations for both airless and plural component airless spray equipment. Plural component airless spray equipment offers substantial advantages over conventional airless equipment. Plural component airless spray equipment permits heating of the individual components to reduce viscosity without reducing working time. The amount of solvent needed to flush the spray lines and risk of product curing in the equipment are both greatly reduced with plural component equipment. For these reasons, plural component airless spray equipment is recommended for spray application of ARC Composites.

The following recommendations and equipment information are designed as a guideline to assist contractors and applicators working with the ARC “S” series of Composites. Other equipment may be substituted as long as satisfactory results are obtained. It is expected that adjustment of spray equipment be made during operation according to the operator’s judgement.

## GRACO XTREME™ MIX PLURAL COMPONENT AIRLESS SPRAY EQUIPMENT SPECIFICATIONS

ARC Product	Volumetric Mix Ratios	Material Temperatures	Feed Pump Motor / Material Supply	Proportioning Pump Motor	Fluid Hose Diameters/Maximum Length*/Temperature	Solvent Flush Pump Motor	Gun/Tip/Pressures
<b>S1PW</b>	<b>2;1</b>	A:43°C (110°F) B:43°C (110°F)	Gravity Fed Hoppers	68-1	A 12.7mm (0.5") x 15m (50ft) B 9.5mm (0.375") x 15m (50ft) Mixed Material Hose: 12.7mm (0.5") x 15m (50ft) Whip Hose: 6mm (0.25") x 7.5m (25ft) Max. Heated to maintain 43°C (110°F)	23-1	XTR-7 Gun / GHD 519-523 RAC Tip Pressure at gun - 6200 psi / 427 Bar (static); 4900 psi / 338 Bar (flowing)
<b>S1HB</b>	<b>2;1</b>	A:43°C (110°F) B:43°C (110°F)	Gravity Fed Hoppers	68-1	A 12.7mm (0.5") x 15m (50ft) B 9.5mm (0.375") x 15m (50ft) Mixed Material Hose: 12.7mm (0.5") x 15m (50ft) Whip Hose: 6mm (0.25") x 7.5m (25ft) Max. Heated to maintain 43°C (110°F)	23-1	XTR-7 Gun / GHD 531 RAC Tip Pressure at gun - 6200 psi / 427 Bar (static); 4900 psi / 338 Bar (flowing)
<b>S2</b>	<b>2;1</b>	A:43°C(110°F) B:43°C (110°F)	Gravity Fed Hoppers	68-1	A 12.7mm (0.5") x 15m (50ft) B 9.5mm (0.375") x 15m (50ft) Mixed Material Hose: 12.7mm (0.5") x 15m (50ft) Whip Hose: 6mm (0.25") x 7.5m (25ft) Max. Heated to maintain 43°C (110°F)	23-1	XTR-7 Gun / GHD 519-523 RAC Tip Pressure at gun - 6200 psi / 427 Bar (static); 4900 psi / 338 Bar (flowing)
<b>SD4i</b>	<b>2;1</b>	A:43°C (110°F) B:43°C (110°F)	Gravity Fed Hoppers	68-1	A 12.7mm (0.5") x 15m (50ft) B 9.5mm (0.375") x 15m (50ft) Mixed Material Hose: 12.7mm (0.5") x 15m (50ft) Whip Hose: 6mm (0.25") x 7.5m (25ft) Max. Heated to maintain 43°C (110°F)	23-1	XTR-7 Gun / Tip GHD 531 RAC Tip Pressure at Gun 4000 psi / 276 Bar (static); 2000 psi / 138 Bar (flowing)
<b>S4+</b>	<b>2;1</b>	A:43°C (110°F) B:43°C (110°F)	Gravity Fed Hoppers	68-1	A 12.7mm (0.5") x 15m (50ft) B 9.5mm (0.375") x 15m (50ft) Mixed Material Hose: 12.7mm (0.5") x 15m (50ft) Whip Hose: 6mm (0.25") x 7.5m (25ft) Max. Heated to maintain 43°C (110°F)	23-1	XTR-7 Gun / Tip GHD 519-523 RAC Pressure at gun - 6800 psi / 469 Bar (static); 4100 psi / 283 Bar (flowing)

Note: Detailed spray equipment set-up parameters are available for ARC S1, SD4i and S4+ from ARC Technical Services.

\* These are maximum hose length recommendations. For longer hose lengths contact Graco.

<b>S1PW / S1HB</b>	<b>S2</b>	<b>SD4i</b>	<b>S4+</b>
Use fluid filter with #60 mesh screen.	Reinforcements will cause wear to pump internals and tips. Remove fluid filter.	Reinforcements will cause wear to pump internals and tips. Remove fluid filter. Contact ARC Technical Services for special suction configuration and solvent flushing recommendations.	Use fluid filter with #60 mesh screen.

### DISCLAIMER

Technical data reflects laboratory data and is intended to indicate general characteristics only. A.W. CHESTERTON DISCLAIMS ALL WARRANTIES EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF

## WIWA DUOMIX 230 PLURAL COMPONENT AIRLESS SPRAY EQUIPMENT SPECIFICATIONS

ARC Product	Volumetric Mix Ratios	Material Temperatures	Feed Pump Motor / Material Supply	Proportioning Pump Motor	Fluid and Spray Hose Diameters / Length	Solvent Flush Pump Motor	Gun/Tip/Pressure at Gun
<b>S1PW</b>	<b>2;1</b>	A:43°C (110°F) B:32°C (90°F)	Hopper Feed	40-1	A 9.5mm (0.375") x 30m (100') max. B 9.5mm (0.375") x 30m (100') max. Mixed Material hose 9.5mm (0.375") x 15m (50') max / Whip hose 6mm (0.25") x 1.8m (6') max.	32-1	WIWA 500D 617 - 619 Tip 240 Bar (3485 psi) Spray Pressure at unit
<b>S1HB</b>	<b>2;1</b>	A:43°C (110°F) B:32°C (90°F)	Hopper Feed	40-1	A 9.5mm (0.375") x 30m (100') max. B 9.5mm (0.375") x 30m (100') max. Mixed Material hose 9.5mm (0.375") x 15m (50') max / Whip hose 6mm (0.25") x 1.8m (6') max.	32-1	WIWA 500D 617 - 619 Tip 240 Bar (3485 psi) Spray Pressure at unit
<b>S2</b>	<b>2;1</b>	A: 50°C (122°F) B: 35°C (95°F)	Hopper Feed	40-1	A 9.5mm (0.375") x 30m (100') max. B 9.5mm (0.375") x 30m (100') max. Mixed Material hose 9.5mm (0.375") x 15m (50') max / Whip hose 6mm (0.25") x 1.8m (6') max.	32-1	WIWA 500D 521 Tip 240 Bar (3485 psi) Spray Pressure at unit
<b>SD4i</b>	<b>2;1</b>	A:46°C (115°F) B:32°C (90°F)	Hopper Feed	40-1	A 9.5mm (0.375") x 30m (100') max. B 9.5mm (0.375") x 30m (100') max. Mixed Material hose 9.5mm (0.375") x 15m (50') max / Whip hose 6mm (0.25") x 1.8m (6') max.	32-1	WIWA 500D Tip 617-621 240 Bar (3485 psi) Spray Pressure at unit
<b>S4+</b>	<b>2;1</b>	A: 49°C (120°F) B: 38°C (100°F)	Hopper Feed	40-1	A 9.5mm (0.375") x 30m (100') max. B 9.5mm (0.375") x 30m (100') max. Mixed Material hose 9.5mm (0.375") x 15m (50') max / Whip hose 6mm (0.25") x 1.8m (6') max.	32-1	WIWA 500D Tip 617-619 240 Bar (3485 psi) Spray Pressure at unit

Note: Detailed spray equipment set-up parameters for the WIWA Duomix 333 are also available for each product from ARC Technical Services.

<b>S1PW</b>	<b>S2</b>	<b>SD4i</b>	<b>S4+</b>
Use 30 mesh high pressure fluid filter. 20 mesh filter on suction. Heated hose bundle required.	Reinforcement will cause wear to pump internals. Use 30 mesh high pressure fluid filter. 20 mesh filter on suction. Heated hose bundle required.	Reinforcement will cause wear to pump internals. Use 30 mesh high pressure fluid filter. 20 mesh filter on suction. Heated hose bundle required.	Use 30 mesh high pressure fluid filter. 20 mesh filter on suction. Heated hose bundle required.

**DISCLAIMER**

Technical data reflects laboratory data and is intended to indicate general characteristics only. A.W. CHESTERTON DISCLAIMS ALL WARRANTIES EXPRESSED OR IMPLIED, INCLUDING

## Airless Spray Equipment Specifications

Product	Material Temperatures	Pump Motor	Hose Diameter/Length From Pump to Gun	Gun/Tip	Recommended Atomizing Pressure			
<b>S1PW</b>	50-55°C (120-130F)	40-1 or larger	Diameter - 6-9 mm (.25-.375"); Length <10m (33')	XTR-7 Gun / GHD 519-523 RAC Tip	Pressure at gun - 6200 psi / 427 Bar (static); 4900 psi / 338 Bar (flowing)			
<b>S2</b>	45-50°C (110-120F)	70-1	Diameter - 6-9 mm (.25-.375"); Length <10m (33')	XTR-7 Gun / GHD 519-523 RAC Tip	Pressure at gun - 6200 psi / 427 Bar (static); 4900 psi / 338 Bar (flowing)			
<b>S3</b>	28-30C	70-1	Diameter - 12mm, Length <15m	XTR-7 Gun / GHD 523 RAC Tip	Pressure at gun - 5000 psi / 344 Bar			
<b>S4+</b>	43-46°C (110-115F)	70-1	Diameter - 6-9 mm (.25-.375"); Length <15m (50')	XTR-7 Gun / GHD 519-523 RAC Tip	Pressure at gun - 6800 psi / 469 Bar (static); 4100 psi / 283 Bar (flowing)			
<b>CS2</b>	32-35°C (90-95°F)	40:1 or larger	Diameter - 6mm (.25") Length <15 meter (50')	XTR-7 Gun / GHD 519-523 RAC Tip	227 Bar (3300 psi)			
<b>CS4</b>	32-35°C (90-95°F)	40:1 or larger	Diameter - 6mm (.25") Length <15 meter (50')	XTR-7 Gun / GHD 519-523 RAC Tip	227 Bar (3300 psi)			
<b>S7</b>	20-25°C ( 68 -77F)	45:1 or larger	Diameter 9mm (3/8") Max Length 25m (75ft)	Graco Silver Plus/ silicon tungsten carbide Tip Size 521-524	200 Bar ( 2900 PSI )			
<b>S7AR</b>	20-25°C ( 68 -77F)	45:1 or larger	Diameter 9mm (3/8") Max Length 25m (75ft)	Graco Silver Plus/ silicon tungsten carbide Tip Size 521-524	200 Bar ( 2900 PSI )			
<b>HT-S</b>	20-25°C ( 68 -77F)	70-1	Diameter 9mm (0.375") Length <15m (50')	Graco Silver Plus/ silicon tungsten carbide Tip Size 419-421	Pressure at Gun - 5200 psi / 350 Bar			
<b>S5</b>	20-25°C ( 68 -77F)	70:1	Diameter 9mm (0.375") Length <15m (50')	Graco Silver Plus/ silicon tungsten carbide Tip Size 421	Pressure at Tip - 6500 psi-7000 psi ( 448 Bar-482 Bar)			
<b>Notes</b>	<b>S1PW</b>	<b>S2</b>	<b>S4+</b>	<b>CS2</b>	<b>CS4</b>	<b>S7</b>	<b>HT-S</b>	<b>S5</b>
	Materials must be preheated to temperature before mixing. Use fluid filter with #60 mesh screen.	Preheat components and premix Part B before adding to Part A. Ceramic reinforcements will cause wear to pump internals and tips. Remove fluid filter.	Materials must be preheated to temperature before mixing. Use fluid filter with #60 mesh screen.	Materials must be preheated to temperature before mixing. Use fluid filter with #60 mesh screen.	Materials must be preheated to temperature before mixing. Use fluid filter with #60 mesh screen.	Remove all fluid filters except for coarse screen on suction hose. Add up to 3% ( by volume) MEK per 14L kit	Remove all fluid filters except for coarse screen on suction hose.	<b>5 liter kits</b> will require 14 fl.oz to 22 fl.oz ( 0.43L to 0.65L ) of MEK ( methyl ethyl ketone) <b>16 Liter Kits</b> will require 47 fl.oz to 70 fl.oz ( 1.39L to 2.08 L) of MEK See <b>Application Instructions</b> for additional information
Pot Life of 16 liters @ Spraying Temperature Range	10 minutes	10 minutes for 12kg kit	12 minutes	15 minutes	10 minutes	Approx 90 minutes. Catalyst addition may be adjusted depending on temperature. See PDS for info.	Approx 70 minutes	

DISCLAIMER  
 Technical data reflects laboratory data and is intended to indicate general characteristics only. A.W. CHESTERTON DISCLAIMS ALL WARRANTIES EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR USE. LIABILITY, IF ANY, IS LIMITED TO PRODUCT REPLACEMENT ONLY.

### **Conventional Air Spray Equipment - ARC S1PW, S2,**

- Pot - Binks Model 13550 or equivalent
  - 8 Liter (2 Gallon) Capacity
  - Pressure Rated to 9 bar (130 psi)
  - 6 mm (0.250") NPT air inlet fitting with regulator
- Gun - Binks 95 or equivalent
- Tip - Binks Model 68 or equivalent (2.8 mm (0.110") opening)
- Air Cap - Binks 104 or equivalent
- Fluid Hose
  - 12 mm (0.5") ID no more than 3 meter(10 ft.) length
- Fluid Pressure
  - 6-7 bar (80-100 psi)
- Air Atomizing Pressure
  - 3-4 bar (40-55 psi) adjust as needed
- Pre-heat S1 & S2 to 50°C (120°F) / Mix and use within 7-10 minutes
- Add solvent to S6 as directed on product data sheet for spray application.
- Flush with MEK/Acetone or Xylene every 10-15 minutes

### **Conventional Air Spray Equipment - ARC SD4i**

Pot - Binks SG2 Model 80-350 or equivalent pressure pot with plastic liners  
Gun - Binks 2001 gun with 68 VT fluid nozzle, 68 PB fluid cap and 0.110/568 needle  
Fluid Hose 9.5mm (3/8") ID x 2.4m (8') long clear tygon  
Air Pressure - 4 Bar (60psi) adjust as required  
Pre-heat A and B to 42°C (108°F)  
Mix 1.5L (0.4 Gallon) of product per batch, i.e. 1L Part A and 0.5L Part B  
Flush with MEK/Acetone or Xylene every 10-15 minutes

#### **DISCLAIMER**

Technical data reflects laboratory data and is intended to indicate general characteristics only. A.W. CHESTERTON DISCLAIMS ALL WARRANTIES EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR USE. LIABILITY, IF ANY, IS LIMITED TO PRODUCT REPLACEMENT ONLY.







